

Using the TRS-80TM in Your Home

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**BASIC Computer Programs
for the Home**
For 16K Level II TRS-80 Model I

By Charles D. Sternberg

Radio Shack
 A Division of Tandy Corporation

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Printed in the United States of America

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Introduction

The Purpose of This Book

Traditionally, home computers, when first purchased, have been used as interesting but expensive game-playing devices. That they have not been more frequently put to a more serious purpose stemmed from the lack of a readily available, comprehensive set of home application programs that were easy to use and understand and that satisfied the practical requirements of the home. The objective of this book is to provide a set of programs that will make your computer start paying for itself the moment it crosses your threshold. The programs provide a good cross section of practical applications that will make your computer beneficial to all family members. The applications have been designed so as not to rely upon the availability of tape or disk-storage devices or upon any other features that may not be easily come by. As you gain familiarity with computer use, moreover, modification of these programs to utilize features of your particular machine should present few difficulties.

The Book's Format

The computer applications given here have been formatted in a way that I hope will be of greatest value to you. Each application has been supplied with detailed information/documentation in the following form:

1. A narrative description of the application includes a brief explanation of the program's functions, data entry procedures, data formats, output descriptions, and suggested enhancements or comments, when appropriate.
2. A complete listing of the program is provided with remarks and data necessary for initialization. All line numbers have been incremented by ten (10) to insure ease of data entry and extension or modification.
3. A listing of sample data used for the example run illustrates the form of data entry and the results it produces.
4. Examples of outputs from the program using the sample data are shown. Whenever possible, the various optional outputs of the program are all shown.
5. All major variable names (symbols) used by the program are explained. In addition, all features of the program that may not be available in the tiniest versions of BASIC are listed and explained.

Entering/Interpreting the Programs

The programming approach decided upon for this book is meant to facilitate your ease of program interpretation and extension or modification. It does not take advantage of many language facilities that minimize program length or processing speed. Concise, highly efficient routines have been avoided as a rule because they generally result in a lack of interpretive clarity and the modularity necessary to facilitate modification and change. Indentation and comments have been used liberally to assist you in interpretation of the program's operation.

Initially, the programs should be entered and tested exactly as they are shown. As you gain familiarity with your machine and its language, you may wish to take advantage of its various memory and time-saving features, such as (1) eliminating extraneous spaces in the instructions, (2) variable dimensioning of arrays and FOR loops, and (3) placing multiple statements on a line (when clarity is not affected). Once a program has been entered, it should be thoroughly tested to insure your understanding of the data formats and the machine acceptability of all program instructions.

Compatibility of Language Features

The program listings provided should pose few, if any, compatibility difficulties in a wide range of microcomputers and their varying versions of the BASIC language. The appendix provides information concerning several language features used in the programs as an aid in surmounting difficulties.

Home Financial Programs

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CHECK BOOK BALANCE

Description

This program allows your computer to assist you in that onerous monthly task of balancing your checkbook against your bank statement. It allows you to enter deposits and checks outstanding to insure that all items are included in your balance. All required data is entered at the keyboard in response to program prompting.

Functions of the Program

The program first initializes the data for balances, deposits outstanding, and checks outstanding. As these items are entered, their total is accumulated. Following the completion of all required entries, the results are printed, and the final lines of output show the comparison between the bank's figures and your own.

Instructions for Use

Run the program and respond to the questions asked. You will need your bank statement and your checkbook stubs.

Data Entry

All data is entered in response to program prompting.

Output Description

See example output. The form of the output is similar to that provided for your use on the reverse of most bank statements.

Comments

The program will accept up to 20 deposits outstanding and 100 checks outstanding.

```
20 REM CHECKBOOK BALANCING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M1=20
50 M2=100
60 DIM D(20)
70 DIM C1$(100)
80 DIM C(100)
90 PRINT "ENTER THE DATE OF THE STATEMENT"
100 INPUT D$
110 PRINT "ENTER BALANCE FROM BANK STATEMENT"
120 INPUT B
130 PRINT "ENTER DEPOSITS NOT CREDITED ON STATEMENT (RETURN WHEN DONE)"
140 FOR I = 1 TO M1
150   D(I)=0
160   INPUT D(I)
```

```

170 IF D(I)=0 THEN 200
180 DO=DO+D(I)
190 NEXT I
200 PRINT "ENTER CHECKS OUTSTANDING (CHECK NBR,AMOUNT"
210 PRINT "PRESS RETURN WHEN DONE"
220 M1=I-1
230 FOR I = 1 TO M2
240 C1$(I)=" "
250 C(I)=0
260 INPUT C1$(I),C(I)
270 IF C1$(I)=" " THEN 300
280 CO=CO+C(I)
290 NEXT I
300 PRINT "SUBTRACT SERVICE AND OTHER CHARGES FROM YOUR "
310 PRINT "CHECKBOOK ( DONT FORGET OTHER ADDS AND SUBTRACTS "
320 PRINT "SUCH AS AUTOMATIC WITHDRAWALS, CHECK CHARGES, ETC."
330 M2=I-1
340 PRINT
350 PRINT "ENTER THE CURRENT BALANCE SHOWN IN YOUR CHECKBOOK"
360 INPUT B1
370 REM ***** PRINT OF RESULTS *****
380 PRINT
390 PRINT "ALIGN FOR OUTPUT"
400 INPUT A$
410 PRINT
420 PRINT TAB(20);D$
430 PRINT
440 PRINT "BALANCE FROM STATEMENT";TAB(30);"$";B
450 PRINT
460 PRINT "RECENT DEPOSITS NOT SHOWN"
470 FOR I=1 TO M1
480 PRINT TAB(25);D(I)
490 NEXT I
500 PRINT TAB(25);"-----"
510 PRINT " SUBTOTAL DEPOSITS";TAB(30);"$";DO
520 PRINT
530 PRINT TAB(30);"====="
540 PRINT " TOTAL ";TAB(30);"$";DO+B
550 PRINT
560 PRINT "CHECKS OUTSTANDING"
570 PRINT TAB(18);"CHK";TAB(25);"AMOUNT"
580 FOR I=1 TO M2
590 PRINT TAB(18);C1$(I);TAB(25);C(I)
600 NEXT I
610 PRINT TAB(25);"-----"
620 PRINT " SUBTOTAL CHECKS OUT";TAB(30);"$";CO
630 PRINT
640 PRINT"====="
650 PRINT "BALANCE EXPECTED IN CHECKBOOK";TAB(30);"$";DO+B-CO
660 PRINT "BALANCE IN CHECKBOOK";TAB(30);"$";B1
670 PRINT "*****"
680 PRINT " DIFFERENCE ";TAB(30);"$";DO+B-CO-B1
690 REM ***** PROGRAM TERMINATION POINT *****
700 PRINT
710 PRINT
720 STOP

```

```

RUN
ENTER THE DATE OF THE STATEMENT
? JUL 20 1980
ENTER BALANCE FROM BANK STATEMENT
? 200

```

ENTER DEPOSITS NOT CREDITED ON STATEMENT (RETURN WHEN DONE)

? 100

? 100

?

ENTER CHECKS OUTSTANDING (CHECK NBR,AMOUNT

PRESS RETURN WHEN DONE

? 1111,10

? 2222,10

? 3333,10

?

SUBTRACT SERVICE AND OTHER CHARGES FROM YOUR CHECKBOOK (DONT FORGET OTHER AIDS AND SUBTRACTS SUCH AS AUTOMATIC WITHDRAWALS, CHECK CHARGES, ETC.

ENTER THE CURRENT BALANCE SHOWN IN YOUR CHECKBOOK

? 369

ALIGN FOR OUTPUT

?

JUL 20 1980

BALANCE FROM STATEMENT \$ 200

RECENT DEPOSITS NOT SHOWN

100

100

SUBTOTAL DEPOSITS \$ 200

TOTAL \$ 400

CHECKS OUTSTANDING

CHK AMOUNT

1111 10

2222 10

3333 10

SUBTOTAL CHECKS OUT \$ 30

BALANCE EXPECTED IN CHECKBOOK \$ 370

BALANCE IN CHECKBOOK \$ 369

DIFFERENCE \$ 1

BREAK IN 720

MAJOR SYMBOL TABLE - CHECK BOOK BALANCE

I	NAME	DESCRIPTION	I
I	D()	.. ARRAY OF DEPOSITS NOT CREDITED	I
I	C1()	.. ARRAY OF CHECK NUMBERS OUTSTANDING	I
I	C()	.. ARRAY OF CHECK AMOUNTS OUTSTANDING	I
I	D\$	.. DATE OF BANK STATEMENT	I
I	B	.. BALANCE FROM BANK STATEMENT	I
I	M1	.. NUMBER OF DEPOSITS NOT CREDITED	I
I	M2	.. NUMBER OF CHECKS OUTSTANDING	I
I	B1	.. BALANCE IN CHECKBOOK	I
I	D0	.. TOTAL DEPOSITS OUTSTANDING	I
I	C0	.. TOTAL OF CHECKS OUTSTANDING	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	ARRAYS..	SINGLE DIMENSION	I

HOUSEHOLD BUDGET

Description

This program will help you prepare your monthly budget. Information is entered using data statements and is retained for later analysis or review.

Functions of the Program

The program reads the budget categories and expense items from data items, as well as the month name abbreviations. It stores these items in arrays, determines the first month/year to print based upon your input, and then finds the starting point in the data items supplied. During processing, the items are read, totaled, and then printed. Note that you must define your budget categories for the program as shown in lines 1170-1220 of the program listing.

Instructions for Use

Before running the program, it is necessary to initialize the budget codes that you wish to use (or use the ones given here) and to provide the budget data items using DATA statements following the budget code "END" indicator.

Data Entry

All data is entered using DATA statements.

Data Formats

There are three types of data formats for this program:

1. The budget category codes are entered in the form:
Code, Category (Fixed, Variable, or Semivariable), Explanation
2. The master month entry is given by:
*, Month name abbreviation, Year
3. Budget expense items for the month are entered using the form:
Budget code, Amount, Explanatory comments

Note the END card.

Output Description

See example provided. Output will be printed for the number of months requested. A maximum of six months is possible, printed horizontally.

Comments

The number of budget expense codes in the program is currently limited to 20.

```

20 REM HOUSEHOLD BUDGET PROGRAM
30 REM ***** DATA INITIATION *****
40 M=10000
50 N=1
60 DIM M$(12)
70 M1=20
80 DIM C$(20)
90 DIM T$(20)
100 DIM D$(20)
110 DIM P(6,20)
120 REM ***** INITIALIZE MONTH ARRAY *****
130 FOR I = 1 TO 12
140   READ M$(I)
150 NEXT I
160 REM ***** INITIALIZE BUDGET CATEGORIES *****
170 FOR I = 1 TO M1
180   READ C$(I)
190   IF C$(I)="END" THEN 220
200   READ T$(I),D$(I)
210 NEXT I
220 M1=M1-1
230 REM ***** DETERMINE MONTHS TO PRINT *****
240 PRINT "ENTER THE STARTING MONTH, YEAR FOR THE PRINT"
250 INPUT MO$,YO
260 FOR I=1 TO 12
270   IF MO$=M$(I) THEN 300
280 NEXT I
290 GOTO 240
300 PRINT "HOW MANY MONTHS SHALL I PRINT (MAXIMUM 6 MONTHS)"
310 NO=I
320 INPUT N1
330 REM ***** FIND STARTING RECORD *****
340 FOR I = 1 TO M
350   READ CO$
360   IF CO$="END" THEN 1080
370   IF CO$<>"*" THEN 420
380   READ M1$,Y
390   IF MO$<>M1$ THEN 420
400   IF YO <>Y THEN 420
410   GOTO 450
420 NEXT I
430 REM *****
440 REM ***** PROCESSING AREA *****
450 I=1
460   READ CO$
470   IF CO$ ="END" THEN 660
480   IF CO$<>"*" THEN 560
490   READ MO$,Y
500   N=N+1
510   PRINT
520   IF MO$=M$(N+NO-1) THEN 460
530   PRINT "MONTH IS MISSING FOLLOWING ";M$(NO+N-2)
540   N1=N-1
550   GOTO 460
560 REM ***** DETERMINE ARRAY POSITION OF ITEM *****
570   READ A,D0$
580   FOR J= 1 TO M1
590     IF CO$=C$(J) THEN 630
600   NEXT J
610   PRINT CO$,";";A;"IN MONTH ";MO$;Y;"CANNOT BE RECOGNIZED"
620   GOTO 460
630   P(N,J)=P(N,J)+A
640   I=I+1
650 IF I<=M THEN 460

```



```

660 REM ***** PRINTING ROUTINE *****
670 N1=N
680 PRINT
690 PRINT
700 PRINT "  ITEM";
710 FOR J=1 TO N1
720   J1=J+N0-1
730   IF J1<=12 THEN 750
740   J1=J1-12
750   PRINT TAB(J*10+11);M$(J1);
760 NEXT J
770 PRINT
780 PRINT
790 FOR J=1 TO M1
800   IF J=1 THEN 830
810   IF T$(J)=T$(J-1) THEN 830
820   PRINT
830   PRINT D$(J);" (";T$(J);")";
840   FOR K=1 TO N1
850     PRINT TAB(K*10+10);P(K,J);
860     IF J=1 THEN 880
870     T(K)=T(K)+P(K,J)
880   NEXT K
890   PRINT
900 NEXT J
910 REM ***** PRINT TOTAL LINES *****
920 FOR K=1 TO N1
930   PRINT TAB(K*10+10);"-----";
940 NEXT K
950 PRINT
960 PRINT "  TOTAL EXPENSES";
970 FOR K=1 TO N1
980   PRINT TAB(K*10+10);T(K);
990 NEXT K
1000 PRINT
1010 PRINT
1020 PRINT "  NET INCOME";
1030 FOR K=1 TO N1
1040   PRINT TAB(K*10+10);P(K,1)-T(K);
1050 NEXT K
1060 PRINT
1070 PRINT
1080 REM *****
1090 REM ***** PROGRAM TERMINATION POINT *****
1100 PRINT
1110 PRINT
1120 STOP
1130 REM *****
1140 REM ***** DATA FOR INITIALIZATION FOLLOWS *****
1150 DATA JAN,FEB,MAR,APR,MAY,JUN,JUL,AUG,SEP,OCT,NOV,DEC
1160 DATA IN,IN,  TOTAL INCOME
1170 DATA H,F,RENT/MORTGAGE,U,F,UTILITIES
1180 DATA I,F,INSURANCE,P,F,PAYMENTS
1190 DATA F,S,FOOD,A,S,AUTO/TRANS
1200 DATA M,S,MAINT/REPAIRS,MD,S,MED/DENTAL
1210 DATA C,V,CLOTHING
1220 DATA E,V,EDUCATION,R,V,RECREATION,S,V,SAVINGS,O,V,OTHER
1230 DATA END

```

```

1240 REM ***** BUDGET DATA FOLLOWS *****
1250 DATA *,JUN,1979
1260 DATA IN,850.2,WAGES
1270 DATA IN,100.50,COMM.
1280 DATA H,350,
1290 DATA U,195,,F,234.45,
1300 DATA I,45.55,LIFE INSURANCE
1310 DATA P,10.15,CHARGE CARD Y
1320 DATA P,23.45,FURNITURE
1330 DATA P,12.15,CHARGE CARD X
1340 DATA M,50,NEW WATER HEATER
1350 DATA MD,20,DENTAL VISIT-JIM
1360 DATA *,JUL,1979
1370 DATA IN,800.50,WAGES
1380 DATA H,350,,U,200,,I,45.55,,P,23.45,,S,100,,R,20,MOVIES
1390 DATA *,AUG,1979
1400 DATA IN,467.55,WAGES
1410 DATA H,375,,U,205,
1420 DATA END

```

```

RUN
ENTER THE STARTING MONTH, YEAR FOR THE PRINT
? JUL,1979
HOW MANY MONTHS SHALL I PRINT (MAXIMUM 6 MONTHS)
? 2

```

ITEM	JUL	AUG
TOTAL INCOME (IN)	800.5	467.55
RENT/MORTGAGE (F)	350	375
UTILITIES (F)	200	205
INSURANCE (F)	45.55	0
PAYMENTS (F)	23.45	0
FOOD (S)	0	0
AUTO/TRANS (S)	0	0
MAINT/REPAIRS (S)	0	0
MED/DENTAL (S)	0	0
CLOTHING (V)	0	0
EDUCATION (V)	0	0
RECREATION (V)	20	0
SAVINGS (V)	100	0
OTHER (V)	0	0
TOTAL EXPENSES	739	580
NET INCOME	61.5	-112.45

BREAK IN 1120

MAJOR SYMBOL TABLE - HOUSEHOLD BUDGET

I	NAME	DESCRIPTION	I
I	M\$()	ARRAY OF MONTH NAMES	I
I	C\$()	MASTER BUDGET CODES	I
I	T\$()	MASTER EXPENSE TYPE CODES	I
I	D\$()	MASTER BUDGET ITEM DESCRIPTIONS	I
I	P()	BUDGET AMOUNTS (2 DIM ARRAY FOR PRINTS)	I
I	M1	MAXIMUM NUMBER OF BUDGET CATEGORIES	I
I	M0\$	START MONTH FOR PRINTING	I
I	Y0	START YEAR FOR PRINTING	I
I	N1	NUMBER OF MONTHS TO PRINT	I
I	N0	POINTER TO STARTING MONTH NAME	I
I	C0\$	TRANSACTION BUDGET CODE	I
I	A	TRANSACTION AMOUNT	I
I	D0\$	TRANSACTION EXPLANATION	I
I	N	MONTH COUNT	I
I	T()	MONTHLY TOTALS	I
I	M	MAXIMUM NUMBER OF DATA READS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	ARRAYS	2 DIMENSIONS	I

HOUSEHOLD EXPENSES

Description

This program will assist in the preparation of household expense reviews and analyses based upon actual-versus-budgeted expenses. In conjunction with the household budget program given previously, this program will be useful in getting the most for your dollar.

Functions of the Program

The program functions in the same way as the household budget program except that only one month is printed during each run of the program. In addition, you will be asked to enter the budget amount through the keyboard for each of the prompted expense categories. Note that the expense categories are defined by you as shown in lines 1140-1210 of the program listing.

Instructions for Use

To run this program, it is necessary to initialize the expense categories that you wish to use and to provide the data entries for the expenses incurred during the month. Note the sample data provided.

Data Entry

Expense data is entered using DATA statements, and budget information is entered through the keyboard.

Data Formats

There are three types of data formats available:

1. Expense category codes and their explanations are entered in the form:

Expense code, Category (Fixed, Variable, or Semivariable),
Explanation

2. Monthly entries require a heading record of the form:

*, Month name abbreviation, Year

3. Expense item entries are provided in the form:

Expense code, Amount, Explanatory comments

Note the END card.

Output Description

Two forms of output are available:

1. A detailed list of the month's expenses (complete with explanatory comments).
2. An analysis of the month's actual-versus-budgeted figures.

Comments

The number of expense category codes is currently limited to 20.

```

20 REM HOUSEHOLD EXPENSE ANALYSIS
30 REM ***** DATA INITIATION *****
40 M=10000
50 DIM M$(12)
60 M1=20
70 DIM C$(20)
80 DIM T$(20)
90 DIM D$(20)
100 DIM F(20)
110 DIM B(20)
120 DIM D(20)
130 REM ***** INITIALIZE MONTH ARRAY *****
140 FOR I = 1 TO 12
150   READ M$(I)
160 NEXT I
170 REM ***** INITIALIZE BUDGET/EXPENSE CATEGORIES *****
180 FOR I= 1 TO M1
190   READ C$(I)
200   IF C$(I)="END" THEN 230
210   READ T$(I),D$(I)
220 NEXT I
230 M1=I-1
240 REM ***** DETERMINE MONTH TO PRINT *****
250 PRINT "ENTER THE MONTH, YEAR FOR THE PRINT"
260 INPUT MO$,YO
270 FOR I=1 TO 12
280   IF MO$=M$(I) THEN 320
290 NEXT I
300 GOTO 250
310 NO=I
320 REM ***** ENTER BUDGET FIGURES *****
330 PRINT "FOR EACH CATEGORY PRINTED ENTER THE BUDGETED AMOUNT "
340 PRINT
350 FOR I = 1 TO M1
360   PRINT D$(I)
370   INPUT B(I)
380 NEXT I
390 PRINT "SHALL I PROVIDE A DETAILED PRINT OF EXPENSES (Y OR N)?"
400 INPUT A$
410 IF A$ <> "Y" THEN 480
420 PRINT
430 PRINT
440 PRINT TAB(15); "EXPENSE DETAIL"
450 PRINT "ITEM"; TAB(20); "AMOUNT"; TAB(30); "EXPLANATION"
460 PRINT "-----"; TAB(20); "-----"; TAB(30);
470 PRINT "-----"
480 REM ***** FIND STARTING RECORD *****
490 FOR I = 1 TO M
500   READ C0$
510   IF C0$="END" THEN 1060
520   IF C0$ <> "*" THEN 570
530   READ M1$,Y
540   IF MO$ <> M1$ THEN 570
550   IF YO <> Y THEN 570
560 GOTO 600
570 NEXT I
580 REM *****
590 REM ***** PROCESSING AREA *****
600 I=1
610   READ C0$
620   IF C0$ ="END" THEN 760
630   IF C0$="*" THEN 760
640   REM ***** DETERMINE ARRAY POSITION OF ITEM *****
650   READ A, D0$

```

```

660   FOR J= 1 TO M1
670   IF C0$=C$(J) THEN 710
680   NEXT J
690   PRINT C0$;" ";A;"IN MONTH ";M0$;Y;"CANNOT BE RECOGNIZED"
700   GOTO 610
710   P(J)=P(J)+A
720   I=I+1
730   IF A$<>"Y" THEN 750
740   PRINT I$(J);TAB(20);A;TAB(30);D0$
750   IF I<=M THEN 610
760   REM ***** ANALYSIS PRINT ROUTINE *****
770   N1=N
780   PRINT
790   PRINT
800   PRINT TAB(25);"*****"
810   PRINT TAB(36);M0$;Y0
820   PRINT TAB(25);"*****"
830   PRINT "  ITEM";TAB(25);"BUDGET";TAB(35);"ACTUAL";TAB(45);" DIFF"
840   PRINT "-----";
850   PRINT TAB(25);"-----"
860   FOR J=1 TO M1
870     IF J=1 THEN 900
880     IF T$(J)=T$(J-1) THEN 900
890     PRINT
900     PRINT D$(J);" (";T$(J);")";
910     D(J)=P(J)-B(J)
920     PRINT TAB(25);B(J);TAB(35);P(J);TAB(45);D(J)
930     IF J=1 THEN 970
940     P0=P0+P(J)
950     B0=B0+B(J)
960     D0=D0+D(J)
970   NEXT J
980   REM ***** PRINT TOTAL LINES *****
990   PRINT TAB(25);"-----"
1000  PRINT "  TOTAL EXPENSES";
1010  PRINT TAB(25);B0;TAB(35);P0;TAB(45);D0
1020  PRINT
1030  PRINT "  NET INCOME";
1040  PRINT TAB(25);B(1)-B0;TAB(35);P(1)-P0;TAB(45);D(1)-D0
1050  PRINT
1060  REM *****
1070  REM ***** PROGRAM TERMINATION POINT *****
1080  PRINT
1090  PRINT
1100  STOP
1110  REM *****
1120  REM ***** DATA FOR INITIALIZATION FOLLOWS *****
1130  DATA JAN,FEB,MAR,APR,MAY,JUN,JUL,AUG,SEP,OCT,NOV,DEC
1140  DATA IN,IN,  TOTAL INCOME
1150  DATA H,F,RENT/MORTGAGE,U,F,UTILITIES
1160  DATA I,F,INSURANCE,P,F,PAYMENTS
1170  DATA F,S,FOOD,A,S,AUTO/TRANS
1180  DATA M,S,MAINT/REPAIRS,MD,S,MED/DENTAL
1190  DATA C,V,CLOTHING
1200  DATA E,V,EDUCATION,R,V,RECREATION,S,V,SAVINGS,O,V,OTHER
1210  DATA END
1220  REM ***** BUDGET DATA FOLLOWS *****
1230  DATA *,JUN,1979
1240  DATA IN,850.2,WAGES
1250  DATA IN,100.50,COMM.
1260  DATA H,350,
1270  DATA U,195,,F,234.45,
1280  DATA I,45.55,LIFE INSURANCE
1290  DATA P,10.15,CHARGE CARD Y

```

1300 DATA P,23.45,FURNITURE
 1310 DATA F,12.15,CHARGE CARD X
 1320 DATA M,50,NEW WATER HEATER
 1330 DATA MD,20,DENTAL VISIT-JIM
 1340 DATA *,JUL,1979
 1350 DATA IN,800.50,WAGES
 1360 DATA H,350,,U,200,,I,45.55,,P,23.45,,S,100,,R,20,MOVIES
 1370 DATA *,AUG,1979
 1380 DATA IN,467.55,WAGES
 1390 DATA H,375,,U,205,
 1400 DATA END

RUN
 ENTER THE MONTH, YEAR FOR THE PRINT
 ? JUL,1979
 FOR EACH CATEGORY PRINTED ENTER THE BUDGETED AMOUNT

TOTAL INCOME
 ? 900
 RENT/MORTGAGE
 ? 350
 UTILITIES
 ? 210
 INSURANCE
 ? 45.55
 PAYMENTS
 ? 23.45
 FOOD
 ? 100
 AUTO/TRANS
 ? 20
 MAINT/REPAIRS
 ? 10
 MED/DENTAL
 ? 10
 CLOTHING
 ? 10
 EDUCATION
 ? 10
 RECREATION
 ? 15
 SAVINGS
 ? 10
 OTHER
 ? 10
 SHALL I PROVIDE A DETAILED PRINT OF EXPENSES (Y OR N)?
 ? Y

ITEM	EXPENSE DETAIL	
	AMOUNT	EXPLANATION
TOTAL INCOME	800.5	WAGES
RENT/MORTGAGE	350	
UTILITIES	200	
INSURANCE	45.55	
PAYMENTS	23.45	
SAVINGS	100	
RECREATION	20	MOVIES

JUL 1979

ITEM	BUDGET	ACTUAL	DIFF
TOTAL INCOME (IN)	900	800.5	-99.5
RENT/MORTGAGE (F)	350	350	0
UTILITIES (F)	210	200	-10
INSURANCE (F)	45.55	45.55	0
PAYMENTS (F)	23.45	23.45	0
FOOD (S)	100	0	-100
AUTO/TRANS (S)	20	0	-20
MAINT/REPAIRS (S)	10	0	-10
MED/DENTAL (S)	10	0	-10
CLOTHING (V)	10	0	-10
EDUCATION (V)	10	0	-10
RECREATION (V)	15	20	5
SAVINGS (V)	10	100	90
OTHER (V)	10	0	-10
TOTAL EXPENSES	824	739	-85
NET INCOME	76	61.5	-14.5

BREAK IN 1100

MAJOR SYMBOL TABLE - HOUSEHOLD EXPENSES

I	NAME	.. DESCRIPTION	I
I	M\$	.. MONTH NAME ARRAY	I
I	C\$()	.. MASTER EXPENSE CATEGORY CODES	I
I	T\$()	.. MASTER EXPENSE TYPE CODES	I
I	D\$()	.. MASTER EXPENSE CATEGORY DESCRIPTIONS	I
I	F()	.. EXPENSE PRINT ARRAY	I
I	B()	.. BUDGET PRINT ARRAY	I
I	D()	.. DIFFERENCE PRINT ARRAY	I
I	MO\$	.. MONTH TO PRINT	I
I	YO	.. YEAR OF MONTH TO PRINT	I
I	CO\$	.. TRANSACTION CATEGORY CODE	I
I	A	.. TRANSACTION AMOUNT	I
I	DO\$	.. TRANSACTION EXPLANATION	I
I	M1	.. MAXIMUM NUMBER OF EXPENSE CATEGORIES	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	FO	.. EXPENSE TOTAL	I
I	BO	.. BUDGET TOTAL	I
I	DO	.. DIFFERENCE TOTAL	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMAT PRINT LINES	I
I	ARRAY	.. SINGLE DIMENSION	I

INSTALLMENT PAYMENT PROJECTION

Description

This program produces projected monthly payment amounts for loans that are based upon monthly compounding of interest.

Functions of the Program

The program accepts inputs of amount to be borrowed, the number of payments desired, and interest rate information. It then calculates and prints the projected monthly payment.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided. A projected monthly payment figure is printed.

```
20 REM INSTALLMENT PAYMENT PROJECTION
30 REM ***** COMPOUNDS MONTHLY *****
40 REM ***** DATA INITIALIZATION *****
50 PRINT "ENTER THE AMOUNT TO BE BORROWED"
60 INPUT A
70 PRINT "ENTER THE NUMBER OF MONTHLY PAYMENTS"
80 INPUT N
90 PRINT "IS THE INTEREST RATE PER MONTH (M) OR YEAR (Y)"
100 INPUT T$
110 PRINT "ENTER THE INTEREST RATE (PERCENT)"
120 INPUT I
130 I=I/100
140 IF T$="M" THEN 170
150 I=I/12
160 REM ***** CALCULATION *****
170 F=A*(I/(1-(1+I)^-N))
180 PRINT
190 PRINT "PROJECTED MONTHLY PAYMENT: ";F
200 REM ***** PROGRAM TERMINATION POINT *****
210 PRINT
220 PRINT
230 STOP
```

```
RUN
ENTER THE AMOUNT TO BE BORROWED
? 1000
ENTER THE NUMBER OF MONTHLY PAYMENTS
? 12
IS THE INTEREST RATE PER MONTH (M) OR YEAR (Y)
? Y
```

ENTER THE INTEREST RATE (PERCENT)

? 9

PROJECTED MONTHLY PAYMENT: 87.4532

BREAK IN 230

MAJOR SYMBOL TABLE - INSTALLMENT PAYMENT PROJECTION

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	A .. AMOUNT OF PRINCIPAL (BORROWED)	I
I	N .. NUMBER OF MONTHLY PAYMENTS	I
I	I .. INTEREST RATE	I
I	P .. RESULTING PROJECTED PAYMENT	I
I	-----	I

INTEREST RECEIVED PROJECTIONS

Description

This program will assist you in analyzing potential investments. It estimates the future returns on an initial investment at a given interest rate.

Functions of the Program

The program initializes variables by requesting inputs through the keyboard. It allows various compounding strategies and will print the results after each compounding period, or at the end of each year. Following the input of all items requested, the program prints the initial information and then proceeds to calculate and print the results.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered through the keyboard.

Output Description

See examples provided. A table of amounts and interest received, by period, is produced.

```
20 REM INTEREST RECEIVED PROJECTIONS
30 REM***** DATA INITIALIZATION"
40 PRINT "ENTER THE AMOUNT TO BE INVESTED"
50 INPUT I
60 PRINT "ENTER THE INTEREST RATE"
70 INPUT R
80 PRINT "ENTER THE NUMBER OF YEARS TO PROJECT"
90 INPUT N
100 PRINT "ENTER THE NBR OF TIMES PER YEAR THAT IT WILL BE COMPOUNDED"
110 INPUT C
120 IF C<= 0 THEN 150
130 PRINT "COMPOUNDING MUST BE AT LEAST ONCE EACH YEAR"
140 GOTO 100
150 PRINT
160 A$="Y"
170 IF C=1 THEN 200
180 PRINT "SHALL I PRINT AFTER EACH COMPOUNDING PERIOD ( Y OR N)?"
190 INPUT A$
200 PRINT
210 PRINT
220 PRINT "*****"
230 PRINT "  INITIAL INVESTMENT $";I
240 PRINT "  ANNUAL INTEREST RATE";R;"%"
250 PRINT "  COMPOUNDED";C;"X PER YEAR"
260 PRINT "*****"
270 PRINT
```

```

280 PRINT TAB(5);"BEGIN";TAB(15);"INTEREST"
290 PRINT "YR";TAB(5);"AMOUNT";TAB(16);"AMOUNT";TAB(26);"TOTAL"
300 PRINT "-----";TAB(15);"-----";TAB(25);"-----"
310 R1=R*.01/C
320 T=I
330 FOR J = 1 TO N
340   PRINT J;
350   T0=T
360   T4=0
370   FOR K = 1 TO C
380     T1=T*R1
390     T2=INT((T1+ .005 )*100)
400     T1=T2/100
410     T4=T4+T1
420     T3=T
430     T5=T1
440     IF A$="Y" THEN 480
450     IF K <C THEN 490
460     T5=T4
470     T3=T0
480     PRINT TAB(5);T3;TAB(15);T5;TAB(25);T1+T
490     T=T+T1
500   NEXT K
510   PRINT
520 NEXT J
530 REM ***** TERMINATION POINT *****
540 PRINT
550 PRINT
560 STOP

```

```

RUN
ENTER THE AMOUNT TO BE INVESTED
? 1000
ENTER THE INTEREST RATE
? 9
ENTER THE NUMBER OF YEARS TO PROJECT
? 3
ENTER THE NBR OF TIMES PER YEAR THAT IT WILL BE COMPOUNDED
? 12

SHALL I PRINT AFTER EACH COMPOUNDING PERIOD ( Y OR N)?
? N

```

```

*****
INITIAL INVESTMENT $ 1000
ANNUAL INTEREST RATE 9 %
COMPOUNDED 12 X PER YEAR
*****

```

YR	BEGIN AMOUNT	INTEREST AMOUNT	TOTAL
1	1000	93.8	1093.8
2	1093.8	102.6	1196.4
3	1196.4	112.23	1308.63

BREAK IN 560

MAJOR SYMBOL TABLE - INTEREST RECEIVED PROJECTIONS

I	NAME	DESCRIPTION	I
I	I	.. AMOUNT INVESTED	I
I	R	.. RATE OF INTEREST	I
I	N	.. NUMBER OF YEARS	I
I	C	.. NUMBER OF TIMES PER YEAR ITS COMPOUNDED	I
I	J	.. YEAR BEING COMPUTED	I
I	T3	.. BEGINNING AMOUNT FOR THE PERIOD	I
I	T5	.. INTEREST AMOUNT FOR THE PERIOD	I
I	T	.. BEGINNING AMOUNT FOR THE YEAR	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I

MORTGAGE AMOUNT PROJECTIONS

Description

This program will project monthly mortgage payments for any amount, interest rate, or mortgage term.

Functions of the Program

This program accepts keyboard input for the projected mortgage amount, interest rate, and number of years for the mortgage. It then produces a projected monthly payment that includes both principal and interest. After data is entered, the interest rate is converted for compounding purposes. Following the computations, the initial entries, as well as the projected monthly payment amount, are printed.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered through the keyboard.

Output Description

See example output provided.

```
20 REM MORTGAGE COMPUTATION PROGRAM --BASIC
30 REM ***** DATA INITIALIZATION *****
40 PRINT "ENTER THE MORTGAGE AMOUNT"
50 INPUT P
60 PRINT "ENTER THE INTEREST RATE"
70 INPUT I1
80 IF I1 >1 THEN 100
90 I1=I1*100
100 I=(I1/100)/12
110 PRINT "ENTER THE YEARS OF THE MORTGAGE"
120 INPUT Y
130 PRINT
140 PRINT
150 PRINT
160 REM ***** COMPUTATION *****
170 M=I/((1+I)^(Y*12)-1)+I
180 M1=M*P
190 PRINT "*****"
200 PRINT "MORTGAGE AMOUNT $" ;P
210 PRINT "INTEREST RATE " ;I1 ;"% "
220 PRINT "MONTHLY PAYMENT $" ;M1
230 PRINT "*****"
240 REM ***** PROGRAM TERMINATION *****
250 PRINT
260 PRINT
270 STOP
```

```
RUN
ENTER THE MORTGAGE AMOUNT
? 75000
ENTER THE INTEREST RATE
? 9
ENTER THE YEARS OF THE MORTGAGE
? 30
```

```
*****
MORTGAGE AMOUNT $ 75000
INTEREST RATE 9 %
MONTHLY PAYMENT $ 603.469
*****
```

BREAK IN 270

MAJOR SYMBOL TABLE - MORTGAGE AMOUNT PROJECTIONS

```
I-----I
I NAME .. DESCRIPTION I
I-----I
I P .. PROJECTED MORTGAGE AMOUNT I
I I1 .. INTEREST RATE I
I I .. MODIFIED INTEREST RATE I
I Y .. NUMBER OF YEARS FOR THE MORTGAGE I
I M1 .. MONTHLY PAYMENT I
I-----I
```

MORTGAGE COMPARISONS

Description

This program produces a table that compares various mortgage amounts, terms, and interest rates. The information is ideal for the prospective buyer or seller and allows him to compare various alternatives that may be available.

Functions of the Program

You are asked to indicate which of the items to vary first. Based upon your response to this question, the amounts, terms, and interest rates are entered. The example output shows the results of a run where the mortgage amount was varied.

Instructions for Use

Run the program and respond to the questions asked, through the keyboard.

Data Entry

All data is entered through the keyboard.

Output Description

See examples provided. The program produces a table of comparisons. They differ slightly in appearance depending upon the item being varied but all tables include the mortgage term, interest rate, mortgage amount, projected monthly payment, and total interest to be paid.

```
20 REM MORTGAGE COMPARISON PROGRAM
30 REM NOTE ROUNDING ERRORS MAY OCCUR IN COMPUTED NUMBERS
40 REM *****
50 REM ***** DATA INITIALIZATION *****
60 PRINT "ENTER THE ITEM TO VARY--AMOUNT(A), INT RATE(I), OR YEARS(Y)"
70 S1=1
80 S2=1
90 S3=1
100 INPUT A$
110 REM ***** ENTRY OF VARIABLE ITEMS *****
120 IF A$="A" THEN 180
130 PRINT "ENTER THE BEGINNING AMOUNT, ENDING AMOUNT TO CONSIDER"
140 INPUT A0,A1
150 PRINT "ENTER THE INTERVAL BETWEEN PRINTS I.E. 1000"
160 INPUT S1
170 GOTO 340
180 IF A$="I" THEN 240
190 PRINT "ENTER THE LOWEST,HIGHEST INTEREST RATE TO CONSIDER"
200 INPUT R0,R1
210 PRINT "ENTER THE INTERVAL BETWEEN PRINTS I.E., .25 FOR 1/4"
220 INPUT S2
```



```

230 GOTO 300
240 IF A$="Y" THEN 290
250 PRINT "ENTER THE LOWEST,HIGHEST NUMBER OF YEARS TO CONSIDER"
260 INPUT Y0,Y1
270 PRINT "ENTER THE INTERVAL BETWEEN PRINTS I.E., 5"
280 INPUT S3
290 REM ***** ENTRY OF CONSTANT ITEMS *****
300 PRINT "ENTER THE MORTGAGE AMOUNT"
310 INPUT P
320 A0=P
330 IF A$="I" THEN 400
340 PRINT "ENTER THE INTEREST RATE"
350 INPUT I1
360 IF I1>=1 THEN 380
370 I1=I1*100
380 R0=I1
390 IF A$="Y" THEN 430
400 PRINT "ENTER THE YEARS OF THE MORTGAGE"
410 INPUT Y
420 Y0=Y
430 PRINT
440 PRINT
450 PRINT
460 REM ***** PROCESSING LOOP *****
470 REM ***** PROCESSING LOOP *****
480 FOR Y=Y0 TO Y1 STEP S3
490 PRINT "FOR A MORTGAGE OF" ;Y;" YEARS"
500 PRINT
510 FOR I1=R0 TO R1 STEP S2
520 PRINT "USING THE INTEREST RATE" ;I1;"%"
530 PRINT
540 PRINT "MORTGAGE" ;TAB(15); "MONTHLY PI" ;TAB(30); " TOTAL"
550 PRINT " AMOUNT" ;TAB(15); " PAYMENT" ;TAB(30); "INTEREST"
560 PRINT "-----" ;TAB(15); "-----" ;TAB(30); "-----"
570 FOR P=A0 TO A1 STEP S1
580 REM ***** COMPUTATION AND PRINT *****
590 I=(I1/100)/12
600 M=I/((1+I)^(Y*12)-1)+I
610 M1=M*P
620 I3=M1*Y*12-P
630 PRINT P ;TAB(15); M1 ;TAB(30); I3
640 NEXT P
650 PRINT "*****"
660 PRINT
670 NEXT I1
680 NEXT Y
690 REM ***** PROGRAM TERMINATION *****
700 PRINT
710 PRINT
720 STOP

```

RUN

```

ENTER THE ITEM TO VARY-AMOUNT(A), INT RATE(I), OR YEARS(Y)
? A
ENTER THE BEGINNING AMOUNT, ENDING AMOUNT TO CONSIDER
? 50000,75000
ENTER THE INTERVAL BETWEEN PRINTS I.E. 1000
? 5000
ENTER THE INTEREST RATE
? 10
ENTER THE YEARS OF THE MORTGAGE
? 30

```

FOR A MORTGAGE OF 30 YEARS

USING THE INTEREST RATE 10 %

MORTGAGE AMOUNT	MONTHLY PI PAYMENT	TOTAL INTEREST
50000	438.788	107964
55000	482.667	118760
60000	526.545	129556
65000	570.424	140353
70000	614.303	151149
75000	658.182	161945

BREAK IN 720

RUN
ENTER THE ITEM TO VARY-AMOUNT(A), INT RATE(I), OR YEARS(Y)
? I
ENTER THE LOWEST,HIGHEST INTEREST RATE TO CONSIDER
? 9.5,10
ENTER THE INTERVAL BETWEEN PRINTS I.E., .25 FOR 1/4
? .25
ENTER THE MORTGAGE AMOUNT
? 50000
ENTER THE YEARS OF THE MORTGAGE
? 35

FOR A MORTGAGE OF 35 YEARS

USING THE INTEREST RATE 9.5 %

MORTGAGE AMOUNT	MONTHLY PI PAYMENT	TOTAL INTEREST
50000	410.806	122539

USING THE INTEREST RATE 9.75 %

MORTGAGE AMOUNT	MONTHLY PI PAYMENT	TOTAL INTEREST
50000	420.296	126524

USING THE INTEREST RATE 10 %

MORTGAGE AMOUNT	MONTHLY PI PAYMENT	TOTAL INTEREST
50000	429.838	130532

BREAK IN 720

MAJOR SYMBOL TABLE - MORTGAGE COMPARISONS

I	NAME	DESCRIPTION	I
I	S1	INTERVAL BETWEEN MORTGAGE AMOUNTS	I
I	S2	INTERVAL BETWEEN INTEREST RATES	I
I	S3	INTERVAL BETWEEN MORTGAGE YEARS	I
I	A0	FIRST AMOUNT CONSIDERED	I
I	A1	LAST AMOUNT CONSIDERED	I
I	R0	LOWEST RATE CONSIDERED	I
I	R1	HIGHEST RATE CONSIDERED	I
I	Y0	LOWEST NUMBER OF YEARS CONSIDERED	I
I	Y1	HIGHEST NUMBER OF YEARS CONSIDERED	I
I	P	SINGLE MORTGAGE AMOUNT	I
I	I1	SINGLE INTEREST RATE	I
I	Y	SINGLE YEAR TO CONSIDER	I
I	M1	MONTHLY PAYMENT COMPUTED	I
I	I3	TOTAL INTEREST PAID	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

PROPERTY COMPARISONS

Description

This program produces a table giving the monthly costs associated with a specific property. Included in the table is a computation of monthly principal-interest and monthly principal-interest-taxes-insurance. Also included is a projected total monthly cost of the property.

Functions of the Program

The program requests annual and monthly expense information concerning the property. Following this, the computation of monthly charges is accomplished, and a cost table is printed. At the end of each cost table, the program requests the name of the next property to consider. The program continues to request information on new properties until you provide a null response (press the return only) to the property name question.

Instructions for Use

Respond to the questions asked by the program. Be thorough in your entry of all relevant costs.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

Comments

The program's results will be only as good as the data provided.

```
20 REM HOUSE COMPARISON PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 PRINT "ENTER PROPERTY NAME ( JUST PRESS RETURN WHEN DONE )"
50 R0= .005
60 N$=" "
70 INPUT N$
80 IF N$=" " THEN 740
90 PRINT "ENTER THE MORTGAGE AMOUNT"
100 P=0
110 INPUT F
120 PRINT "ENTER THE INTEREST RATE"
130 INPUT I1
140 IF I1>=1 THEN 160
150 I1=I1*100
160 I=(I1/100)/12
170 PRINT "ENTER THE YEARS OF THE MORTGAGE"
180 INPUT Y
```

```

190 PRINT "ENTER THE ANNUAL TAXES ON THE PROPERTY"
200 T=0
210 INPUT T
220 T=T/12
230 T=INT((T+R0)*100)
240 T=T/100
250 PRINT "ENTER THE ANNUAL INSURANCE COSTS FOR THE PROPERTY"
260 F=0
270 INPUT F
280 F=F/12
290 F=INT((F+R0)*100)
300 F=F/100
310 PRINT "ENTER THE ANNUAL MAINTENANCE AND REPAIR COSTS"
320 R=0
330 INPUT R
340 R=R/12
350 R=INT((R+R0)*100)
360 R=R/100
370 PRINT "ENTER ANY OTHER *** MONTHLY *** COSTS THAT APPLY"
380 S=0
390 INPUT S
400 PRINT "ENTER AVERAGE *** MONTHLY *** UTILITY COSTS"
410 U=0
420 INPUT U
430 PRINT
440 PRINT
450 PRINT
460 REM ***** COMPUTATION *****
470 M=I/((1+I)^(Y*12)-1)-I
480 M1=M*F
490 M1=INT((M1+R0)*100)
500 M1=M1/100
510 O=U+S+R
520 T1=M1+T+F
530 PRINT "*****"
540 PRINT
550 PRINT N$;" INTEREST RATE";I1;"% - MORTGAGE YEARS";Y
560 PRINT
570 PRINT "MORTGAGE";TAB(10);" P I";TAB(20);" TAXES";TAB(30);" INS";
580 PRINT TAB(40);" PITI"
590 PRINT "-----";TAB(10);"-----";TAB(20);"-----";TAB(30);
600 PRINT "-----";TAB(40);"-----"
610 PRINT P;TAB(10);M1;TAB(20);T;TAB(30);F;TAB(40);T1
620 PRINT
630 PRINT "UTILITIES";TAB(15);" MAINT";TAB(25);" OTHER";TAB(38);
640 PRINT "OPERATING COSTS"
650 PRINT "-----";TAB(15);"-----";TAB(25);"-----";
660 PRINT TAB(40);"-----"
670 PRINT U;TAB(15);R;TAB(25);S;TAB(40);O
680 PRINT
690 PRINT " TOTAL MONTHLY COSTS: $";D+T1
700 PRINT
710 PRINT "*****"
720 PRINT
730 GOTO 40
740 REM ***** PROGRAM TERMINATION *****
750 PRINT
760 PRINT
770 STOP

```

RUN
 ENTER PROPERTY NAME (JUST PRESS RETURN WHEN DONE)
 ? 9111 ANY ROAD STREET
 ENTER THE MORTGAGE AMOUNT
 ? 35000
 ENTER THE INTEREST RATE
 ? 10
 ENTER THE YEARS OF THE MORTGAGE
 ? 30
 ENTER THE ANNUAL TAXES ON THE PROPERTY
 ? 789.50
 ENTER THE ANNUAL INSURANCE COSTS FOR THE PROPERTY
 ? 123.50
 ENTER THE ANNUAL MAINTENANCE AND REPAIR COSTS
 ? 1000
 ENTER ANY OTHER *** MONTHLY *** COSTS THAT APPLY
 ? 40
 ENTER AVERAGE *** MONTHLY *** UTILITY COSTS
 ? 155.10

9111 ANY ROAD STREET INTEREST RATE 10 % - MORTGAGE YEARS 30

MORTGAGE	P I	TAXES	INS	FITI
35000	307.15	65.79	10.29	383.23
UTILITIES	MAINT	OTHER	OPERATING COSTS	
155.1	83.33	40	278.43	

TOTAL MONTHLY COSTS: \$ 661.66

ENTER PROPERTY NAME (JUST PRESS RETURN WHEN DONE)
 ?

BREAK IN 770

MAJOR SYMBOL TABLE - PROPERTY COMPARISONS

I	NAME	DESCRIPTION	I
I	RO	ROUNDING CONSTANT	I
I	N\$	NAME OF PROPERTY	I
I	P	MORTGAGE AMOUNT	I
I	I1	INTEREST RATE	I
I	Y	NUMBER OF YEARS FOR THE MORTGAGE	I
I	T	ANNUAL TAXES	I
I	F	ANNUAL INSURANCE COSTS	I
I	R	ANNUAL MAINT/REPAIR COSTS	I
I	S	OTHER MONTHLY CHARGES	I
I	U	UTILITY COSTS	I
I	M1	PRINCIPAL AND INTEREST	I
I	T1	PRINCIPAL/INTEREST/TAXES/INSURANCE	I
I	O	TOTAL UTILITIES/MAINT/OTHER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	INT	CONVERTS NUMBER TO INTEGER	I

FINANCIAL RECORDS

Description

Items such as credit card numbers and the contents of financial papers can cause significant difficulties if not immediately available or lost. This program was designed to assist you in recording important financial information. It allows for recording information concerning credit cards, insurance, securities, and property (mortgage) information.

Functions of the Program

The program accepts all entries from DATA statements previously provided and prints all entries, or selected categories of entries. A separate processing area exists for the handling of each type of record. In each area headings are printed, formatting is accomplished, and the items are printed.

Instructions for Use

Provide data entries for all items prior to running the program. The DATA formats differ slightly for each type of record.

Data Entry

All data is entered using DATA statements.

Data Formats

There are four data formats; each is described below.

1. Credit card entries:

C, Card name, Name issued to, Card number, Expiration date,
Credit limit, Address to notify in case of loss

2. Insurance entries:

I, Type insurance, Name issued to, Policy number, Date issued,
Amount, Company name and address

3. Securities:

S, Security type, Company, Quantity, Date purchased,
Purchase price, File location of security

4. Property (Mortgages):

M, Property location, Registered to, Mortgage years,
Purchase date, Amount, Mortgage holder

Output Description

See examples provided. The output can include all records or those of a specified type only.


```

20 REM FINANCIAL RECORD PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "DO YOU WISH TO PRINT ALL ENTRIES (Y OR N)?"
60 INPUT A0$
70 IF A0$="Y" THEN 170
80 PRINT "SHALL I PRINT CREDIT CARDS (C), INSURANCE (I),"
90 PRINT "      SECURITIES (S), OR MORTGAGES (M)?"
100 INPUT A1$
110 IF A1$="C" THEN 180
120 IF A1$="I" THEN 360
130 IF A1$="S" THEN 530
140 IF A1$="M" THEN 700
150 PRINT "INPUT NOT RECOGNIZED"
160 GOTO 50
170 REM ***** CREDIT CARD PROCESSING *****
180 PRINT
190 PRINT
200 PRINT
210 PRINT "CREDIT CARD/LIMIT";TAB(19);"NAME/NOTIFY";TAB(37);"NUMBER";
220 PRINT TAB(52);"EXP DATE"
230 PRINT "-----";TAB(19);"-----";TAB(37);
240 PRINT "-----";TAB(52);"-----"
250 FOR I = 1 TO M
260   READ T$
270   IF T$="END" THEN 340
280   READ N$,H$,A$,D$,A$,L$
290   IF T$<>"C" THEN 330
300   PRINT N$;TAB(19);H$;TAB(37);A$;TAB(52);D$
310   PRINT A$;TAB(19);L$
320   PRINT
330 NEXT I
340 IF A0$<>"Y" THEN 850
350 RESTORE
360 REM ***** INSURANCE PROCESSING *****
370 PRINT
380 PRINT "INS TYPE/AMT";TAB(19);"INSURED/COMPANY";TAB(37);"POLICY #";
390 PRINT TAB(52);"DATE"
400 PRINT "-----";TAB(19);"-----";
410 PRINT TAB(37);"-----";TAB(52);"-----"
420 FOR I =1 TO M
430   READ T$
440   IF T$="END" THEN 510
450   READ N$,H$,A$,D$,A$,L$
460   IF T$<>"I" THEN 500
470   PRINT N$;TAB(19);H$;TAB(37);A$;TAB(52);D$
480   PRINT A$;TAB(19);L$
490   PRINT
500 NEXT I
510 IF A0$<>"Y" THEN 850
520 RESTORE
530 REM ***** SECURITIES PROCESSING *****
540 PRINT
550 PRINT "SECURITY/PRICE";TAB(19);"COMPANY";TAB(37);"QTY";TAB(52);
560 PRINT "DATE"
570 PRINT "-----";TAB(19);"-----";TAB(37);
580 PRINT "-----";TAB(52);"-----"
590 FOR I =1 TO M
600   READ T$
610   IF T$="END" THEN 680
620   READ N$,H$,A$,D$,A$,L$
630   IF T$<>"S" THEN 670
640   PRINT N$;TAB(19);H$;TAB(37);A$;TAB(52);D$
650   PRINT A$;TAB(19);L$

```

```

660 PRINT
670 NEXT I
680 IF A0=C>"Y" THEN 850
690 RESTORE
700 REM ***** MORTGAGE PROCESSING *****
710 PRINT
720 PRINT "PROPERTY/AMOUNT";TAB(19);"NAME";TAB(37);"YRS";
730 PRINT TAB(52);"PRCH DATE"
740 PRINT "-----";TAB(19);"-----";TAB(37);
750 PRINT "-----";TAB(52);"-----"
760 FOR I = 1 TO M
770   READ T$
780   IF T$="END" THEN 850
790   READ N$,H$,A$,D$,A,L$
800   IF T$>"M" THEN 840
810   PRINT N$;TAB(19);H$;TAB(37);A$;TAB(52);D$
820   PRINT A$;TAB(19);L$
830   PRINT
840 NEXT I
850 REM ***** PROGRAM TERMINATION POINT *****
860 PRINT
870 PRINT
880 STOP
890 REM ***** DATA ENTRIES FOLLOW *****
900 DATA I,LIFE INSURANCE,JOHN A JONES,12-23456,JUN 5 1979,30000
910 DATA ANY INSURANCE COMPANY TOPEKA KANSAS
920 DATA C,CARD BRAND X,JOHN OR JUDY DOE,22 786 28982 1,OCT 1980
930 DATA 500.00,CARD OFFICE BOX 1415 TOPEKA KANSAS
940 DATA S,COMMON STOCK,ABC CORP,100,JUN 5 1979,1234.46,SAFE DEPOSIT BOX
950 DATA C,CREDIT CARD Y,JOHN DOE,11 234 12,NOV 1980
960 DATA 1000,ABC INC BOX 123 MIAMI FLORIDA
970 DATA M,1234 LORA PLACE,JOHN OR JUDY DOE,30,JUN 11 1979,35000
980 DATA MORTGAGE AAA SERVICE DAYTON OHIO 42401
990 DATA END

```

```

RUN
DO YOU WISH TO PRINT ALL ENTRIES (Y OR N)?
? Y

```

CREDIT CARD/LIMIT	NAME/NOTIFY	NUMBER	EXP DATE
CARD BRAND X 500	JOHN OR JUDY DOE CARD OFFICE BOX 1415 TOPEKA KANSAS	22 786 28982 1	OCT 1980
CREDIT CARD Y 1000	JOHN DOE ABC INC BOX 123 MIAMI FLORIDA	11 234 12	NOV 1980
INS TYPE/AMT	INSURED/COMPANY	POLICY #	DATE
LIFE INSURANCE 30000	JOHN A JONES ANY INSURANCE COMPANY TOPEKA KANSAS	12-23456	JUN 5 1979
SECURITY/PRICE	COMPANY	QTY	DATE
COMMON STOCK 1234.46	ABC CORP SAFE DEPOSIT BOX	100	JUN 5 1979

PROPERTY/AMOUNT	NAME	YRS	PRCH DATE
1234 LORA PLACE 35000	JOHN OR JUDY DOE	30	JUN 11 1979
	MORTGAGE AAA SERVICE DAYTON OHIO 42401		

BREAK IN 880

RUN
DO YOU WISH TO PRINT ALL ENTRIES (Y OR N)?
? N
SHALL I PRINT CREDIT CARDS (C), INSURANCE (I),
SECURITIES (S), OR MORTGAGES (M)?
? I

INS TYPE/AMT	INSURED/COMPANY	POLICY #	DATE
LIFE INSURANCE 30000	JOHN A JONES ANY INSURANCE COMPANY TOPEKA KANSAS	12-23456	JUN 5 1979

BREAK IN 880

MAJOR SYMBOL TABLE - FINANCIAL RECORDS

I	I NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	A1\$	.. PRINT INDICATOR	I
I	T\$	.. RECORD TYPE CODE	I
I	N\$	.. CARD NAME/INSURANCE/SECURITY TYPE/PROPERTY	I
I	H\$	.. NAME OF HOLDER	I
I	A\$	.. ACCT NBR/PTY/YEARS	I
I	D\$	.. DATE	I
I	A	.. AMOUNT/LIMITATION	I
I	L\$	.. LOCATION/ADDRESS	I

FUNCTIONS USED

I	I NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINE	I

INCOME TAX RECORDING

Description

This program can assist you in recording/computing the various items required for State and Federal income tax reporting. While it cannot produce the completed forms for you (because of changing laws and forms), it can assist with the tedious job of accumulating your results.

Functions of the Program

The program initializes the various income/deduction categories first. As the program exists in the listing provided, the first eight items are considered to be income categories. Item number 8 is not defined. The remaining items are the expense (deduction) categories. All data items are read to accumulate income items. Following the completion of reading the income items, the data is restored and the process is repeated for the expense categories.

Instructions for Use

Prior to running the program, the income and deduction items must be entered using DATA statements.

Data Entry

All data is entered using DATA statements.

Data Formats

The format for both income and expense items is the same:

I or D, Detailed item type code, Amount, Explanation

See examples provided.

Output Description

See example provided. Output is produced in separate sections for income and deductions. Subtotals and totals are produced for all categories.

Suggested Enhancements

This program could easily be modified to accept input from disk or tape files that were accumulated throughout the year.

Comments

The results will be no better than the data provided.

```

20 REM INCOME TAX RECORDING PROGRAM
30 REM *****
40 REM THIS PROGRAM CAN BE EXTREMELY USEFUL IN MAINTAINING THE
50 REM INFORMATION THAT YOU NEED TO PREPARE YOUR INCOME TAX
60 REM AND IT WILL HELP YOU CATEGORIZE YOUR TAX FORM ITEMS.
70 REM IT CANNOT COMPUTE YOUR TAX FOR YOU. CHANGING TAX LAWS
80 REM AND FORMS REQUIRE YOUR DECISION MAKING IN THE PROCESS.
90 REM *****
100 REM ***** DATA INITIALIZATION *****
110 M=18
120 M0=10000
130 M1=8
140 DIM C1$(18)
150 DIM D1$(18)
160 C1$(1)="W"
170 D1$(1)="WAGES"
180 C1$(2)="B"
190 D1$(2)="BUSINESS/PROFESSION INCOME"
200 C1$(3)="F"
210 D1$(3)="FARM INCOME"
220 C1$(4)="I"
230 D1$(4)="INTEREST INCOME"
240 C1$(5)="D"
250 D1$(5)="DIVIDENDS"
260 C1$(6)="R"
270 D1$(6)="RENT/ROYALTY INCOME"
280 C1$(7)="O"
290 D1$(7)="OTHER INCOME"
300 C1$(9)="M"
310 D1$(9)="MOVING EXPENSES"
320 C1$(10)="C"
330 D1$(10)="CONTRIBUTIONS"
340 C1$(11)="I"
350 D1$(11)="INTEREST EXPENSES"
360 C1$(12)="T"
370 D1$(12)="TAXES PAID"
380 C1$(13)="MD"
390 D1$(13)="MEDICAL/DENTAL"
400 C1$(14)="CT"
410 D1$(14)="CASUALTY/THEFT"
420 C1$(15)="E"
430 D1$(15)="ENTERTAINMENT/TRAVEL"
440 C1$(16)="B"
450 D1$(16)="BUSINESS EXPENSE"
460 C1$(17)="MI"
470 D1$(17)="MISC EXPENSE"
480 C1$(18)="O"
490 D1$(18)="OTHER EXPENSES"
500 REM ** INCOME CATEGORIES ARE FIRST 8 POSITIONS OF THE ARRAY
510 REM ***** END OF CATEGORY ARRAY INPUTS *****
520 REM ***** PRINT OF INCOME ITEMS BY CATEGORIES *****
530 PRINT "ALIGN TO TOP OF PAGE"
540 INPUT G$
550 PRINT "***** INCOME *****"
560 FOR J = 1 TO M1
570 PRINT D1$(J)
580 FOR I = 1 TO M0
590 READ T$
600 IF T$="END" THEN 670
610 READ C$,D$,S$
620 IF T$<>"I" THEN 660

```

```

630     IF C#<>C1$(J) THEN 660
640     PRINT TAB(5);S$;TAB(50);D
650     T1=T1+D
660     NEXT I
670     PRINT TAB(42);"TOTAL";TAB(50);T1
680     T2=T2+T1
690     T1=0
700     PRINT "-----"
710     RESTORE
720     NEXT J
730     RESTORE
740     PRINT TAB(36);"TOTAL INCOME";TAB(50);T2
750     T2=0
760     T1=0
770     J0=J
780     REM ***** END OF INCOME - START DEDUCTION PRINT *****
790     PRINT "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
800     FOR J = J0 TO M
810     PRINT D1$(J)
820     FOR I = 1 TO M0
830     READ T$
840     IF T$="END" THEN 910
850     READ C$,D$,S$
860     IF T$<>"D" THEN 900
870     IF C#<>C1$(J) THEN 900
880     PRINT TAB(5);S$;TAB(50);D
890     T1=T1+D
900     NEXT I
910     PRINT TAB(42);"TOTAL";TAB(50);T1
920     PRINT "-----"
930     T2=T2+T1
940     T1=0
950     RESTORE
960     NEXT J
970     PRINT TAB(36);"TOTAL DEDUCTIONS";TAB(50);T2
980     T2=0
990     T1=0
1000    REM XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1010    REM XXXXXXXX DATA ENTRIES FOR INITIALIZATION XXXXXXXX
1020    REM XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1030    DATA I,W,13.45,EMPLOYER 1
1040    DATA I,W,8900.46,EMPLOYER 2
1050    DATA I,I,.09,BANK OR SAVINGS AND LOAN 1
1060    DATA I,B,14.35,SIGN PAINTING FOR XYZ CORP
1070    DATA I,B,13.63,SIGN PAINTING FOR COMPANY XYZ
1080    DATA I,D,.41,DIVIDEND PAID BY ABC INC.
1090    DATA D,C,14.89,CHURCH ABC
1100    DATA D,C,15.12,XYZ CHARITY
1110    DATA D,MD,200.00,DOCTOR Z FOR HOSPITAL VISIT
1120    DATA D,MD,50.,DENTIST Q FOR FILLINGS
1130    DATA D,I,45.00,AAA CREDIT CORP
1140    DATA D,CT,13.89,THEFT OF TAPE RECORDER
1150    DATA D,MI,2.50,INCOME TAX PREPARATION
1160    DATA D,E,13.45,BUSINESS LUNCH ON 12 JUN WITH MR X-MR Y
1170    DATA D,B,12.10,PAINT FOR SIGN PAINTING
1180    DATA END

```

```

RUN
ALIGN TO TOP OF PAGE
?

```

***** INCOME *****

WAGES

EMPLOYER 1	13.45
EMPLOYER 2	8900.46
TOTAL	8913.91

BUSINESS/PROFESSION INCOME

SIGN PAINTING FOR XYZ CORP	14.35
SIGN PAINTING FOR COMPANY XYZ	13.63
TOTAL	27.98

FARM INCOME

TOTAL 0

INTEREST INCOME

BANK OR SAVINGS AND LOAN 1	.09
TOTAL	.09

DIVIDENDS

DIVIDEND PAID BY ABC INC.	.41
TOTAL	.41

RENT/ROYALTY INCOME

TOTAL 0

OTHER INCOME

TOTAL 0

TOTAL 0

TOTAL INCOME 8942.39

***** DEDUCTIONS *****

MOVING EXPENSES

TOTAL 0

CONTRIBUTIONS

CHURCH ABC	14.89
XYZ CHARITY	15.12
TOTAL	30.01

INTEREST EXPENSES

AAA CREDIT CORP	45
TOTAL	45

TAXES PAID

TOTAL 0

MEDICAL/DENTAL

DOCTOR Z FOR HOSPITAL VISIT	200
DENTIST Q FOR FILLINGS	50
TOTAL	250

CASUALTY/THEFT

THEFT OF TAPE RECORDER	13.89
TOTAL	13.89

ENTERTAINMENT/TRAVEL

BUSINESS LUNCH ON 12 JUN WITH MR X-MR Y.	13.45
TOTAL	13.45

BUSINESS EXPENSE		
PAINT FOR SIGN PAINTING		12.1
	TOTAL	12.1

MISC EXPENSE		
INCOME TAX PREPARATION		2.5
	TOTAL	2.5

OTHER EXPENSES		
	TOTAL	0

	TOTAL DEDUCTIONS	366.95

MAJOR SYMBOL TABLE - INCOME TAX RECORDING

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	M .. MAXIMUM NUMBER OF CATEGORIES	I
I	M0 .. MAXIMUM NUMBER OF DATA READS	I
I	M1 .. NUMBER OF INCOME CATEGORIES	I
I	C1\$() .. MASTER CATEGORY CODE ARRAY	I
I	D1\$() .. MASTER CATEGORY DESCRIPTION ARRAY	I
I	T\$.. INCOME/DEDUCTION CODE	I
I	C\$.. TRANSACTION CATEGORY CODE	I
I	D .. TRANSACTION AMOUNT	I
I	S\$.. TRANSACTION DESCRIPTION	I
I	T1 .. SUBTOTAL INCOME/DEDUCTIONS	I
I	T2 .. TOTAL INCOME/DEDUCTIONS	I
I	-----	I

FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	TAB .. FORMATS PRINT LINE	I
I	ARRAYS.. SINGLE DIMENSION	I
I	-----	I

STOCKS

Description

This program can assist the investor in analyzing and keeping track of current holdings. There are three options available:

1. Listing transactions
2. Listing current holdings after computing the results of all buy/sell transactions and stock splits
3. Producing a profit/loss analysis for specific stocks owned.

Functions of the Program

The program accepts all entries from DATA statements, interprets the transaction code, and produces the listing desired. The data expected for each type of transaction differs as shown below.

Instructions for Use

Transactions are entered in DATA statements prior to running the program. The data should be updated as transactions occur but can be gathered and entered just prior to a run.

How to Enter Data

All data is entered using DATA statements.

Data Formats

See examples. Data formats differ for each transaction type, as follows:

1. Buy transactions:
B, Company name, Stock symbol, Exchange, Date purchased,
Price per share, Quantity of shares, Commission paid
2. Sell transactions:
S, Company name, Stock symbol, Exchange, Date purchased,
Price per share, Quantity, Commission paid
3. Dollar dividends:
D, Stock symbol, Dividend amount per share, Date of dividend,
Shares of record for dividend
4. Share dividends:
SD, Dividend per share, Date of dividend,
Shares of record for dividend
5. Stock splits:
SS, Shares after split, Shares before split, Date of Split,
Shares of record for split

Output Description

See examples provided. Three forms of output are available; each has easily readable headings for clarity and ease of interpretation.

```

20 REM          STOCK MARKET RECORD PROGRAM
30 REM***** DATA INITIALIZATION *****
40 M1=50
50 M=1000
60 DIM S1$(50)
70 DIM C1$(30)
80 DIM Q1$(30)
90 DIM P1$(30)
100 N1=1
110 S=0
120 M0=0
130 DIM T1$(6)
140 T1$(1)="BOUGHT"
150 T2$(1)="E"
160 T1$(2)="SOLD"
170 T2$(2)="S"
180 T1$(3)="$ DVD"
190 T2$(3)="D"
200 T1$(4)="SHR DVD"
210 T2$(4)="SD"
220 T1$(5)="SPLIT"
230 T2$(5)="SS"
240 T1$(6)="*****"
250 PRINT
260 PRINT "THE FOLLOWING OPTIONS ARE AVAILABLE"
270 PRINT
280 PRINT TAB(10);"1... A LIST OF ALL TRANSACTIONS"
290 PRINT TAB(10);"2... A LIST OF ALL CURRENT HOLDINGS"
300 PRINT TAB(10);"3... THE PROFIT/LOSS ON A GIVEN STOCK"
310 PRINT
320 PRINT "ENTER THE OPTION DESIRED ( 1, 2, OR 3)"
330 INPUT O
340 PRINT
350 PRINT
360 IF O <> 3 THEN 460
370 PRINT "ENTER THE STOCK SYMBOL TO EVALUATE"
380 INPUT X$
390 PRINT "ENTER THE CURRENT PRICE OF THE STOCK"
400 INPUT V
410 PRINT "ENTER THE CURRENT DATE"
420 INPUT D1$
430 PRINT
440 PRINT
450 PRINT "          TRANSACTION RECAP  ---  ";X$;TAB(50);D1$
460 PRINT
470 REM ***** PROCESSING AREA *****
480 FOR I = 1 TO M
490   READ T$
500   IF T$ = "END" THEN 830
510   IF T$="D" THEN 560
520   IF T$="SS" THEN 620
530   IF T$="SD" THEN 560
540   READ C$,S$,E$,D$,P,Q,C
550   GOTO 630
560   READ S$,N0,D$,Q
570   C$="  "
580   E$="  "
590   P=N0
600   C=0
610   GOTO 630
620   READ S$,N0,N1,D$,Q
630   FOR J= 1 TO M0
640     IF S$=S1$(J) THEN 710
650   NEXT J

```

```

660 M0=M0+1
670 S1$(M0)=S$
680 M1=M0
690 J=M0
700 GOTO 720
710 M1=J
720 IF 0 <> 1 THEN 750
730 GOSUB 1360
740 GOTO 820
750 IF 0 <> 2 THEN 780
760 GOSUB 1570
770 GOTO 820
780 IF 0 <> 3 THEN 820
790 IF S$ <> X$ THEN 820
800 GOSUB 1680
810 GOTO 820
820 NEXT I
830 REM END OF MAIN PROCESSING LOOP *****
840 IF 0=1 THEN 1320
850 IF 0 <> 2 THEN 1070
860 FOR I = 1 TO M0
870 PRINT "ENTER THE CURRENT PRICE OF ";C1$(I); " (";S1$(I);")"
880 INPUT P1(I)
890 NEXT I
900 PRINT
910 PRINT
920 PRINT TAB(20);"CURRENT STATUS OF HOLDINGS"
930 PRINT
940 PRINT
950 PRINT "STOCK";TAB(20);"SYMBOL";TAB(30);"QTY HELD";TAB(41);
960 PRINT "PRICE";TAB(51);"VALUE"
970 PRINT "-----";TAB(20);"-----";TAB(30);"-----";TAB(41);
980 PRINT "-----";TAB(51);"-----"
990 FOR I = 1 TO M0
1000 PRINT C1$(I);TAB(20);S1$(I);TAB(30);Q1(I);TAB(40);
1010 PRINT P1(I);TAB(50);P1(I)*Q1(I)
1020 TB=TB+(P1(I)*Q1(I))
1030 NEXT I
1040 PRINT TAB(50);"======"
1050 PRINT TAB(42);"TOTAL";TAB(50);TB
1060 GOTO 1240
1070 IF 0 <> 3 THEN 1320
1080 PRINT
1090 PRINT
1100 PRINT TAB(24);"SUMMARY ANALYSIS"
1110 PRINT
1120 PRINT TAB(7);"I SHARE COMM DVD I BOOK ";TAB(42);
1130 PRINT "CURRENT I";TAB(53);"CURRENT"
1140 PRINT"SHARES";TAB(7);"I COST PAID RCVD";
1150 PRINT TAB(31);"I TOTAL";TAB(43);"VALUE I";TAB(53)"POSITION"
1160 PRINT "-----I -----I";
1170 PRINT TAB(34)"-----";TAB(42);"----- I";TAB(53);"-----"
1180 PRINTQ9;TAB(10);P9;TAB(18);C9;TAB(27);D9;TAB(33);V9;
1190 PRINT TAB(41);V*Q9;TAB(53);(V*Q9)-V9
1200 IF S9 = 0 THEN 1240
1210 PRINT TAB(35);"*"
1220 PRINT
1230 PRINT "* SHARE DIVIDEND OF ";S9;" SHARES"
1240 PRINT
1250 IF Q9=0 THEN 1320
1260 PRINT TAB(26);D1$
1270 PRINT TAB(20)"*****"
1280 PRINT TAB(23)"BOOK VALUE IS ";V9/Q9
1290 PRINT TAB(20)"*****"

```

```

1300 PRINT TAB(23)"CURRENT VALUE ";V
1310 PRINT TAB(20);"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
1320 PRINT
1330 PRINT
1340 STOP
1350 REM ***** TRANSACTION INTERPRETATION ROUTINE ***
1360 IF I <> 1 THEN 1430
1370 PRINT TAB(28);"TRANSACTION LIST"
1380 PRINT
1390 PRINT "TRANS COMPANY";TAB(24);"SYB EX DATE";TAB(43);"PRICE";
1400 PRINT TAB(51);"QTY";TAB(56);"COMM"
1410 PRINT "-----" TAB(24);"-----" TAB(43);"-----";
1420 PRINT TAB(51);"-----";TAB(56);"-----"
1430 FOR J= 1 TO 5
1440 IF T# <> T2#(J) THEN 1470
1450 L=J
1460 GOTO 1490
1470 NEXT J
1480 L=6
1490 IF L>2 THEN 1530
1500 PRINT T1#(L);TAB(8);C#;TAB(24);S#;TAB(28);E#;
1510 PRINT TAB(31);D#;TAB(42);P#;TAB(50);Q#;TAB(55);C
1520 GOTO 1560
1530 PRINT T1#(4);TAB(8);N0/N1;" " T1#(L);TAB(24);S#;TAB(31);D#;
1540 PRINT TAB(50);Q
1550 N1=1
1560 RETURN
1570 REM ***** ACCUMULATION ROUTINE FOR HOLDINGS ***
1580 C1#(J)=C#
1590 IF T#<>"B" THEN 1610
1600 Q1(J)=Q1(J)+Q
1610 IF T#<>"S" THEN 1630
1620 Q1(J)=Q1(J)-Q
1630 IF T#<>"SD" THEN 1650
1640 Q1(J)=Q1(J)+(N0*Q)
1650 IF T#<>"SS" THEN 1670
1660 Q1(J)=(Q1(J)-Q)+(Q*N0/N1)
1670 RETURN
1680 REM ***** ACCUMULATION ROUTINE FOR PROFIT/LOSS *****
1690 IF S = 1 THEN 1730
1700 PRINT TAB(23);C#
1710 PRINT
1720 S=1
1730 IF T#<>"B" THEN 1800
1740 PRINT "BOUGHT";TAB(8);Q#;TAB(13);" AT ";P#;TAB(25);"-"D#;
1750 PRINT TAB(37);" - CHARGES:";TAB(48);C#;PRINT " (";(Q*P)+C#)"
1760 Q9=Q9+Q
1770 C9=C9+C
1780 P9=P9+ (P*Q)
1790 V9=V9+(Q*P)+C
1800 REM HANDLES SALES
1810 IF T#<>"S" THEN 1880
1820 PRINT "SOLD";TAB(8);Q#;TAB(13);" AT ";P#;TAB(25);"-"D#;
1830 PRINT TAB(37);" - CHARGES:";TAB(48);C#;PRINT " (";(Q*P)-C#)"
1840 Q9=Q9-Q
1850 C9=C9+C
1860 P9=P9-(P*Q)
1870 V9=V9-(Q*P)+C
1880 REM HANDLES DIVIDENDS
1890 IF T#<>"D" THEN 1940
1900 V9=V9-(Q*N0)
1910 D9=D9+(N0*Q)
1920 PRINT "DIVIDENDS *** OF ";N0#;TAB(25);"-"D#;TAB(38);Q#;TAB(44);
1930 PRINT "SHARES";PRINT " (";(Q*N0);" )"

```

```

1940 REM HANDLES SHARE DIVIDENDS
1950 IF T#="SD" THEN 2000
1960 S9=S9+(N0*Q)
1970 Q9=Q9+(N0*Q)
1980 PRINT "SHARE DIV *** ";N0;TAB(25);"-";D$;TAB(38);Q;TAB(44);
1990 PRINT "SHRS DVD=";N0*Q;" SHRS"
2000 REM HANDLES STOCK SPLITS
2010 IF T#="SS" THEN 2050
2020 PRINT "STK SPLIT *** ";N0;"/";N1;TAB(25);"-";D$;TAB(38);Q;TAB(44);
2030 PRINT "SHARES"
2040 Q9=(Q9-Q)+(Q*N0/N1)
2050 REM TOTAL PRINTING AREA
2060 RETURN
2070 REM ***** DATA ENTRIES FOLLOW *****
2080 DATA B,ABC CORPORATION,ABC,NY,JUN 5 1979,12.00,100,12.15
2090 DATA B,XYZ COMPANY,XYZ,A,JUN 6 1979,100.22,200,35.33
2100 DATA S,XYZ COMPANY,XYZ,A,OCT 7 1979,88.88,100,21.11
2110 DATA D,XYZ,3.05,NOV 1979,100
2120 DATA SS,XYZ,3,1,DEC 31 1979,100
2130 DATA SD,XYZ,.05,JAN 1 1980,100
2140 DATA B,XYZ COMPANY,XYZ,A,JAN 31 1980,75.00,100,19.99
2150 DATA S,ABC CORPORATION,ABC,NY,JAN 28 1980,14.00,50,4.55
2160 DATA END

```

THE FOLLOWING OPTIONS ARE AVAILABLE

- 1... A LIST OF ALL TRANSACTIONS
- 2... A LIST OF ALL CURRENT HOLDINGS
- 3... THE PROFIT/LOSS ON A GIVEN STOCK

ENTER THE OPTION DESIRED (1, 2, OR 3)

? 1

TRANSACTION LIST

TRANS	COMPANY	SYB EX	DATE	PRICE	QTY	COMM
BOUGHT	ABC CORPORATION	ABC NY	JUN 5 1979	12	100	12.15
BOUGHT	XYZ COMPANY	XYZ A	JUN 6 1979	100.22	200	35.33
SOLD	XYZ COMPANY	XYZ A	OCT 7 1979	88.88	100	21.11
****	3.05 DOLLAR DVD	XYZ	NOV 1979		100	
****	.3 STK SPLIT	XYZ	DEC 31 1979		100	
****	.05 SHARE DVD	XYZ	JAN 1 1980		100	
BOUGHT	XYZ COMPANY	XYZ A	JAN 31 1980	75	100	19.99
SOLD	ABC CORPORATION	ABC NY	JAN 28 1980	14	50	4.55

BREAK IN 1340

RUN

THE FOLLOWING OPTIONS ARE AVAILABLE

- 1... A LIST OF ALL TRANSACTIONS
- 2... A LIST OF ALL CURRENT HOLDINGS
- 3... THE PROFIT/LOSS ON A GIVEN STOCK

ENTER THE OPTION DESIRED (1, 2, OR 3)

? 2

ENTER THE CURRENT PRICE OF ABC CORPORATION (ABC)
 ? 98.85
 ENTER THE CURRENT PRICE OF XYZ COMPANY (XYZ)
 ? 67.89

CURRENT STATUS OF HOLDINGS

STOCK	SYMBOL	QTY HELD	PRICE	VALUE
ABC CORPORATION	ABC	50	98.85	4942.5
XYZ COMPANY	XYZ	405	67.89	27495.5
			TOTAL	32438

RUN

THE FOLLOWING OPTIONS ARE AVAILABLE

- 1... A LIST OF ALL TRANSACTIONS
- 2... A LIST OF ALL CURRENT HOLDINGS
- 3... THE PROFIT/LOSS ON A GIVEN STOCK

ENTER THE OPTION DESIRED (1, 2, OR 3)
 ? 3

ENTER THE STOCK SYMBOL TO EVALUATE
 ? XYZ
 ENTER THE CURRENT PRICE OF THE STOCK
 ? 55.25
 ENTER THE CURRENT DATE
 ? JUN 19 1980

TRANSACTION RECAP -- XYZ JUN 19 1980

XYZ COMPANY

BOUGHT 200 AT 100.22 -JUN 6 1979 - CHARGES: 35.33 (20079.3)
 SOLD 100 AT 88.88 -OCT 7 1979 - CHARGES: 21.11 (8866.89)
 DIVIDENDS *** OF 3.05 -NOV 1979 100 SHARES (305)
 STK SPLIT *** 3 / 1 -DEC 31 1979 100 SHARES
 SHARE DIV *** .05 -JAN 1 1980 100 SHARES DIV= 5 SHARES
 BOUGHT 100 AT 75 -JAN 31 1980 - CHARGES: 19.99 (7519.99)

SUMMARY ANALYSIS

SHARES	I	SHARE	COMM	DVD	I	BOOK	CURRENT	I	CURRENT
-----	I	COST	PAID	RCVD	I	TOTAL	VALUE	I	POSITION
405		18656	76.43	305		18427.4	22376.3		3948.82

* SHARE DIVIDEND OF 5 SHARES

JUN 19 1980

 BOOK VALUE IS 45.4998

 CURRENT VALUE 55.25

BREAK IN 1340

MAJOR SYMBOL TABLE - STOCKS

```
I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS           I
I S1$( ).. ARRAY OF STOCK SYMBOLS                  I
I C1$( ).. ARRAY OF COMPANY NAMES                  I
I Q1( ) .. ARRAY OF QTY HELD                        I
I P1( ) .. ARRAY OF PRICES PAID                    I
I T1$( ).. MASTER CATEGORY CODE ARRAY              I
I T2$( ).. MASTER CATEGORY DESCRIPTION ARRAY       I
I O     .. OPTION NUMBER                            I
I X$    .. STOCK SYMBOL TO EVALUATE                 I
I V     .. CURRENT PRICE OF STOCK                   I
I D1$   .. CURRENT DATE                             I
I T$    .. TRANSACTION CATEGORY CODE                I
I C$    .. TRANSACTION COMPANY NAME                 I
I S$    .. TRANSACTION STOCK SYMBOL                I
I E$    .. TRANSACTION EXCHANGE                     I
I D$    .. TRANSACTION DATE                         I
I P     .. TRANSACTION PRICE                        I
I Q     .. TRANSACTION QTY                          I
I C     .. TRANSACTION COMMISSION COST              I
I-----I
```

FUNCTIONS USED

```
I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINE                       I
I GOSUB .. BRANCHES AND RETURNS                     I
I DIM   .. SINGLE DIMENSION ARRAY                  I
I-----I
```

Automobile Related Programs

<i>Auto Maintenance</i>	50
<i>Gasoline Use Computation—Basic Version</i>	54
<i>Gasoline Use Computation—Extended Version</i>	56
<i>Automobile Comparisons</i>	59
<i>Trip Planning—Basic Version</i>	64
<i>Trip Planning—Extended Version</i>	67

AUTO MAINTENANCE

Description

Automobiles are increasing in price every day. This program will assist you in insuring that recommended maintenance (service) actions are taken to protect your investment. In addition, it provides an ideal record for showing to prospective buyers.

Functions of the Program

The program reads the data items that reflect the manufacturer's recommended maintenance schedules and the service accomplished by you. The basic schedule items are extended by the program (based upon mileage) through the current mileage on the vehicle. Maintenance schedules and records are printed, as requested.

Instructions for Use

Data entries of all recommended service items in the automobile owner's manual must be entered into the program prior to running. Service performed should be entered as it is accomplished.

Data Entry

All data is entered using DATA statements.

Data Formats

Three formats are required:

1. The first item is the automobile's purchase date:
Month, Year
2. Basic manufacturer recommended service schedules are then added in the following form:
Service code, Description, Frequency in miles,
Frequency in months
3. Service accomplished is entered in the following form:
Service code, Mileage, Month, Year

Note that an END card is required to separate the basic service requirements from the items accomplished.

Output Description

See example provided. Three outputs are available:

1. A list of the basic maintenance requirements and their frequency.
2. A detailed list of maintenance accomplished.
3. A schedule of the next scheduled accomplishment of each of the service requirements.

```

20 REM      AUTOMOBILE MAINTENANCE RECORD - BASIC
30 REM ***** DATA INITIALIZATION *****
40 M0=25
50 I0=1000
60 DIM M(M0)
70 DIM I$(M0)
80 DIM C$(M0)
90 DIM L1(M0)
100 DIM L1$(M0)
110 DIM D0$(12)
120 FOR I=1 TO 12
130   READ D0$(I)
140 NEXT I
150 READ T1$,Y1
160 DIM T(M0)
170 REM ***** MAIN PROCESSING AREA *****
180 REM ***** READ INITIAL SCHEDULES
190 FOR I = 1 TO M0
200   READ C$(I)
210   IF C$(I)="END" THEN 240
220   READ I$(I),M(I),T(I)
230 NEXT I
240 M0 = I-1
250 PRINT "WOULD YOU LIKE TO SEE THE BASIC SCHEDULE (Y OR N)?"
260 INPUT A$
270 IF A$<>"Y" THEN 330
280 PRINT "  ITEM";TAB(30);"MILES";TAB(40);"MONTHS"
290 PRINT "-----";TAB(30);"-----";TAB(40);"-----"
300 FOR I = 1 TO M0
310   PRINT I$(I);TAB(30);M(I);TAB(40);T(I)
320 NEXT I
330 REM ***** PRINTS MAINTENANCE RECORD *****
340 PRINT
350 PRINT
360 PRINT "ENTER CURRENT MILEAGE"
370 INPUT M1
380 PRINT "SHALL I PRINT THE MAINTENANCE RECORD (Y OR N)?"
390 INPUT A$
400 PRINT "ALIGN PAPER FOR PRINTING"
410 INPUT A1$
420 IF A$<>"Y" THEN 500
430 PRINT "*****"
440 PRINT
450 PRINT "RECORD OF SCHEDULED MAINTENANCE ACCOMPLISHED"
460 PRINT
470 PRINT "CODE";TAB(10);"  ITEM";TAB(30);"AT MILES";TAB(40);"  DATE"
480 PRINT "-----";TAB(10);"-----";TAB(30);"-----";
490 PRINT TAB(40);"-----"
500 K=1
510   READ C9$
520   IF C9$="END" THEN 690
530   READ M9,M9$,Y9
540   FOR I = 1 TO M0
550     IF C9$<>C$(I) THEN 600
560     IF L1(I)>=M9 THEN 590
570     L1(I)=M9
580     L1$(I)=M9$
590     GOTO 610
600   NEXT I
610   IF A$<>"Y" THEN 670
620   FOR I=1 TO M0
630     IF C9$=C$(I) THEN 660
640     NEXT I
650     I$(I)="  "

```

```

660 PRINT C9$;TAB(10);I$(I);TAB(30);M9;TAB(40);M9$;Y9
670 K=K+1
680 IF K<=I0 THEN 510
690 PRINT
700 PRINT
710 PRINT "*****"
720 PRINT
730 PRINT "SCHEDULED MAINTENANCE - BASED UPON MILEAGE"
740 PRINT
750 PRINT " ITEM";TAB(30);" FREQ";TAB(40);"LAST";TAB(50);" SCHED"
760 PRINT "-----";TAB(30);"-----";TAB(40);"-----";
770 PRINT TAB(50);"-----"
780 FOR J=1 TO M0
790 I=L1(J)+M(J)
800 IF I>M1 THEN 820
810 X$="*"
820 PRINT I$(J);TAB(30);M(J);TAB(40);L1(J);TAB(50);I;X$
830 X$=" "
840 NEXT J
850 PRINT
860 PRINT "CURRENT MILEAGE IS ";M1
870 PRINT
880 PRINT "*****"
890 REM "***** PROGRAM TERMINATION POINT *****"
900 PRINT
910 PRINT
920 STOP
930 REM "***** DATA FOR INITIALIZATION *****"
940 DATA JAN,FEB,MAR,APR,MAY,JUN,JUL,AUG,SEP,OCT,NOV,DEC
950 REM "***** DATA ENTRY FOLLOWS *****"
960 DATA JUN,1978
970 DATA OILF,OIL FILTER,12000,12
980 DATA AIRF,AIR FILTER,12000,12
990 DATA ROTATE,ROTATE TIRES,6000,6
1000 DATA LUBE,LUBRICATE,12000,12
1010 DATA CHKTW,CHECK TIRE WEAR,3000,3
1020 DATA CHKAL,CHECK ALIGNMENT,4000,4
1030 DATA END
1040 DATA OILF,13000,JUN,1979
1050 DATA LUBE,11000,MAY,1979
1060 DATA END

```

RUN
 WOULD YOU LIKE TO SEE THE BASIC SCHEDULE (Y OR N)?
 ? Y

ITEM	MILES	MONTHS
OIL FILTER	12000	12
AIR FILTER	12000	12
ROTATE TIRES	6000	6
LUBRICATE	12000	12
CHECK TIRE WEAR	3000	3
CHECK ALIGNMENT	4000	4

ENTER CURRENT MILEAGE
 ? 13700
 SHALL I PRINT THE MAINTENANCE RECORD (Y OR N)?
 ? Y
 ALIGN PAPER FOR PRINTING
 ?

RECORD OF SCHEDULED MAINTENANCE ACCOMPLISHED

CODE	ITEM	AT MILES	DATE
OILF	OIL FILTER	13000	JUN 1979
LUBE	LUBRICATE	11000	MAY 1979

SCHEDULED MAINTENANCE - BASED UPON MILEAGE

ITEM	FREQ	LAST	SCHED
OIL FILTER	12000	13000	25000
AIR FILTER	12000	0	12000 *
ROTATE TIRES	6000	0	6000 *
LUBRICATE	12000	11000	23000
CHECK TIRE WEAR	3000	0	3000 *
CHECK ALIGNMENT	4000	0	4000 *

CURRENT MILEAGE IS 13700

BREAK IN 920

MAJOR SYMBOL TABLE - AUTO MAINTENANCE

I	NAME	DESCRIPTION	I
I	MO	NUMBER OF MASTER SERVICE ITEMS	I
I	IO	MAXIMUM NUMBER OF DATA READS	I
I	M()	MASTER MILEAGE ARRAY	I
I	I\$()	MASTER SERVICE REQNTS ARRAY	I
I	C\$()	MASTER CODE FOR SERVICE ITEMS ARRAY	I
I	L1()	LATEST SERVICE -MILEAGE ARRAY	I
I	L1\$()	LATEST SERVICE -MONTH ARRAY	I
I	DO\$()	MONTH NAME ARRAY	I
I	T()	MASTER TIME ARRAY	I
I	T1\$	PURCHASE MONTH	I
I	Y1	PURCHASE YEAR	I
I	M1	CURRENT MILEAGE	I
I	C9\$	TRANSACTION CODE IN	I
I	M9	TRANSACTION MILEAGE IN	I
I	M9\$	TRANSACTION MONTH IN	I
I	Y9	TRANSACTION YEAR IN	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	DIM	SINGLE DIMENSION ARRAYS	I

GASOLINE USE COMPUTATION – BASIC VERSION

Description

The rising cost of gasoline makes this program more useful each day since it allows you to compute the current average miles per gallon for your automobile(s).

Functions of the Program

The program requests from you the initial mileage for the period and the date that the recording period started. Following this, the gasoline used during the period is entered along with the mileage at the end of the period. The program then computes miles driven, total gasoline used, and the average miles per gallon for the period.

Instructions for Use

Record your mileage and the gasoline used prior to running the program. Supply this information in response to the program's request.

Data Entry

All data is entered in response to the program's request, through the keyboard.

Output Description

See example provided.

Suggested Enhancements

See the extended version for historical recordkeeping functions.

```
20 REM GASOLINE MILEAGE ANALYSIS
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "ENTER THE INITIAL MILEAGE, DATE OF RECORDING"
60 INPUT M0,D0$
70 PRINT "ENTER THE GASOLINE USED (0 WHEN FINISHED)"
80 FOR I = 1 TO M
90   G=0
100  INPUT G
110  IF G=0 THEN 140
120  G1=G1+G
130 NEXT I
140 PRINT "ENTER ENDING MILEAGE,DATE"
150 INPUT M9,D9$
160 REM ***** PROCESSING AREA *****
170 M=M9-M0
180 C=M/G1
190 PRINT
200 PRINT
210 PRINT "*****"
```

```

220 PRINT "FOR THE PERIOD ";D0$;"-" ;D9$
230 PRINT "   MILES DRIVEN:";M
240 PRINT "   GASOLINE USED:";G1
250 PRINT "   AVG MILES/GALLON:";C
260 PRINT "*****"
270 REM ***** PROGRAM TERMINATION POINT *****
280 PRINT
290 PRINT
300 STOP

```

```

RUN
ENTER THE INITIAL MILEAGE, DATE OF RECORDING
? 10000
?? JUL 5 1979
ENTER THE GASOLINE USED (0 WHEN FINISHED)
? 10
? 15
? 15
? 20
? 20
? 20
?
ENTER ENDING MILEAGE,DATE
? 11000,AUG 1 1979

```

```

*****
FOR THE PERIOD JUL 5 1979-AUG 1 1979
MILES DRIVEN: 1000
GASOLINE USED: 100
AVG MILES/GALLON: 10
*****

```

BREAK IN 300

```

MAJOR SYMBOL TABLE - GASOLINE USE - BASIC
I-----I
I NAME      .. DESCRIPTION                      I
I-----I
I M         .. MAXIMUM NUMBER OF DATA READS  I
I M0        .. INITIAL MILEAGE                 I
I D0$       .. DATE OF INITIAL MILEAGE         I
I G         .. GASOLINE USED                   I
I G1        .. TOTAL GASOLINE USED             I
I M9        .. ENDING MILEAGE                  I
I D9$       .. DATE OF ENDING MILEAGE          I
I M         .. MILES DRIVEN                    I
I C         .. AVERAGE MILES/GALLON           I
I-----I

```

GASOLINE USE COMPUTATION – EXTENDED VERSION

Description

This program extends the basic version shown previously by adding a historical record of gas mileage and consumption.

Functions of the Program

See the basic version. This program adds to these functions the capability to print data items from past periods. After each analysis, the format to be supplied for historical use is printed for you.

Instructions for Use

Record your mileage and gas consumption prior to running the program. After processing, enter the information as DATA statements in accordance with the instructions given.

Data Entry

Current information is entered in response to program request. Historical information is entered using DATA statements.

Data Formats

The format of the historical data is as follows:

Starting month-day-year, Ending month-day-year,
Ending mileage, Miles driven during period, Gasoline used

Output Description

See example provided.

```
20 REM  GASOLINE USE COMPUTATION
30 REM  ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "DO YOU WISH TO ANALYZE PAST (P), OR CURRENT (C) DATA?"
60 INPUT A$
70 IF A$="P" THEN 390
80 PRINT "ENTER THE INITIAL MILEAGE, DATE OF RECORDING"
90 INPUT M0,D0$
100 PRINT "ENTER THE GASOLINE USED (0 WHEN FINISHED)"
110 FOR I = 1 TO M
120   G=0
130   INPUT G
140   IF G=0 THEN 170
150   G1=G1+G
160 NEXT I
170 PRINT "ENTER ENDING MILEAGE,DATE"
180 INPUT M9,D9$
```

```

190 REM ***** PROCESSING AREA *****
200 REM ***** ANALYSIS OF CURRENT PERFORMANCE *****
210 M=M9-M0
220 C=M/G1
230 PRINT
240 PRINT
250 PRINT "*****"
260 PRINT "FOR THE PERIOD ";D0$;"-";D9$
270 PRINT "   MILES DRIVEN:";M
280 PRINT "   GASOLINE USED:";G1
290 PRINT "   AVG MILES/GALLON:";C
300 PRINT "*****"
310 PRINT
320 PRINT
330 PRINT "ENTER           ";D0$;" ";D9$;" ";M9;" ";M;" ";G1
340 PRINT "AS THE LAST DATA STATEMENT BEFORE THE END CARD"
350 PRINT
360 PRINT "WOULD YOU LIKE TO SEE PAST DATA NOW (Y OR N)?"
370 INPUT A$
380 IF A$<>"Y" THEN 560
390 REM ***** ANALYSIS OF PAST PERFORMANCE *****
400 PRINT
410 PRINT
420 PRINT "PERIODS RECORDED";TAB(25);"MILES";TAB(33);"GALLONS";
430 PRINT TAB(41);"AVG MPG";TAB(51);"END MILEAGE"
440 PRINT "-----";TAB(25);"-----";TAB(33);"-----";
450 PRINT TAB(41);"-----";TAB(51);"-----"
460 FOR I= 1 TO M
470   READ D0$
480   IF D0$="END" THEN 540
490   READ D9$,M9,M,G1
500   PRINT D0$;" - ";D9$;TAB(25);M;TAB(33);G1;TAB(41);M/G1;TAB(51);M9
510   M5=M5+M
520   G5=G5+G1
530 NEXT I
540 PRINT TAB(25);"-----";TAB(33);"-----";TAB(41);"-----"
550 PRINT "TOTAL RECORDED";TAB(25);M5;TAB(33);G5;TAB(41);M5/G5
560 REM ***** PROGRAM TERMINATION POINT *****
570 PRINT
580 PRINT
590 STOP
600 REM ***** DATA ENTRIES FOLLOW *****
610 DATA JUN 1 1979,JUL 1 1979,32000,1000,100
620 DATA JUL 2 1979,AUG 15 1979,33500,1500,200
630 DATA AUG 19 1979,SEP 1 1979,36000,2000,300
640 DATA END

```

```

RUN
DO YOU WISH TO ANALYZE PAST (P), OR CURRENT (C) DATA?
? C
ENTER THE INITIAL MILEAGE, DATE OF RECORDING
? 36000,SEP 1 1979
ENTER THE GASOLINE USED (0 WHEN FINISHED)
? 13
? 15
? 10
? 12
?
ENTER ENDING MILEAGE,DATE
? 36500,SEP 15 1979

```



```

*****
FOR THE PERIOD SEP 1 1979-SEP 15 1979
MILES DRIVEN: 500
GASOLINE USED: 50
AVG MILES/GALLON: 10
*****

```

```

ENTER      SEP 1 1979,SEP 15 1979, 36500 , 500 , 50
AS THE LAST DATA STATEMENT BEFORE THE END CARD

```

```

WOULD YOU LIKE TO SEE PAST DATA NOW (Y OR N)?
? Y

```

PERIODS RECORDED	MILES	GALLONS	AVG MPG	END MILEAGE
JUN 1 1979 - JUL 1 1979	1000	100	10	32000
JUL 2 1979 - AUG 15 1979	1500	200	7.5	33500
AUG 19 1979 - SEP 1 1979	2000	300	6.66667	36000
TOTAL RECORDED	4500	600	7.5	

BREAK IN 590

MAJOR SYMBOL TABLE - GASOLINE USE - EXTENDED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS           I
I M0    .. INITIAL MILEAGE                         I
I D0$   .. DATE OF INITIAL MILEAGE                 I
I G     .. GASOLINE USED                           I
I G1    .. TOTAL GASOLINE USED                     I
I M9    .. ENDING MILEAGE                          I
I D9$   .. DATE OF ENDING MILEAGE                  I
I M     .. MILES DRIVEN                            I
I C     .. AVERAGE MILES/GALLON                   I
I M5    .. OVERALL MILES DRIVEN                    I
I G5    .. OVERALL GASOLINE USED                   I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINES                     I
I-----I

```

AUTOMOBILE COMPARISONS

Description

This program has been designed to assist the automobile shopping family in the evaluation of the costs of owning the various models being considered. The selection can then be made with a better idea of what the total costs of the model really are.

Functions of the Program

The program compares the specified number of automobiles based upon several vital costs of automobile ownership. These costs are computed for the time period requested. The costs analyzed include: gasoline, maintenance, depreciation, insurance, and other costs. Each cost computation is separated for ease in adding other cost categories.

Instructions for Use

Run the program and enter the cost data in response to the program's requests.

Data Entry

Data is entered through the keyboard, in response to the program's request.

Output Description

See example provided. Each automobile is processed and printed separately. Annual ownership costs are printed in detail, and totals are provided for the number of years specified.

```
20 REM AUTOMOBILE COMPARISON PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 DIM C(10)
50 DIM N$(6)
60 DIM G(6)
70 DIM D2(6)
80 DIM M(10,6)
90 DIM V(10,6)
100 DIM F(10,6)
110 DIM O(10,6)
120 DIM G1(6)
130 DIM T(6)
140 PRINT
150 PRINT "HOW MANY AUTOMOBILES ARE WE COMPARING?"
160 INPUT N
170 PRINT "ENTER THE NUMBER OF YEARS FOR THE ANALYSIS "
180 INPUT Y
190 PRINT "ENTER THE AVERAGE ANNUAL MILES IT IS TO BE DRIVEN"
200 INPUT D
210 PRINT "ENTER THE EXPECTED COST/GALLON OF GAS"
```

```

220 INPUT CO
230 PRINT
240 FOR I = 1 TO N
250   PRINT
260   PRINT "ENTER FOR AUTOMOBILE NUMBER " ; I
270   PRINT "NAME"
280   INPUT N$(I)
290   PRINT "INITIAL COST (INCLUDE SALES TAX, ETC)"
300   INPUT C(I)
310   PRINT "MILES PER GALLON ESTIMATE"
320   INPUT G(I)
330   FOR J = 1 TO Y
340     PRINT
350     PRINT "ENTER FOR YEAR " ; J
360     PRINT "MAINTENANCE COST"
370     INPUT M(I,J)
380     PRINT "APPROX VALUE AT YEAR END"
390     INPUT V(I,J)
400     PRINT "INSURANCE COSTS "
410     INPUT P(I,J)
420     PRINT "ENTER OTHER OPERATING COSTS "
430     INPUT O(I,J)
440   NEXT J
450 NEXT I
460 PRINT
470 PRINT "*****"
480 PRINT "              ANALYSIS RESULTS"
490 PRINT "*****"
500 PRINT
510 REM ***** PRINT OF RESULTS *****
520 FOR I = 1 TO N
530   PRINT "AUTO: " ; N$(I) ; TAB(20) ; "PRICE:" ; C(I) ; TAB(35) ; "MPG:" ; G(I)
540   PRINT
550   PRINT "ANNUAL OPERATING COSTS"
560   PRINT "ITEM" ;
570   FOR K=1 TO Y
580     PRINT TAB(K*10) ; " YEAR" ; K ;
590   NEXT K
600   PRINT
610   FOR K=1 TO Y+1
620     PRINT TAB((K-1)*10) ; "-----" ;
630   NEXT K
640   PRINT
650   REM *****
660   PRINT "GAS $" ;
670   FOR K=1 TO Y
680     G1(K)=D/G(I)*CO
690     PRINT TAB(K*10) ; G1(K) ;
700   NEXT K
710   PRINT
720   REM *****
730   PRINT "MAINT $" ;
740   FOR K=1 TO Y
750     PRINT TAB(K*10) ; M(I,K) ;
760   NEXT K
770   PRINT
780   REM *****
790   PRINT "DEFREC $" ;
800   FOR K=1 TO Y
810     IF K<>1 THEN 840

```

```

820     D2(K)=C(I)-V(I,K)
830     GOTO 850
840     D2(K)=V(I,K-1)-V(I,K)
850     PRINT TAB(K*10);D2(K);
860     NEXT K
870     PRINT
880     REM *****
890     PRINT "INSUR $";
900     FOR K=1 TO Y
910         PRINT TAB(K*10);P(I,K);
920     NEXT K
930     PRINT
940     REM *****
950     PRINT "OTHER $";
960     FOR K=1 TO Y
970         PRINT TAB(K*10);O(I,K);
980     NEXT K
990     PRINT
1000    FOR K=1 TO Y
1010        PRINT TAB(K*10);"-----";
1020    NEXT K
1030    PRINT
1040    PRINT "TOTAL";
1050    FOR K=1 TO Y
1060        T(K)=M(I,K)+D2(K)+P(I,K)+G1(K)+O(I,K)
1070        T=T+T(K)
1080        PRINT TAB(K*10);T(K);
1090    NEXT K
1100    PRINT
1110    PRINT
1120    PRINT "COST/MILE";
1130    FOR K=1 TO Y
1140        PRINT TAB(K*10);T(K)/D;
1150    NEXT K
1160    PRINT
1170    PRINT
1180    PRINT "OVERALL MILES DRIVEN:";Y*D; " COST/MILE: ";T/(Y*D)
1190    T=0
1200    PRINT "*****"
1210    PRINT
1220    NEXT I
1230    REM ***** PROGRAM TERMINATION POINT *****
1240    PRINT
1250    PRINT
1260    STOP

```

RUN

```

HOW MANY AUTOMOBILES ARE WE COMPARING?
? 1
ENTER THE NUMBER OF YEARS FOR THE ANALYSIS
? 2
ENTER THE AVERAGE ANNUAL MILES IT IS TO BE DRIVEN
? 10000
ENTER THE EXPECTED COST/GALLON OF GAS
? .55

```

ENTER FOR AUTOMOBILE NUMBER 1
 NAME
 ? BRAND X
 INITIAL COST (INCLUDE SALES TAX, ETC)
 ? 5000
 MILES PER GALLON ESTIMATE
 ? 10

ENTER FOR YEAR 1
 MAINTENANCE COST
 ? 100
 APPROX VALUE AT YEAR END
 ? 3000
 INSURANCE COSTS
 ? 100
 ENTER OTHER OPERATING COSTS
 ? 100

ENTER FOR YEAR 2
 MAINTENANCE COST
 ? 200
 APPROX VALUE AT YEAR END
 ? 2000
 INSURANCE COSTS
 ? 100
 ENTER OTHER OPERATING COSTS
 ? 100

 ANALYSIS RESULTS

AUTO: BRAND X PRICE: 5000 MPG: 10

COST/MILE .285 .195

OVERALL MILES DRIVEN: 20000 COST/MILE: .24

ANNUAL OPERATING COSTS

ITEM	YEAR 1	YEAR 2
GAS \$	550	550
MAINT \$	100	200
DEPREC \$	2000	1000
INSUR \$	100	100
OTHER \$	100	100
TOTAL	2850	1950

MAJOR SYMBOL TABLE - CAR COMPARISONS

I	NAME	DESCRIPTION	I
I	C()	INITIAL COST ARRAY	I
I	G()	MILES/GALLON ARRAY	I
I	D2()	DEPRECIATION ARRAY	I
I	M()	MAINTENANCE COSTS	I
I	V()	VALUES AT YEAR END ARRAY	I
I	N\$()	NAMES OF AUTOS	I
I	P()	INSURANCE COSTS	I
I	O()	OTHER COSTS	I
I	G1()	GASOLINE COSTS YEARLY	I
I	T()	TOTAL COSTS PER YEAR	I
I	N	NUMBER OF AUTOS TO COMPARE	I
I	Y	NUMBER OF YEARS FOR THE COMPARISON	I
I	D	AVERAGE ANNUAL MILES DRIVEN	I
I	CO	EXPECTED COST PER GALLON	I
I	T	TOTAL COSTS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	DIM	2 DIMENSION ARRAYS	I

TRIP PLANNING – BASIC VERSION

Description

This program offers assistance in planning your vacations and other automobile travel. Daily budgets and total trip costs are computed for your use.

Functions of the Program

The program accepts keyboard inputs concerning the trip and produces a table showing the projected itinerary and costs for each type of expense incurred. Totals for each day are provided in addition to total trip costs.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered in response to the program's requests.

Output Description

See example provided. A table of costs is produced that details the itinerary and produces totals for all costs.

```
20 REM TRIP ANALYSIS - BASIC
30 REM ***** DATA INITIALIZATION *****
40 DIM D$(15)
50 DIM M(15)
60 DIM F(15)
70 DIM L(15)
80 DIM O(15)
90 DIM T(15)
100 PRINT "ENTER THE NAME FOR THE TRIP"
110 INPUT N$
120 PRINT "ENTER THE MILES/GALLON YOU EXPECT TO ACHIEVE"
130 INPUT C
140 PRINT "ENTER THE AVERAGE COST PER GALLON YOU EXPECT TO PAY"
150 INPUT G
160 PRINT "ENTER THE NUMBER OF DAYS IT WILL TAKE YOU"
170 INPUT D1
180 FOR J= 1 TO D1
190   PRINT "FOR DAY";J
200   PRINT "ENTER STOPPING POINT,MILES TRAVELED"
210   INPUT D$(J),M(J)
220   PRINT "ENTER YOUR COST FOR MEALS,LODGING,OTHER I.E., 75,25.50,10"
230   INPUT F(J),L(J),O(J)
240 NEXT J
250 REM ***** PRINT OF RESULTS *****
```

```

260 PRINT
270 PRINT
280 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
290 PRINT "                      RESULTS OF ANALYSIS"
300 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
310 PRINT
320 PRINT "TRIP NAME:  " & N$
330 PRINT
340 PRINT " DAY"; TAB(8); "STOP AT"; TAB(18); "MILES"; TAB(25); "GAS $";
350 PRINT TAB(32); "FOOD $"; TAB(40); "LODGE $"; TAB(48); "OTHER $";
360 PRINT TAB(56); "TOTAL $"
370 PRINT "-----"; TAB(8); "-----"; TAB(18) "-----";
380 PRINT TAB(25); "-----";
390 PRINT TAB(32); "-----"; TAB(40) "-----"; TAB(48) "-----";
400 PRINT TAB(56) "-----"
410 FOR J = 1 TO D1
420   X=M(J)/C*G
430   PRINT "DAY"; J; TAB(8); D$(J); TAB(18); M(J); TAB(25); X;
440   PRINT TAB(32); F(J); TAB(40); L(J); TAB(48); O(J); TAB(56);
450   T(J)=X+F(J)+L(J)+O(J)
460   X1=X1+X
470   M1=M1+M(J)
480   F1=F1+F(J)
490   L1=L1+L(J)
500   O1=O1+O(J)
510   PRINT TAB(56); T(J)
520   T1=T1+T(J)
530   T(J)=0
540   PRINT
550 NEXT J
560 PRINT TAB(16); "-----"; TAB(24); "-----"; TAB(32);
570 PRINT "-----"; TAB(40); "-----"; TAB(48); "-----"; TAB(56);
580 PRINT "-----"
590 PRINT TAB(8); "TOTAL"; TAB(18); M1; TAB(25); X1; TAB(32); F1; TAB(40);
600 PRINT L1; TAB(48); O1; TAB(56); T1
610 PRINT
620 REM XXXXXXXXXXXXXXXXXXXX PROGRAM TERMINATION POINT XXXXXXXXXXXXXXX
630 PRINT
640 PRINT
650 STOP

```

```

RUN
ENTER THE NAME FOR THE TRIP
? COLORADO SPRINGS
ENTER THE MILES/GALLON YOU EXPECT TO ACHIEVE
? 10
ENTER THE AVERAGE COST PER GALLON YOU EXPECT TO PAY
? .50
ENTER THE NUMBER OF DAYS IT WILL TAKE YOU
? 2
FOR DAY 1
ENTER STOPPING POINT,MILES TRAVELED
? DENVER,500
ENTER YOUR COST FOR MEALS,LODGING,OTHER I.E., 75,25.50,10
? 75,25.50,10
FOR DAY 2
ENTER STOPPING POINT,MILES TRAVELED
? COLO SPRNGS,65
ENTER YOUR COST FOR MEALS,LODGING,OTHER I.E., 75,25.50,10
? 25,0,10

```

 RESULTS OF ANALYSIS

TRIP NAME: COLORADO SPRINGS

DAY	STOP AT	MILES	GAS \$	FOOD \$	LODGE \$	OTHER \$	TOTAL \$
DAY 1	DENVER	500	25	75	25.5	10	135.5
DAY 2	COLO SPRNGS	65	3.25	25	0	10	38.25
TOTAL		565	28.25	100	25.5	20	173.75

BREAK IN 650

MAJOR SYMBOL TABLE - TRIP PLANNING - BASIC

I	NAME	DESCRIPTION	I
I	D\$()	.. ARRAY OF STOP POINTS	I
I	M()	.. ARRAY OF MILES TRAVELED	I
I	F()	.. ARRAY OF FOOD COSTS	I
I	L()	.. ARRAY OF LODGING COSTS	I
I	O()	.. ARRAY OF OTHER COSTS	I
I	T()	.. ARRAY OF TOTAL DAILY COSTS	I
I	N\$	.. NAME OF TRIP	I
I	C	.. EXPECTED MILES PER GALLON	I
I	G	.. AVERAGE COST PER GALLON	I
I	D1	.. NUMBER OF DAYS FOR TRIP	I
I	X	.. GASOLINE COSTS	I
I	X1	.. TOTAL GASOLINE COSTS	I
I	M1	.. TOTAL MILES	I
I	F1	.. TOTAL FOOD COSTS	I
I	L1	.. TOTAL LODGING COSTS	I
I	O1	.. TOTAL OTHER COSTS	I
I	T1	.. TOTAL COSTS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

TRIP PLANNING – EXTENDED VERSION

Description

This program offers assistance in comparing various travel plans and routes.

Functions of the Program

The program accepts keyboard inputs of trip information and produces a table showing the itinerary and the projected costs for that trip/route. Totals for each day are produced, along with overall totals for the trip.

Instructions for Use

Run the program and answer the questions asked of you.

Data Entry

All data is entered through the keyboard in response to the program's requests.

Output Description

See example provided. The results for each route are printed with daily and trip totals provided.

Comments

The maximum number of routes is currently set at five, and the maximum number of days for each is set at fifteen. These are easily changed by modifying lines 40-140.

```
20 REM TRIP ANALYSIS PROGRAM -- EXTENDED
30 REM ***** DATA INITIALIZATION *****
40 DIM C(5)
50 DIM G(5)
60 DIM D(5)
70 DIM D1(5)
80 DIM D$(5,15)
90 DIM M(5,15)
100 DIM F(5,15)
110 DIM L(5,15)
120 DIM O(5,15)
130 DIM N$(5)
140 DIM T(15)
150 PRINT "ENTER THE NUMBER OF ROUTES THAT YOU ARE CONSIDERING"
160 INPUT R
170 FOR I = 1 TO R
180   PRINT "FOR ROUTE #";I
190   PRINT "ENTER THE NAME OF THIS ROUTE"
200   INPUT N$(I)
210   PRINT "ENTER THE MILES/GALLON YOU EXPECT TO ACHIEVE ON ROUTE";I
```

```

220 INPUT C(I)
230 PRINT "ENTER THE AVERAGE COST PER GALLON YOU EXPECT TO PAY"
240 INPUT G(I)
250 PRINT "ENTER THE NUMBER OF DAYS IT WILL TAKE YOU"
260 INPUT D1(I)
270 FOR J= 1 TO D1(I)
280 PRINT "FOR DAY";J
290 PRINT "ENTER YOUR STOPPING DESTINATION"
300 INPUT D$(I,J)
310 PRINT "ENTER YOUR MILES TRAVELED"
320 INPUT M(I,J)
330 PRINT "ENTER YOUR COST FOR MEALS"
340 INPUT F(I,J)
350 PRINT "ENTER YOUR COST OF LODGING"
360 INPUT L(I,J)
370 PRINT "ENTER ANY OTHER COSTS"
380 INPUT O(I,J)
390 NEXT J
400 NEXT I
410 REM ***** PRINT OF RESULTS *****
420 PRINT
430 PRINT
440 PRINT "*****"
450 PRINT " RESULTS OF ANALYSIS"
460 PRINT "*****"
470 PRINT
480 FOR I= 1 TO R
490 PRINT "RESULTS OF ROUTE";I;N$(I)
500 PRINT
510 D(I)=D1(I)
520 L1=0
530 IF D1(I)<=6 THEN 570
540 L1=L1+1
550 D1(I)=D1(I)-6
560 GOTO 530
570 FOR L=0 TO L1
580 IF L1=0 THEN 620
590 D(I)=6
600 IF L1<>L THEN 620
610 D(I)=D1(I)
620 FOR K1=1 TO D(I)
630 K=K1+L*6
640 PRINT TAB(K1*10+1);"DAY";K;
650 NEXT K1
660 PRINT
670 FOR K1=1 TO D(I)
680 PRINT TAB(K1*10);"-----";
690 NEXT K1
700 PRINT
710 PRINT "STOP AT";
720 FOR J1=1 TO D(I)
730 J=J1+L*6
740 PRINT TAB(J1*10);D$(I,J);
750 NEXT J1
760 PRINT
770 PRINT "MILEAGE";
780 FOR J1=1 TO D(I)
790 J=J1+L*6
800 PRINT TAB(J1*10);M(I,J);
810 NEXT J1
820 PRINT
830 FOR J1=1 TO D(I)
840 PRINT TAB(J1*10);"-----";
850 NEXT J1

```

```

860 PRINT
870 PRINT "GAS $";
880 FOR J1=1 TO D(I)
890 J=J1+L*6
900 X=M(I,J)/C(I)*G(I)
910 PRINT TAB(J1*10);X;
920 T(J)=T(J)+X
930 NEXT J1
940 PRINT
950 PRINT "MEALS $";
960 FOR J1=1 TO D(I)
970 J=J1+L*6
980 PRINT TAB(J1*10);F(I,J);
990 T(J)=T(J)+F(I,J)
1000 NEXT J1
1010 PRINT
1020 PRINT "LODGING $";
1030 FOR J1=1 TO D(I)
1040 J=J1+L*6
1050 PRINT TAB(J1*10);L(I,J);
1060 T(J)=T(J)+L(I,J)
1070 NEXT J1
1080 PRINT
1090 PRINT "OTHER $";
1100 FOR J1=1 TO D(I)
1110 J=J1+L*6
1120 PRINT TAB(J1*10);O(I,J);
1130 T(J)=T(J)+O(I,J)
1140 NEXT J1
1150 PRINT
1160 FOR J1=1 TO D(I)
1170 PRINT TAB(J1*10);"-----";
1180 NEXT J1
1190 PRINT
1200 PRINT "TOTAL $";
1210 FOR J1=1 TO D(I)
1220 J=J1+L*6
1230 PRINT TAB(J1*10);T(J);
1240 T0=T0+T(J)
1250 T(J)=0
1260 NEXT J1
1270 PRINT
1280 PRINT
1290 NEXT L
1300 PRINT
1310 PRINT "TOTAL COST FOR THIS ROUTE IS:";T0
1320 T0=0
1330 PRINT "*****"
1340 PRINT
1350 NEXT I
1360 REM ***** PROGRAM TERMINATION POINT *****
1370 PRINT
1380 PRINT
1390 STOP

```

```

RUN
ENTER THE NUMBER OF ROUTES THAT YOU ARE CONSIDERING
? 2
FOR ROUTE # 1
ENTER THE NAME OF THIS ROUTE
? NORTHERN
ENTER THE MILES/GALLON YOU EXPECT TO ACHIEVE ON ROUTE 1
? 10

```

ENTER THE AVERAGE COST PER GALLON YOU EXPECT TO PAY
 ? .75
 ENTER THE NUMBER OF DAYS IT WILL TAKE YOU
 ? 1
 FOR DAY 1
 ENTER YOUR STOPPING DESTINATION
 ? CITY Y
 ENTER YOUR MILES TRAVELED
 ? 500
 ENTER YOUR COST FOR MEALS
 ? 50
 ENTER YOUR COST OF LODGING
 ? 0
 ENTER ANY OTHER COSTS
 ? 10
 FOR ROUTE # 2
 ENTER THE NAME OF THIS ROUTE
 ? SOUTHERN
 ENTER THE MILES/GALLON YOU EXPECT TO ACHIEVE ON ROUTE 2
 ? 11
 ENTER THE AVERAGE COST PER GALLON YOU EXPECT TO PAY
 ? .50
 ENTER THE NUMBER OF DAYS IT WILL TAKE YOU
 ? 1
 FOR DAY 1
 ENTER YOUR STOPPING DESTINATION
 ? CITY Y
 ENTER YOUR MILES TRAVELED
 ? 600
 ENTER YOUR COST FOR MEALS
 ? 50
 ENTER YOUR COST OF LODGING
 ? 0
 ENTER ANY OTHER COSTS
 ? 25

 RESULTS OF ANALYSIS

RESULTS OF ROUTE 1 NORTHERN

	DAY 1

STOP AT	CITY Y
MILEAGE	500

GAS \$	37.5
MEALS \$	50
LODGING \$	0
OTHER \$	10

TOTAL \$	97.5

TOTAL COST FOR THIS ROUTE IS: 97.5

RESULTS OF ROUTE 2 SOUTHERN

```

          DAY 1
-----
STOP AT  CITY Y
MILEAGE  600
-----
GAS $    27.2727
MEALS $   50
LODGING $  0
OTHER $   25
-----
TOTAL $   102.273
    
```

TOTAL COST FOR THIS ROUTE IS: 102.273

BREAK IN 1390

MAJOR SYMBOL TABLE - TRIP PLANNING - EXTENDED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I C( )  .. MILES PER GALLON ARRAY                   I
I G( )  .. AVERAGE COST PER GALLON ARRAY           I
I D( )  .. DAY ARRAY                                I
I D1( ) .. NUMBER OF DAYS PER ROUTE ARRAY           I
I D$( ) .. DAILY STOPPING POINT ARRAY              I
I M( )  .. MILES TRAVELED ARRAY                     I
I F( )  .. FOOD COST ARRAY                          I
I L( )  .. LODGING COST ARRAY                       I
I O( )  .. OTHER COST ARRAY                         I
I N$( ) .. ROUTE NAME ARRAY                        I
I Y$( ) .. TOTAL DAILY COST ARRAY                  I
I R      .. NUMBER OF ROUTES                        I
I J      .. HORIZONTAL PRINT CONTROL                I
I J1     .. HORIZONTAL PRINT CONTROL                I
I X      .. GASOLINE COSTS                          I
I TO     .. TOTAL COSTS                             I
I-----I
    
```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINES                      I
I DIM   .. 2 DIMENSION ARRAYS                      I
I-----I
    
```


Kitchen Helpmates

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RECIPE CONVERSION

Description

This program converts given quantities of recipe ingredients based upon the number of servings in the basic recipe to the quantities needed for the number of servings desired.

Functions of the Program

The program accepts recipe name, the number of servings in the basic recipe, the number of servings desired, and the individual ingredients of the recipe. The quantities are converted for the desired number of servings, and the modified recipe is printed.

Instructions for Use

Run the program and answer the questions asked.

Data Entry

All data is entered through the keyboard in response to program prompting.

Output Description

See example provided.

```
20 REM  RECIPE CONVERSION PROGRAM
30 REM ***** DATA INITIATION *****
40 M0=25
50 DIM N(25)
60 DIM T$(25)
70 DIM D$(25)
80 REM ***** START OF RECIPE ENTRY *****
90 PRINT "ENTER RECIPE NAME"
100 INPUT R$
110 PRINT "ENTER NUMBER OF SERVINGS IN RECIPE ENTERED"
120 INPUT Q
130 PRINT "ENTER NUMBER OF SERVINGS WANTED"
140 INPUT W
150 PRINT "ENTER NUMBER, QTY, AND ITEM EXAMPLE  2,TSP,WATER
160 FOR I=1 TO M0
170   N(I)=0
180   INPUT N(I),T$(I),D$(I)
190 IF N(I)=0 THEN 210
200 NEXT I
210 M0=M0-1
220 REM ***** SERVING CONVERSION AREA *****
230 C=W/Q
240 FOR I=1 TO M0
250   N(I)=N(I)*C
260 NEXT I
270 REM ***** PRINT AREA *****
280 PRINT
```

```

290 PRINT
300 PRINT " RECIPE - "R$ " FOR "W
310 PRINT
320 FOR I=1 TO M0
330 PRINT N(I);TAB(10);T$(I);TAB(20);D$(I)
340 NEXT I
350 REM ***** PROGRAM TERMINATION POINT *****
360 PRINT
370 PRINT
380 STOP

```

```

RUN
ENTER RECIPE NAME
? CHEFS SPECIAL
ENTER NUMBER OF SERVINGS IN RECIPE ENTERED
? 2
ENTER NUMBER OF SERVINGS WANTED
? 4
ENTER NUMBER, QTY, AND ITEM EXAMPLE 2,TSP,WATER
? 2,TSP,WATER
? 2,CUPS,FLOUR
? .5,CUP,MILK
? 1,DASH,SALT
?

```

RECIPE - CHEFS SPECIAL FOR 4

```

4      TSP      WATER
4      CUPS     FLOUR
1      CUP      MILK
2      DASH     SALT

```

BREAK IN 380

MAJOR SYMBOL TABLE - RECIPE CONVERSION

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I M0    .. MAXIMUM ITEMS ALLOWED  I
I N( )  .. NUMBER OF UNITS ARRAY  I
I T$( ) .. UNITS ARRAY( I.E. TSP)  I
I D$( ) .. ITEM ARRAY (I.E. FLOUR) I
I R$    .. RECIPE NAME  I
I Q     .. SERVINGS IN RECIPE  I
I W     .. SERVINGS DESIRED  I
I C     .. CONVERSION FACTOR  I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I TAB   .. FORMATS PRINT LINE  I
I DIM   .. SINGLE DIMENSION ARRAY  I
I-----I

```

MEAL PLANNING

Description

This program produces a menu and checklist for determining additional grocery items required. Grocery items are categorized for ease in shopping.

Functions of the Program

The program initializes all data items for the food categories first. Following this initialization, the first day's results are analyzed and printed, followed by each succeeding day, for all of the days included as data items. The last item printed is a list for shopping use. Multiple passes through the data entries are made to insure correct categorization of items.

Instructions for Use

Prior to running the program, the data items for each meal must be entered using DATA statements.

Data Entry

All data is entered using DATA statements.

Data Formats

There are three types of data entries:

1. A master record is required for each day entered:
*, Day name
2. A meal record is required for each meal that gives the meal number of the day. The format is:
N, Meal number of the day
3. Menu item entries are entered for each item. The format is:
Food category code, Item description

Output Description

See example provided. Output is in two sections:

1. A menu for each day included in the data items.
2. A grocery list of the items required for the menu.

Suggested Enhancements

You may wish to have the data entered via the keyboard rather than through DATA statements. To accomplish this, an array will be required to hold the data.

```

20 REM      MEAL PLANNING PROGRAM
30 REM      ***** DATA INITIALIZATION *****
40 DIM D0$(31)
50 M0=7
60 DIM N$(3)
70 N$(1)="BREAKFAST"
80 N$(2)="LUNCH"
90 N$(3)="DINNER"
100 DIM D$(7)
110 DIM F$(7)
120 M=1000
130 F$(1)="M"
140 D$(1)="MEATS"
150 F$(2)="FV"
160 D$(2)="FRESH VEGETABLES"
170 F$(3)="CV"
180 D$(3)="CANNED VEGETABLES"
190 F$(4)="FF"
200 D$(4)="FRESH FRUITS"
210 F$(5)="CF"
220 D$(5)="CANNED FRUITS"
230 F$(6)="D"
240 D$(6)="DAIRY"
250 F$(7)="O"
260 D$(7)="OTHER"
270 REM      *****
280 REM      ***** PROCESSING AREA *****
290 FOR K = 1 TO M
300   N0=0
310   READ T$
320   IF T$ = "END" THEN 500
330   IF T$ = "*" THEN 490
340   IF T$="N" THEN 390
350   READ M$
360   D0$((N1-1)*10+C)=M$
370   M$=" "
380   GOTO 460
390   READ N1
400   IF N1<=N0 THEN 420
410   N0=N1
420   IF C0<=C1 THEN 460
430   C1=C0
440   C0=0
450   C=0
460   C=C+1
470   C0=C0+1
480   GOTO 780
490   READ M$
500   IF K=1 THEN 760
510   C=N1
520   REM      ***** MENU PRINTING *****
530   PRINT
540   PRINT
550   PRINT TAB(30);X$
560   PRINT TAB(5);N$(1);TAB(29);N$(2);TAB(47);N$(3)
570   FOR K1 = 1 TO C
580     PRINT TAB((K1-1)*20);"I-----";
590   NEXT K1
600   PRINT "I"
610   FOR L = 1 TO C1
620     K3=1
630     FOR K1=1 TO C
640       K3=(K1-1)*10+L
650       PRINT TAB((K1-1)*20+2);

```

```

660     IF D0$(K3)=" " THEN 700
670     PRINT D0$(K3);
680     D0$(K3)=" "
690     GOTO 700
700     NEXT K1
710     PRINT
720     NEXT L
730     C1=0
740     C=0
750     C0=0
760     IF T$="END" THEN 790
770     X$=M$
780     NEXT K
790     REM ***** GROCERY LIST PRINTING *****
800     PRINT
810     PRINT
820     PRINT
830     PRINT
840     PRINT "GROCERY ITEMS REQUIRED"
850     PRINT
860     PRINT
870     FOR K = 1 TO M0
880     RESTORE
890     PRINT D$(K)
900     PRINT "-----"
910     FOR I = 1 TO M
920     READ T$
930     IF T$="END" THEN 980
940     READ M$
950     IF T$<> F$(K) THEN 970
960     PRINT "( )"TAB(5);M$
970     NEXT I
980     PRINT
990     NEXT K
1000    REM *****
1010    REM ***** PROGRAM TERMINATION POINT *****
1020    PRINT
1030    PRINT
1040    STOP
1050    REM *****
1060    REM ***** DATA ENTRIES FOLLOW *****
1070    DATA *,MON
1080    DATA N,1
1090    DATA M,BACON
1100    DATA FF,BANANAS
1110    DATA O,TOAST
1120    DATA O,EGGS
1130    DATA N,3
1140    DATA M,SIRLOIN STEAK
1150    DATA V,GREEN BEANS
1160    DATA FV,FRENCH FRIES
1170    DATA O,CHERRY PIE
1180    DATA *,TUES
1190    DATA N,1
1200    DATA M,SAUSAGE
1210    DATA O,PANCAKES
1220    DATA FF,PEARS
1230    DATA N,3
1240    DATA M,MEATLOAF
1250    DATA FV,TOMATOES
1260    DATA FV,BAKED POTATOES
1270    DATA FF,PEACHES
1280    DATA END

```

RUN

BREAKFAST	MON LUNCH	DINNER
BACON BANANAS TOAST EGGS		SIRLOIN STEAK GREEN BEANS FRENCH FRIES CHERRY PIE

BREAKFAST	TUES LUNCH	DINNER
SAUSAGE PANCAKES PEARS		MEATLOAF TOMATOES BAKED POTATOES PEACHES

GROCERY ITEMS REQUIRED

MEATS

- BACON
- SIRLOIN STEAK
- SAUSAGE
- MEATLOAF

FRESH VEGETABLES

- FRENCH FRIES
- TOMATOES
- BAKED POTATOES

CANNED VEGETABLES

FRESH FRUITS

- BANANAS
- PEARS
- PEACHES

CANNED FRUIT

DAIRY

OTHER

- TOAST
- EGGS
- CHERRY PIE
- PANCAKES

MAJOR SYMBOL TABLE - MEAL PLANNING

I	NAME	DESCRIPTION	I
I	DO\$	.. ARRAY OF INPUT ITEMS	I
I	N\$()	.. MEAL NAME ARRAY	I
I	D\$()	.. MASTER FOOD CATEGORY ARRAY	I
I	F\$()	.. MASTER CATEGORY CODE ARRAY	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	T\$	.. TRANSACTION CODE	I
I	M\$	.. TRANSACTION ITEM/DAY	I
I	C	.. COUNTER	I
I	N1	.. MEAL NUMBER IN DAY	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

DIET PLANNING – VERSION 1

Description

This program produces a menu, complete with calorie values, calories per meal, and total calories per day. After printing the menu, it produces a list of all food items scheduled for each of several major food groups.

Functions of the Program

The program initializes the food group categories first. Following this, menus are printed, calorie counts produced, and daily totals are printed. The last task of the program is the printing of the food group lists. It does so by rereading the data items for each major food group.

Instructions for Use

Prior to running the program, the menu items must be entered using DATA statements.

Data Entry

All data is entered using DATA statements.

Data Formats

There are three types of data entries:

1. A master card is required for each day. Its format is:
*, Day name
2. A meal number entry is required for each meal of the day:
N, Meal number of the day
3. Menu items are entered for each item. The format is:
Food category code, Item description, Calories

Output Description

See example provided. Output is in two sections:

1. A menu for each day entered in the DATA statements is produced.
2. A list of foods, scheduled by major food groups, is printed.

Suggested Enhancements

You may wish to have the data entered through the keyboard rather than through DATA statements. To accomplish this, an array will be required to hold the items entered.


```

20 REM      DIET PLANNING PROGRAM      BASIC
30 REM      *****      DATA INITIALIZATION      *****
40 DIM D0$(31)
50 DIM A0(31)
60 M0=9
70 DIM N$(3)
80 N$(1)="BREAKFAST"
90 N$(2)="LUNCH"
100 N$(3)="DINNER"
110 DIM D$(9)
120 DIM F$(9)
130 M=1000
140 F$(1)="M"
150 D$(1)="MEATS"
160 F$(2)="FV"
170 D$(2)="FRUIT/VEGETABLES"
180 F$(3)="BC"
190 D$(3)="BREADS/CEREALS"
200 F$(4)="B"
210 D$(4)="BEVERAGES"
220 F$(5)="S"
230 D$(5)="SOUPS"
240 F$(6)="SD"
250 D$(6)="SWEETS/DESSERTS"
260 F$(7)="F"
270 D$(7)="FATS"
280 F$(8)="D"
290 D$(8)="DAIRY"
300 F$(9)="O"
310 D$(9)="OTHER"
320 FOR I = 1 TO 31
330   D0$(I)=" "
340 NEXT I
350 REM      *****
360 REM      *****      PROCESSING AREA      *****
370 FOR K = 1 TO M
380   N0=0
390   READ T$
400   IF T$ = "END" THEN 610
410   IF T$="*" THEN 600
420   IF T$="N" THEN 480
430   READ M$,A
440   D0$((N1-1)*10+C)=M$
450   A0((N1-1)*10+C)=A
460   M$=" "
470   GOTO 550
480   READ N1
490   IF N1<=N0 THEN 510
500   N0=N1
510   IF C0<=C1 THEN 550
520   C1=C0
530   C0=0
540   C=0
550   C=C+1
560   C0=C0+1
570   D0$((N1-1)*10+C)=M$
580   A0((N1-1)*10+C)=A
590   GOTO 1020
600   READ M$
610   IF K=1 THEN 1000
620   C=N1
630   REM      *****      MENU PRINTING      *****
640   PRINT
650   PRINT

```

```

660 PRINT TAB(30);X$
670 PRINT TAB(5);N$(1);TAB(29);N$(2);TAB(47);N$(3)
680 FOR K1 = 1 TO C
690 PRINT TAB((K1-1)*20);"I-----";
700 NEXT K1
710 PRINT "I"
720 FOR L = 1 TO C1
730 K3=1
740 FOR K1=1 TO C
750 K3=(K1-1)*10+L
760 PRINT TAB((K1-1)*20+2);
770 IF D0$(K3)=" " THEN 830
780 PRINT D0$(K3);A0(K3);
790 T0(K1)=T0(K1)+A0(K3)
800 D0$(K3)=" "
810 A0(K3)=0
820 GOTO 830
830 NEXT K1
840 PRINT
850 NEXT L
860 FOR K1=1 TO C
870 PRINT TAB(20*(K1-1)+4);"CALORIES";TAB(15*K1);T0(K1);
880 T1=T1+T0(K1)
890 T0(K1)=0
900 NEXT K1
910 PRINT
920 PRINT
930 PRINT "XXXXXXXXXXXXXXXXXXXXX"
940 PRINT "DAILY TOTAL IS ";T1"
950 PRINT "XXXXXXXXXXXXXXXXXXXXX"
960 C1=0
970 T1=0
980 C=0
990 C0=0
1000 IF T$="END" THEN 1030
1010 X$=M$
1020 NEXT K
1030 REM ***** ANALYSIS BY FOOD TYPE *****
1040 PRINT
1050 PRINT
1060 PRINT
1070 PRINT
1080 PRINT "FOODS PLANNED BY GROUP"
1090 PRINT
1100 PRINT
1110 FOR K = 1 TO M0
1120 RESTORE
1130 PRINT D$(K)
1140 PRINT "-----"
1150 FOR I = 1 TO M
1160 READ T$
1170 IF T$="N" THEN 1240
1180 IF T$="*" THEN 1240
1190 IF T$="END" THEN 1260
1200 READ M$,A
1210 IF T$= F$(K) THEN 1250
1220 PRINT "( )"TAB(5);M$;A
1230 GOTO 1250
1240 READ M$
1250 NEXT I
1260 PRINT
1270 NEXT K
1280 REM *****
1290 REM ***** PROGRAM TERMINATION POINT *****

```

```

1300 PRINT
1310 PRINT
1320 STOP
1330 REM *****
1340 REM ***** DATA ENTRIES FOLLOW *****
1350 DATA *,MON
1360 DATA N,1
1370 DATA M,BACON,60
1380 DATA B,ORANGE JUICE,60
1390 DATA FV,BANANAS,85
1400 DATA BC,TOAST,70
1410 DATA F,MARGARINE,25
1420 DATA M,SOFT BOILED EGG,80
1430 DATA N,3
1440 DATA M,SIRLOIN STEAK,330
1450 DATA D,GLASS MILK,160
1460 DATA FV,GREEN BEANS,15
1470 DATA FV,FRENCH FRIES,215
1480 DATA SD,CHERRY PIE,310
1490 DATA *,TUES
1500 DATA N,1
1510 DATA M,SAUSAGE,250
1520 DATA BC,PANCAKES,60
1530 DATA SD,SYRUP,55
1540 DATA FV,PEAR,100
1550 DATA N,3
1560 DATA M,BROILED SALMON,155
1570 DATA FV,TOMATOES,20
1580 DATA FV,BAKED POTATO,145
1590 DATA FV,1 PEACH,30
1610 DATA END

```

RUN

BREAKFAST	MON LUNCH	DINNER
BACON 60		SIRLOIN STEAK 330
ORANGE JUICE 60		GLASS MILK 160
BANANAS 85		GREEN BEANS 15
TOAST 70		FRENCH FRIES 215
MARGARINE 25		CHERRY PIE 310
SOFT BOILED EGG 80		
CALORIES 380	CALORIES 0	CALORIES 1030

DAILY TOTAL IS 1410

BREAKFAST	TUES LUNCH	DINNER
SAUSAGE 250		BROILED SALMON 155
PANCAKES 60		TOMATOES 20
SYRUP 55		BAKED POTATO 145
PEAR 100		1 PEACH 30
CALORIES 465	CALORIES 0	CALORIES 350

DAILY TOTAL IS 815

FOODS PLANNED BY GROUP

MEATS

- () BACON 60
() SOFT BOILED EGG 80
() SIRLOIN STEAK 330
() SAUSAGE 250
() BROILED SALMON 155

FRUIT/VEGETABLES

- () BANANAS 85
() GREEN BEANS 15
() FRENCH FRIES 215
() PEAR 100
() TOMATOES 20
() BAKED POTATO 145
() 1 PEACH 30

BREADS/CEREALS

- () TOAST 70
() PANCAKES 60

FATS

- () MARGARINE 25

BEVERAGES

- () ORANGE JUICE 60

SOUPS

SWEETS/DESSERTS

- () CHERRY PIE 310
() SYRUP 55

DAIRY

- () GLASS MILK 160

OTHER

BREAK IN 1320

MAJOR SYMBOL TABLE - DIET PLANNING - VERSION 1

I	-----I
I	NAME .. DESCRIPTION
I	-----I
I	DO\$() .. INPUT ITEM ARRAY
I	A0\$() .. ARRAY OF INPUT CALORIES
I	N\$() .. ARRAY OF MEAL NAMES
I	D\$() .. ARRAY OF MASTER CATEGORY CODES
I	F\$() .. ARRAY OF MASTER CATEGORY DESCRIPTIONS
I	T\$.. TRANSACTION CODE
I	M\$.. TRANSACTION ITEM
I	A .. TRANSACTION CALORIES
I	N1 .. MEAL NUMBER
I	C .. COUNTER
I	C1 .. COUNTER
I	T1 .. TOTAL DAILY CALORIES
I	-----I

FUNCTIONS USED

I	-----I
I	NAME .. DESCRIPTION
I	-----I
I	TAB .. FORMATS PRINT LINES
I	DIM .. SINGLE DIMENSION ARRAYS
I	-----I

DIET PLANNING – VERSION 2

Description

This program for diet planning deals with fixed diet requirements and produces a menu selection list based upon the diet's requirements.

Functions of the Program

This program differs substantially from the other version of diet planning provided in this book. The program reads the data items; determines whether the item is a member of a group or subgroup of foods and whether it is optional or required; and then prints the item accordingly. The processing of the various groups/subgroups is accomplished in separate routines for ease of understanding or for modification, if desired.

Instructions for Use

Provide the data items for the diet prior to running the program for the first time.

Data Entry

All data is entered using DATA statements.

Data Formats

Several types of data formats are available for your use, as follows:

1. A master item is required for each meal. Its format is:
*, Meal name
2. Group choices are provided by an entry of the following form:
G, Number of choices (choices must follow immediately)
3. Subgroup items are indicated by the following:
S, Number of optional choices (choices must follow immediately)
4. Required items are indicated by the following:
R, Required item name
5. Choices for the optional entries are provided in Englishlike form, without any transaction code.

Note the END data item.

Output Description

See example provided. A separate column for each day is printed for use in menu selection.

Suggested Enhancements

You may wish to extend the program to accept the individual's menu choices and compare them against the selection criteria. Following a check for accuracy, the menu may be printed.

```

20 REM DIET PLANNING PROGRAM 2
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 C=1
60 S1=0
70 PRINT "HOW MANY DAYS SHALL I PRINT?"
80 INPUT N
90 PRINT
100 PRINT
110 REM ***** PROCESSING AREA *****
120 FOR I = 1 TO M
130 READ T$
140 IF T$="END" THEN 730
150 IF T$="*" THEN 300
160 IF T$="G" THEN 470
170 IF T$="S" THEN 530
180 IF T$="R" THEN 610
190 IF S1>0 THEN 230
200 PRINT TAB(10);C;"- ";T$;
210 C=C+1
220 GOTO 250
230 PRINT TAB(13);S1;"- ";T$;
240 S1=S1+1
250 FOR K=1 TO N
260 PRINT TAB(K*3+46);"( )";
270 NEXT K
280 PRINT
290 GOTO 710
300 REM ***** PROCESS NEW MEAL *****
310 PRINT
320 PRINT "*****"
330 FOR K=1 TO N
340 PRINT TAB(K*3+46);"***";
350 NEXT K
360 PRINT
370 READ M$
380 PRINT TAB(10);M$TAB(50);"DAY"
390 PRINT "*****"
400 FOR K = 1 TO N
410 PRINT TAB(K*3+46);K;
420 NEXT K
430 PRINT
440 S1=0
450 C=1
460 GOTO 710
470 REM ***** PROCESS NEW GROUP *****
480 PRINT
490 READ G0
500 PRINT "CHOOSE";G0;"OF THE FOLLOWING:"
510 S1=0
520 GOTO 710
530 REM ***** SUB GROUP PROCESSING *****
540 S1=0
550 PRINT
560 READ S0
570 S1=S1+1
580 PRINT TAB(10);C;"- ANY";S0;" OF THE FOLLOWING:"
590 C=C+1
600 GOTO 710
610 REM ***** REQUIRED ITEMS *****
620 PRINT

```

```

630 READ R$
640 C=1
650 S1=0
660 PRINT "REQUIRED ";R$;
670 FOR K=1 TO N
680 PRINT TAB(K*3+46);"(X)";
690 NEXT K
700 PRINT
710 NEXT I
720 REM *****
730 REM ***** PROGRAM TERMINATION POINT *****
740 PRINT
750 PRINT
760 STOP
770 REM *****
780 REM ***** DATA ENTRIES FOLLOW *****
790 DATA *,BREAKFAST
800 DATA G,1
810 DATA SOFT BOILED EGG
820 DATA POACHED EGG
830 DATA S,2
840 DATA ORANGE JUICE
850 DATA FRESH ORANGE
860 DATA GRAPEFRUIT
870 DATA GRAPEFRUIT JUICE
880 DATA G,1
890 DATA 1 SLICE BACON
900 DATA 2 LINKS SAUSAGE
910 DATA G,1
920 DATA TOAST
930 DATA MUFFIN
940 DATA *,LUNCH
950 DATA R,2 SLICES BREAD
960 DATA G,1
970 DATA 1 SLICE BOLOGNA
980 DATA 2 SLICES TURKEY
990 DATA G,1
1000 DATA BUTTER
1010 DATA MARGARINE
1020 DATA MAYONAISE
1030 DATA R,MILK
1040 DATA *,DINNER
1050 DATA G,2
1060 DATA APPLE,PEACH,PEAR,ORANGE JUICE,GRAPEFRUIT JUICE
1070 DATA S,2
1080 DATA LETTUCE,TOMATO,GREEN PEPPERS
1090 DATA S,1
1100 DATA BUTTER
1110 DATA MARGARINE,SALAD DRESSING
1120 DATA G,1
1130 DATA 4 OZ BEEF
1140 DATA 4 OZ HAM
1150 DATA 6 OZ BROILED CHICKEN
1160 DATA END

```

```

RUN
HOW MANY DAYS SHALL I PRINT?
? 2

```



```

*****
BREAKFAST                                DAY
*****                                1 2

CHOOSE 1 OF THE FOLLOWING:
  1 - SOFT BOILED EGG                    ( )( )
  2 - POACHED EGG                        ( )( )

  3 - ANY 2 OF THE FOLLOWING:
    1 - ORANGE JUICE                     ( )( )
    2 - FRESH ORANGE                     ( )( )
    3 - GRAPEFRUIT                       ( )( )
    4 - GRAPEFRUIT JUICE                 ( )( )

CHOOSE 1 OF THE FOLLOWING:
  4 - 1 SLICE BACON                      ( )( )
  5 - 2 LINKS SAUSAGE                   ( )( )

CHOOSE 1 OF THE FOLLOWING:
  6 - TOAST                              ( )( )
  7 - MUFFIN                             ( )( )

*****
LUNCH                                    DAY
*****                                1 2

REQUIRED 2 SLICES BREAD                  (X)(X)

CHOOSE 1 OF THE FOLLOWING:
  1 - 1 SLICE BOLOGNA                   ( )( )
  2 - 2 SLICES TURKEY                   ( )( )

CHOOSE 1 OF THE FOLLOWING:
  3 - BUTTER                            ( )( )
  4 - MARGARINE                         ( )( )
  5 - MAYONAISE                         ( )( )

REQUIRED MILK                           (X)(X)

*****
DINNER                                  DAY
*****                                1 2

CHOOSE 2 OF THE FOLLOWING:
  1 - APPLE                              ( )( )
  2 - PEACH                              ( )( )
  3 - PEAR                               ( )( )
  4 - ORANGE JUICE                      ( )( )
  5 - GRAPEFRUIT JUICE                 ( )( )

  6 - ANY 2 OF THE FOLLOWING:
    1 - LETTUCE                          ( )( )
    2 - TOMATO                           ( )( )
    3 - GREEN PEPPERS                    ( )( )

  7 - ANY 1 OF THE FOLLOWING:
    1 - BUTTER                            ( )( )
    2 - MARGARINE                         ( )( )
    3 - SALAD DRESSING                   ( )( )

CHOOSE 1 OF THE FOLLOWING:
  8 - 4 OZ BEEF                         ( )( )
  9 - 4 OZ HAM                           ( )( )
  10 - 6 OZ BROILED CHICKEN            ( )( )

```

BREAK IN 760

MAJOR SYMBOL TABLE - DIET PLANNING - VERSION 2

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	M .. MAXIMUM NUMBER OF DATA READS	I
I	N .. NUMBER OF DAYS TO PRINT	I
I	T\$.. TRANSACTION TYPE	I
I	C .. ITEM COUNTER	I
I	GO .. NUMBER OF GROUP ITEMS TO SELECT	I
I	SO .. NUMBER OF SUBGROUP ITEMS TO SELECT	I
I	R\$.. DESCRIPTION OF REQUIRED ITEM	I
I	M\$.. MEAL NAME	I
I	-----	I

FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	TAB .. FORMATS PRINT LINES	I
I	-----	I

CATEGORIZING RECIPES – VERSION 1

Description

This simple program allows the cook to categorize favorite recipes and locate them instantly with the help of the computer.

Functions of the Program

The program accepts the recipe code to search for and then locates all recipes categorized with that code. The recipe name is printed, along with its location and page number.

Instructions for Use

Recipes must be entered prior to running the program.

Data Entry

All data is entered using DATA statements.

Data Format

The format of the DATA statement is:

Recipe code, Recipe name, Location, Page number

Output Description

See example provided. All recipes with a code that matches the selection criteria will be printed, or all entries can be printed, if desired.

```
20 REM    RECIPE LOCATING PROGRAM    -    BASIC
30 REM  *****    DATA INITIALIZATION    *****
40 M=1000
50 PRINT "SHALL I PRINT ALL ENTRIES ( Y OR N )?"
60 INPUT A$
70 PRINT
80 IF A$ ="Y" THEN 160
90 PRINT "ENTER THE RECIPE CODE TO FIND"
100 INPUT X$
110 PRINT
120 PRINT
130 PRINT
140 PRINT
150 PRINT X$
160 PRINT TAB(10)"RECIPE";TAB(30);"LOCATION";TAB(50);"PAGE NBR"
170 PRINT TAB(10)"-----";TAB(30);"-----";TAB(50);"-----"
180 PRINT
190 REM  *****    PROCESSING AREA    *****
200 FOR I = 1 TO M
210   READ C$
220   IF C$="END" THEN 300
230   READ R$,L$,P$
240   IF A$ <> "Y" THEN 270
250   PRINT C$;TAB(10)R$;TAB(30);L$;TAB(50);P$
```

```

260 GOTO 290
270 IF C#<X# THEN 290
280 PRINT TAB(10)R#;TAB(30)I#;TAB(50)P#
290 NEXT I
300 REM***** PROGRAM TERMINATION POINT *****
310 PRINT
320 PRINT
330 STOP
340 REM ***** DATA ENTRIES FOLLOW *****
350 DATA EGGS,EGGS BENEDICT,COOKBOOK 1,PG 200
360 DATA EGGS,POACHED EGGS,COOKBOOK 2, PG 178
370 DATA EGGS,FRIED,COOKBOOK 3,PG 13
380 DATA STEAK,BROILED STEAK,COOKBOOK 2,PG 16
390 DATA LAMB, LAMB CHOPS,COOKBOOK 4, PG 1-18
400 DATA EGGS,HARD BOILED,COOKBOOK 1,PG 16
410 DATA EGGS,HARD BOILED,COOKBOOK 4, PG 2-13
420 DATA STEAK,SALISBURY STEAK,COOKBOOK 2,PG 16
430 DATA END

```

```

RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? Y

```

	RECIPE	LOCATION	PAGE NBR
	-----	-----	-----
EGGS	EGGS BENEDICT	COOKBOOK 1	PG 200
EGGS	POACHED EGGS	COOKBOOK 2	PG 178
EGGS	FRIED	COOKBOOK 3	PG 13
STEAK	BROILED STEAK	COOKBOOK 2	PG 16
LAMB	LAMB CHOPS	COOKBOOK 4	PG 1-18
EGGS	HARD BOILED	COOKBOOK 1	PG 16
EGGS	HARD BOILED	COOKBOOK 4	PG 2-13
STEAK	SALISBURY STEAK	COOKBOOK 2	PG 16

BREAK IN 330

```

RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? N

```

```

ENTER THE RECIPE CODE TO FIND
? STEAK

```

STEAK	RECIPE	LOCATION	PAGE NBR
	-----	-----	-----
	BROILED STEAK	COOKBOOK 2	PG 16
	SALISBURY STEAK	COOKBOOK 2	PG 16

BREAK IN 330

MAJOR SYMBOL TABLE - RECIPE - VERSION 1

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	X\$	.. RECIPE CODE TO SELECT	I
I	R\$	.. RECIPE NAME	I
I	L\$	.. LOCATION	I
I	F\$	.. PAGE LOCATION	I
I	C\$	.. TRANSACTION CODE	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

CATEGORIZING RECIPES – VERSION 2

Description

This recipe program is provided for those who wish to recall their favorite recipes with the push of a button. The recipes are entered as data to the program and then are printed upon request.

Functions of the Program

The program allows both the printing of all recipe names available and the printing of individual recipes, complete with instructions and ingredients.

Instructions for Use

All recipe items must be entered prior to running the program.

Data Entry

All data is entered using DATA statements.

Data Formats

Data is entered in two formats:

1. The master record for each recipe has the following form:
*, Recipe code, Recipe name
2. Recipe instructions are entered in Englishlike form, without special coding.

Note the END record.

Output Description

See example provided. Output can be either a condensed list for review purposes or a detailed printout of the selected recipe.

Suggested Enhancements

This application is ideal for conversion to disk or tape data file storage.

```
20 REM      RECIPE FILE PROGRAM - BASIC
30 REM ***** DATA INITIALIZATION *****
40 M=10000
50 REM ***** BEGIN PROCESSING *****
60 PRINT "WOULD YOU LIKE TO SEE A LIST OF ALL RECIPES (Y OR N)?"
70 INPUT  A$
80 PRINT
90 PRINT
100 IF A$<>"Y" THEN 260
110 PRINT "CATEGORY          RECIPE"
120 PRINT "-----"
130 FOR I = 1 TO M
```

```

140 READ C1$
150 IF C1$ ="END" THEN 200
160 IF C1$ <>"*" THEN 190
170 READ C2$,R$
180 PRINT C2$;TAB(15);R$
190 NEXT I
200 RESTORE
210 PRINT
220 PRINT
230 PRINT "WOULD YOU LIKE TO SEE ANY RECIPES ( Y OR N)?"
240 INPUT A$
250 IF A$="N" THEN 480
260 PRINT "SHALL I PRINT ALL OF THE ENTRIES (Y OR N)?"
270 INPUT A$
280 IF A$ ="Y" THEN 310
290 PRINT "ENTER THE RECIPE TO SEARCH FOR "
300 INPUT X$
310 REM ***** MAJOR PROCESSING LOOP *****
320 FOR I = 1 TO M
330 READ C1$
340 IF C1$="END" THEN 480
350 IF C1$ <>"*" THEN 450
360 PRINT
370 S=0
380 READ C2$,R$
390 IF A$="Y" THEN 410
400 IF R$ <> X$ THEN 470
410 S=1
420 PRINT C2$;TAB(15);R$
430 PRINT TAB(7)-----
440 GOTO 470
450 IF S<>1 THEN 470
460 PRINT TAB(7);C1$
470 NEXT I
480 REM ***** PROGRAM TERMINATION POINT *****
490 PRINT
500 PRINT
510 STOP
520 REM ***** DATA ENTRIES FOLLOW *****
530 DATA *,EGGS,EGGS BENEDICT
540 DATA THESE ARE THE INSTRUCTIONS FOR
550 DATA EGGS BENEDICT. IT INCLUDES ANYTHING
560 DATA DESIRED AS LONG AS THERE ARE NO COMMAS.
570 DATA *,EGGS,FRIED
580 DATA INSTRUCTION 1 FOR FRIED EGGS
590 DATA INSTRUCTION 2 FOR FRIED EGGS
600 DATA *,STEAK,BROILED STEAK
610 DATA INSTRUCTION 1 FOR STEAK
620 DATA INSTRUCTION 2 FOR STEAK
630 DATA *,EGGS,HARD BOILED
640 DATA INSTRUCTION 1 FOR HARDBOILED EGGS
650 DATA INSTRUCTION 2
660 DATA *,STEAK,PAN-FRIED
670 DATA INSTRUCTION 1
680 DATA END

```

RUN
 WOULD YOU LIKE TO SEE A LIST OF ALL RECIPES (Y OR N)?
 ? Y

CATEGORY	RECIPE
EGGS	EGGS BENEDICT
EGGS	FRIED
STEAK	BROILED STEAK
EGGS	HARD BOILED
STEAK	PAN-FRIED

WOULD YOU LIKE TO SEE ANY RECIPES (Y OR N)?
 ? Y
 SHALL I PRINT ALL OF THE ENTRIES (Y OR N)?
 ? N
 ENTER THE RECIPE TO SEARCH FOR
 ? BROILED STEAK

STEAK	BROILED STEAK
INSTRUCTION 1 FOR STEAK	
INSTRUCTION 2 FOR STEAK	

BREAK IN 510

MAJOR SYMBOL TABLE - RECIPE - VERSION 2

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	C1\$	.. TRANSACTION CODE/INSTRUCTION	I
I	C2\$	.. RECIPE CODE	I
I	R\$	.. RECIPE NAME	I
I	X\$	.. RECIPE TO SEARCH FOR	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

FREEZER INVENTORY – BASIC VERSION

Description

This program allows you to maintain and control an inventory of all items in your freezer. Either a full list of the freezer's contents or a list of all items of a selected type can be printed when desired.

Functions of the Program

The program initializes the entries based upon keyboard inputs and then prints the requested items.

Instructions for Use

Freezer inventory items must be given an item number and entered as data to the program prior to running it. Items used should be recorded and deleted from the data list at the time of use to insure the continued accuracy of your inventory.

Data Entry

Data is entered using DATA statements.

Data Format

A single data format is used by the program. It is recommended that the data items be entered in item number order. The format is:

Item code, Description, Item number,
Month, Year item was placed in freezer, Months of freezer life

Note the END record.

Output Description

See example provided. Two forms of output are available:

1. A list of the current contents (all entries).
2. A list of all items of a specified type.

Suggested Enhancements

The possibility of disk or tape-file storage and update of the inventory items should be considered for ease of use.

```
20 REM   FREEZER INVENTORY PROGRAM
30 REM   *****      DATA INITIALIZATION      *****
40 M=1000
50 PRINT "ENTER THE DATE ( MONTH,DAY,YEAR) I.E., JUL,15,1979
60 INPUT C1$,C2,C3
70 PRINT "SHALL I PRINT ALL ENTRIES ( Y OR N )?"
80 INPUT A$
90 PRINT
```

```

100 IF A$ ="Y" THEN 140
110 PRINT "ENTER THE ITEM CODE TO FIND
120 INPUT X$
130 PRINT
140 PRINT
150 PRINT
160 PRINT TAB(20);"TODAY'S DATE: ";C1$;C2;C3
170 PRINT
180 PRINT "ITEM CODE";TAB(15);"ITEM";TAB(35);"NBR";TAB(42);"DATE IN";
190 PRINT TAB(55);"MTHS"
200 PRINT "-----";TAB(15);"-----";TAB(35);"----";TAB(42);
210 PRINT "-----";TAB(55);"-----"
220 PRINT
230 REM ***** PROCESSING AREA *****
240 FOR I = 1 TO M
250   READ I1$
260   IF I1$="END" THEN 340
270   READ I2$,N,D1$,D2,T
280   IF A$ <> "Y" THEN 310
290   PRINT I1$;TAB(15);I2$;TAB(34);N;TAB(42);D1$;D2;TAB(55);T
300   GOTO 330
310   IF I1$<>X$ THEN 330
311   C=C+1
312   IF C=1 THEN 320
313   I1$=" "
320   PRINT I1$;TAB(15);I2$;TAB(34);N;TAB(42);D1$;D2;TAB(55);T
330 NEXT I
340 REM***** PROGRAM TERMINATION POINT *****
350 PRINT
360 PRINT
370 STOP
380 REM ***** DATA ENTRIES FOLLOW *****
390 DATA BEEF,ROUND STEAK,100,JAN,1979,18
400 DATA PORK,ROAST,101,JAN,1979,9
410 DATA BEEF,HAMBURGER,103,FEB,1979,18
420 DATA PORK,CHOPS,104,FEB,1979,9
430 DATA PORK,BACON,105,MAR,1979,18
440 DATA VEG,CORN,106,JUN,1979,18
450 DATA LAMB,CHOPS,107,AUG,1979,6
460 DATA PORK,BACON,108,DEC,1979,6
470 DATA BEEF,SIRLOIN STEAK,109,JAN,1979,18
480 DATA BEEF,HAMBURGER,110,FEB,1979,18
490 DATA END

```

```

RUN
ENTER THE DATE ( MONTH,DAY,YEAR) I.E., JUL,15,1979
? DEC,1,1980
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? Y

```

TODAY'S DATE: DEC 1 1980

ITEM CODE	ITEM	NBR	DATE IN	MTHS
BEEF	ROUND STEAK	100	JAN 1979	18
PORK	ROAST	101	JAN 1979	9
BEEF	HAMBURGER	103	FEB 1979	18
PORK	CHOPS	104	FEB 1979	9
PORK	BACON	105	MAR 1979	18
VEG	CORN	106	JUN 1979	18
LAMB	CHOPS	107	AUG 1979	6
PORK	BACON	108	DEC 1979	6
BEEF	SIRLOIN STEAK	109	JAN 1979	18
BEEF	HAMBURGER	110	FEB 1979	18

BREAK IN 370

RUN

ENTER THE DATE (MONTH, DAY, YEAR) I.E., JUL, 15, 1979

? DEC, 1, 1980

SHALL I PRINT ALL ENTRIES (Y OR N)?

? N

ENTER THE ITEM CODE TO FIND

? BEEF

TODAY'S DATE: DEC 1 1980

ITEM CODE	ITEM	NBR	DATE IN	MTHS
BEEF	ROUND STEAK	100	JAN 1979	18
	HAMBURGER	103	FEB 1979	18
	SIRLOIN STEAK	109	JAN 1979	18
	HAMBURGER	110	FEB 1979	18

BREAK IN 370

MAJOR SYMBOL TABLE - FREEZER LIST - BASIC

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	C1\$	CURRENT MONTH	I
I	C2	CURRENT DAY	I
I	C3	CURRENT YEAR	I
I	X\$	TRANSACTION CODE TO LOCATE	I
I	I2\$	ITEM	I
I	N	NUMBER OF ITEM	I
I	D1\$	DATE INTO FREEZER-MONTH	I
I	D2	DATE INTO FREEZER-YEAR	I
I	T	MONTHS OF FREEZER LIFE	I
I	I1\$	TRANSACTION CODE	I
I	C	COUNTER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

FREEZER INVENTORY – EXTENDED VERSION

Description

This program provides a perpetual inventory of your freezer's contents, complete with an analysis of the items scheduled to reach their maximum freezer life. Its use will help to insure the greatest possible savings from your freezer.

Functions of the Program

The program initializes all data elements, including month name abbreviations prior to processing. Depending upon the answers that you provide to the questions asked by the program, a list will be provided in one of several formats. The expiration date list is sorted by expiration dates (computed from the date in and the months of freezer life for the item). The program's various processing elements have been separated to provide flexibility for extension of any of its features.

Instructions for Use

Freezer inventory items must be entered as data items to the program. Items used should be recorded and deleted from the data list at the time of use to insure the continued accuracy of your inventory.

Data Entry

All data items are entered as DATA statements.

Data Format

A single data format is used:

Item code, Description, Item number,
Month, Year item was placed in freezer, Months of freezer life

Note the END data card.

Output Description

See example provided. Three forms of reports are available:

1. A list of the freezer's entire contents.
2. A list of all items of a specific type.
3. A sorted list that is in order by expiration date or item types.

Suggested Enhancements

The possibility of disk or tape-file storage should be considered for this program.

```

20 REM   FREEZER INVENTORY PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 DIM E3(37)
50 DIM E4(37)
60 DIM M$(13)
70 M$(1)="JAN"
80 M$(2)="FEB"
90 M$(3)="MAR"
100 M$(4)="APR"
110 M$(5)="MAY"
120 M$(6)="JUN"
130 M$(7)="JUL"
140 M$(8)="AUG"
150 M$(9)="SEP"
160 M$(10)="OCT"
170 M$(11)="NOV"
180 M$(12)="DEC"
190 M$(13)="???"
200 M=1000
210 PRINT "ENTER THE DATE ( MONTH,DAY,YEAR) I.E., JUL,15,1979"
220 INPUT C1$,C2$,C3
230 PRINT "SHALL I PRINT ALL ENTRIES ( Y OR N )?"
240 E2=D2
250 INPUT A$
260 PRINT
270 IF A$ ="Y" THEN 310
280 PRINT "ENTER THE ITEM CODE TO FIND"
290 INPUT X$
300 GOTO 390
310 PRINT "SHALL I PRINT THE ITEMS IN THE ORDER I HAVE THEM ( Y OR N )?"
320 INPUT A0$
330 IF A0$="Y" THEN 360
340 PRINT "IN ORDER BY ITEM CODE (I) OR EXPIRATION DATE (E)?"
350 INPUT A$
360 PRINT
370 PRINT
380 PRINT
390 REM ***** PROCESSING AREA *****
400 PRINT TAB(20);"TODAY'S DATE: ";C1$;C2$;C3
410 PRINT
420 IF A$="I" THEN 640
430 IF A$="E" THEN 970
440 PRINT "ITEM CODE";TAB(15);"ITEM";TAB(35);"NBR";TAB(42);"DATE IN";
450 PRINT TAB(55);"MTHS"
460 PRINT "-----";TAB(15);"-----";TAB(35);"----";TAB(42);
470 PRINT "-----";TAB(55);"-----"
480 PRINT
490 FOR I = 1 TO M
500   READ I1$
510   IF I1$="END" THEN 590
520   READ I2$,N,D1$,D2$,T
530   IF A$ <> "Y" THEN 560
540   PRINT I1$;TAB(15);I2$;TAB(34);N;TAB(42);D1$;D2$;TAB(55);T
550   GOTO 580
560   IF I1$<>X$ THEN 580
570   PRINT I1$;TAB(15);I2$;TAB(34);N;TAB(42);D1$;D2$;TAB(55);T
580 NEXT I
590 REM***** PROGRAM TERMINATION POINT *****
600 PRINT
610 PRINT
620 PRINT
630 STOP
640 REM ***** ITEM CODE BREAKDOWN AND PRINT *****
650 PRINT "ITEM CODE";TAB(15);"ITEM";TAB(35);"NBR";TAB(42);"DATE IN";

```

```

660 PRINT TAB(55);"MTHS"
670 PRINT "-----";TAB(15);"-----";TAB(35);"----";TAB(42);
680 PRINT "-----";TAB(55);"-----"
690 I=1
700 FOR J = 1 TO M
710   READ I1$
720   IF I1$="END" THEN 880
730   READ I2$,N,D1$,D2,T
740   IF J>I THEN 850
750   IF J<I THEN 870
760   S$=I1$
770   IF I =1 THEN 850
780   RESTORE
790   FOR K =1 TO J
800     READ I1$,I2$,N,D1$,D2,T
810     IF S$<>I1$ THEN 830
820     C=C+1
830   NEXT K
840   IF C>1 THEN 880
850   IF I1$<>S$ THEN 870
860   PRINT I1$;TAB(15);I2$;TAB(34);N;TAB(42);D1$;D2;TAB(55);T
870 NEXT J
880 RESTORE
890 C=0
900 IF I>1 THEN 920
910 M=M-1
920 PRINT
930 I=I+1
940 IF I<=M THEN 700
950 GOTO 590
960 PRINT
970 REM *****EXPIRATION DATE BREAKDOWN AND PRINT *****
980 PRINT "EXP DATE";TAB(12);"ITEM CODE";TAB(24);"ITEM";TAB(40);"NBR";
990 PRINT TAB(47);"DATE IN";TAB(57);"MTHS"
1000 PRINT "-----";TAB(12);"-----";TAB(24);"-----";TAB(40);
1010 PRINT "----";TAB(47);"-----";TAB(57);"-----"
1020 REM ***** BUILD AND SORT EXP DATE ARRAY *****
1030 FOR J=1 TO M
1040   READ I1$
1050   IF I1$="END" THEN 1180
1060   READ I2$,N,D1$,D2,T
1070   GOSUB 1490
1080   FOR K = 1 TO 36
1090     IF E3(K)=0 THEN 1140
1100     IF E2<>E4(K) THEN 1130
1110     IF L1<> E3(K) THEN 1130
1120     GOTO 1170
1130   NEXT K
1140   E3(K)=L1
1150   M3=M3+1
1160   E4(K)=E2
1170 NEXT J
1180 REM ***** SORT ENTRIES *****
1190 FOR I = 1 TO M3-1
1200   FOR K = I+1 TO M3
1210     IF E4(I)< E4(K) THEN 1300
1220     IF E4(I)>E4(K) THEN 1240
1230     IF E3(I)<=E3(K) THEN 1300
1240     E4(37)=E4(I)
1250     E3(37)=E3(I)
1260     E4(I)=E4(K)
1270     E3(I)=E3(K)
1280     E4(K)=E4(37)
1290     E3(K)=E3(37)

```

```

1300 NEXT K
1310 NEXT I
1320 REM ***** PRINT OF RESULTS AFTER THE SORT *****
1330 RESTORE
1340 FOR J = 1 TO M3
1350 FOR I = 1 TO M
1360 READ I1$
1370 IF I1$="END" THEN 1450
1380 READ I2$,N,D1$,D2$,T
1390 GOSUB 1490
1400 IF E1$ <> M$(E3(J)) THEN 1440
1410 IF E2 <> E4(J) THEN 1440
1420 PRINT E1$;E2;TAB(12);I1$;TAB(24);I2$;TAB(39);N;TAB(47);D1$;D2;
1430 PRINT TAB(57);T
1440 NEXT I
1450 RESTORE
1460 PRINT
1470 NEXT J
1480 GOTO 590
1490 REM ***** EXPIRATION DATE CONVERSION *****
1500 E2=D2
1510 FOR L = 1 TO 12
1520 IF M$(L)<>D1$ THEN 1550
1530 L1=L
1540 GOTO 1580
1550 NEXT L
1560 L1=13
1570 IF L1 =13 THEN 1630
1580 L1=L1+T
1590 IF L1<=12 THEN 1630
1600 L1=L1-12
1610 E2=E2+1
1620 GOTO 1590
1630 E1$=M$(L1)
1640 RETURN
1650 REM ***** DATA FOR INITIALIZATION *****
1660 REM ***** DATA ENTRIES FOLLOW *****
1670 DATA BEEF,ROUND STEAK,100,JAN,1979,18
1680 DATA PORK,ROAST,101,JAN,1979,9
1690 DATA BEEF,HAMBURGER,103,FEB,1979,18
1700 DATA PORK,CHOPS,104,FEB,1979,9
1710 DATA PORK,BACON,105,MAR,1979,18
1720 DATA VEG,CORN,106,JUN,1979,18
1730 DATA LAMB,CHOPS,107,AUG,1979,6
1740 DATA PORK,BACON,108,DEC,1979,6
1750 DATA BEEF,SIRLOIN STEAK,109,JAN,1979,18
1760 DATA BEEF,HAMBURGER,110,FEB,1979,18
1770 DATA END

```

```

RUN
ENTER THE DATE ( MONTH,DAY,YEAR) I.E., JUL,15,1979
? DEC,1,1980
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? Y

```

```

SHALL I PRINT THE ITEMS IN THE ORDER I HAVE THEM ( Y OR N )?
? Y

```

TODAY'S DATE: DEC 1 1980

ITEM CODE	ITEM	NBR	DATE IN	MTHS
BEEF	ROUND STEAK	100	JAN 1979	18
PORK	ROAST	101	JAN 1979	9
BEEF	HAMBURGER	103	FEB 1979	18
PORK	CHOPS	104	FEB 1979	9
PORK	BACON	105	MAR 1979	18
VEG	CORN	106	JUN 1979	18
LAMB	CHOPS	107	AUG 1979	6
PORK	BACON	108	DEC 1979	6
BEEF	SIRLOIN STEAK	109	JAN 1979	18
BEEF	HAMBURGER	110	FEB 1979	18

BREAK IN 630

RUN
ENTER THE DATE (MONTH,DAY,YEAR) I.E., JUL,15,1979
? DEC,1,1980
SHALL I PRINT ALL ENTRIES (Y OR N)?
? N

ENTER THE ITEM CODE TO FIND
? PORK

TODAY'S DATE: DEC 1 1980

ITEM CODE	ITEM	NBR	DATE IN	MTHS
PORK	ROAST	101	JAN 1979	9
PORK	CHOPS	104	FEB 1979	9
PORK	BACON	105	MAR 1979	18
PORK	BACON	108	DEC 1979	6

BREAK IN 630

RUN
ENTER THE DATE (MONTH,DAY,YEAR) I.E., JUL,15,1979
? DEC,1,1980
SHALL I PRINT ALL ENTRIES (Y OR N)?
? Y

SHALL I PRINT THE ITEMS IN THE ORDER I HAVE THEM (Y OR N)?
? N
IN ORDER BY ITEM CODE (I) OR EXPIRATION DATE (E)?
? E

TODAY'S DATE: DEC 1 1980

EXP DATE	ITEM CODE	ITEM	NBR	DATE IN	MTHS
OCT 1979	PORK	ROAST	101	JAN 1979	9
NOV 1979	PORK	CHOPS	104	FEB 1979	9
FEB 1980	LAMB	CHOPS	107	AUG 1979	6
JUN 1980	PORK	BACON	108	DEC 1979	6
JUL 1980	BEEF	ROUND STEAK	100	JAN 1979	18
JUL 1980	BEEF	SIRLOIN STEAK	109	JAN 1979	18
AUG 1980	BEEF	HAMBURGER	103	FEB 1979	18
AUG 1980	BEEF	HAMBURGER	110	FEB 1979	18
SEP 1980	PORK	BACON	105	MAR 1979	18
DEC 1980	VEG	CORN	106	JUN 1979	18

BREAK IN 630

MAJOR SYMBOL TABLE - FREEZER LIST - EXTENDED

```
I-----I
I NAME .. DESCRIPTION I
I-----I
I E3( ) .. ARRAY FOR EXPIRATION DATE SORT I
I E4( ) .. ARRAY FOR EXPIRATION DATE SORT I
I M$( ) .. MONTH NAME ARRAY I
I M .. MAXIMUM NUMBER OF DATA READS I
I C1$ .. CURRENT MONTH I
I C2 .. CURRENT DAY I
I C3 .. CURRENT YEAR I
I X$ .. TRANSACTION CODE TO LOCATE I
I I1$ .. TRANSACTION CODE I
I I2$ .. ITEM DESCRIPTION I
I N .. ITEM NUMBER I
I D1$ .. DATE INTO FREEZER -MONTH I
I D2 .. DATE INTO FREEZER - YEAR I
I T .. MONTHS FREEZER LIFE I
I E1$ .. EXPIRATION MONTH I
I E2 .. EXPIRATION YEAR I
I-----I
```

FUNCTIONS USED

```
I-----I
I NAME .. DESCRIPTION I
I-----I
I TAB .. FORMATS PRINT LINES I
I GOSUB .. BRANCHES AND RETURNS I
I DIM .. SINGLE DIMENSION ARRAYS I
I-----I
```

SUPERMARKET LIST

Description

This program assists the homemaker by producing a grocery shopping list that is listed by categories to facilitate fast and efficient shopping.

Functions of the Program

The program begins by initializing the seven major food categories provided. Additional categories can be added easily, if desired. Prior to the printing of the grocery list, all data items are read and validated for accuracy. The major processing area of the program cycles through the data (once for each food category) and produces the formatted listing.

Instructions for Use

Data statements must be provided to the program prior to running it.

Data Entry

All data is entered using DATA statements.

Data Format

The format of the grocery list items is:

Food category code, Item description, Quantity

Note the END data record.

Output Description

See example provided.

```
20 REM          SUPERMARKET LIST
30 REM  ***** DATA INITIALIZATION *****
40 M=1000
50 DIM T$(7)
60 M1=7
70 T$(1)="M"
80 N$(1)="MEAT"
90 T$(2)="FF"
100 N$(2)="FRESH FRUITS"
110 T$(3)="CF"
120 N$(3)="CANNED FRUITS"
130 T$(4)="FV"
140 N$(4)="FRESH VEGETABLES"
150 T$(5)="CV"
160 N$(5)="CANNED VEGETABLES"
170 T$(6)="D"
180 N$(6)="DAIRY PRODUCTS"
190 T$(7)="O"
200 N$(7)="OTHER"
210 REM  ***** CHECK FOR DATA ACCURACY *****
220 FOR I = 1 TO M
```

```

230 READ T1$
240 IF T1$="END" THEN 310
250 READ I$,Q$
260 FOR J = 1 TO M1
270 IF T1$=T$(J) THEN 300
280 NEXT J
290 PRINT "FOOD TYPE FOR ITEM #";I;" ";I$;" IS NOT RECOGNIZED"
300 NEXT I
310 PRINT "SHALL I CONTINUE ( Y OR N)?"
320 INPUT A$
330 IF A$ ="N" THEN 500
340 RESTORE
350 REM ***** PROCESSING AREA *****
360 FOR I = 1 TO M1
370 PRINT
380 PRINT
390 PRINT " ";N$(I)
400 PRINT"-----"
410 FOR J= 1 TO M
420 READ T1$
430 IF T1$="END" THEN 480
440 READ I$,Q$
450 IF T1$<> T$(I) THEN 470
460 PRINT Q$;TAB(10);I$
470 NEXT J
480 RESTORE
490 NEXT I
500 REM ***** PROGRAM TERMINATION POINT *****
510 PRINT
520 PRINT
530 STOP
540 REM ***** DATA ENTRIES FOLLOW *****
550 DATA M,STEAK,1 LARGE
560 DATA D,MILK,5 GALS
570 DATA FF,APPLES ,1 BAG
580 DATA CV,GREEN BEANS, 2 CANS
590 DATA CV,YELLOW BEANS,1 CAN
600 DATA CF,PEACHES, 1 CAN
610 DATA FF,PEARS, 1/2 DOZEN
620 DATA O,DOG FOOD, BAG
630 DATA DAIRY,BUTTER, 1 POUND
640 DATA END

```

```

RUN
FOOD TYPE FOR ITEM # 9 BUTTER IS NOT RECOGNIZED
SHALL I CONTINUE ( Y OR N)?
? Y

```

MEAT

1 LARGE STEAK

FRESH FRUITS

1 BAG APPLES
1/2 DOZEN PEARS

CANNED FRUITS

1 CAN PEACHES

FRESH VEGETABLES

CANNED VEGETABLES

2 CANS GREEN BEANS
1 CAN YELLOW BEANS

DAIRY PRODUCTS

5 GALS MILK

OTHER

BAG DOG FOOD

BREAK IN 530

MAJOR SYMBOL TABLE - SUPERMARKET LIST

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	T\$()	MASTER CATEGORY CODE ARRAY	I
I	N\$()	MASTER CATEGORY DESCRIPTION ARRAY	I
I	M1	NUMBER OF CATEGORIES	I
I	T1\$	TRANSACTION CODE	I
I	I\$	TRANSACTION DESCRIPTION	I
I	Q\$	TRANSACTION QUANTITY	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	DIM	SINGLE DIMENSION ARRAYS	I

Scheduling Programs for Home Use

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TV SCHEDULING – BASIC VERSION

Description

This program eliminates difficulties arising from family television viewing conflicts. It produces a weekly schedule that details the time, channel, and person scheduled to view a particular television show.

Functions of the Program

This program has several subroutines. Each is designed to perform a specific printing function. If extensions are desired, they should be relatively easy to accomplish by changing the individual routines. The program reads the scheduled items from DATA statements, determines their placement in the schedule, and then prints the schedule for the week.

Instructions for Use

Provide all individual schedule items prior to running the program. Priority in scheduling is given to the last entry read. Note the method used to indicate time: At 1200, the counter moves to 0030.

Data Entry

All data is entered using DATA statements.

Data Format

All data is entered using a single format:

Person, Day of the week, Start time, Stop time, Channel number

Note the END data record.

Output Description

See example provided. Output is printed for seven days.

```
20 REM          TELEVISION SCHEDULE PROGRAM
30 REM  ***** ENTRY OF START / STOP TIMES *****
40 PRINT "ENTER STARTING TIME FOR THE SCHEDULE I.E., 930"
50 INPUT T0
60 PRINT "ENTER STOPPING TIME FOR THE SCHEDULE I.E., 1130"
70 INPUT T1
80 REM  ***** DATA INITIALIZATION *****
90 M0=2
100 M1=7
110 DIM D0$(M1)
120 DIM C1 (7)
130 DIM N1$ (7)
140 FOR I = 1 TO 7
150   N1$(I)=" "
160   C1(I) = 0
```

```

170 NEXT I
180 DIM N0$ (7)
190 D0$ (1)="SUN"
200 D0$ (2)="MON"
210 D0$ (3)="TUE"
220 D0$ (4) = "WED"
230 D0$ (5)="THU"
240 D0$ (6)="FRI"
250 D0$ (7)="SAT"
260 REM ***** PROCESSING LOOP *****
270 GOSUB 690
280 X0=T0
290 X1=X0-100*(INT(X0/100))
300 IF X1 < 60 THEN 320
310 X0=X0+100-X1
320 IF INT(X0/100) >=10 THEN 340
330 PRINT " ";
340 PRINT X0;
350 GOSUB 760
360 REM ***** CHECKS SCHEDULE ENTRIES FOR TIME *****
370 FOR J= 1 TO 336
380   READ N$,D1$,S0,S1,C0
390   IF N$="END" THEN 480
400   IF S0 > X0 THEN 470
410   IF S1 <= X0 THEN 470
420   FOR K = 1 TO 7
430     IF D1$ <> D0$ (K) THEN 460
440     N1$ (K) = N$
450     C1 (K) = C0
460   NEXT K
470 NEXT J
480 GOSUB 840
490 REM ***** PRINTS SCHEDULE ENTRIES *****
500 PRINT "      I";
510 FOR K=1 TO 7
520   PRINT N1$(K);
530   IF C1 (K) >9 THEN 550
540   PRINT " ";
550   PRINT C1 (K);"I";
560   N1$ (K) = " "
570   C1 (K) = 0
580 NEXT K
590 PRINT
600 GOSUB 840
610 RESTORE
620 X0=X0+30
630 IF X0 < T1+1 THEN 290
640 REM ***** PROGRAM TERMINATION POINT *****
650 PRINT "      ";
660 GOSUB 760
670 STOP
680 REM ***** SUBROUTINES FOLLOW *****
690 REM ***** PRINTS HEADINGS *****
700 PRINT "      ";
710 FOR I = 1 TO M1
720   PRINT "      ";D0$ (I);"      ";
730 NEXT I
740 PRINT
750 RETURN
760 REM ***** PRINTS SCHEDULE OUTLINE *****
780 FOR I = 1 TO M1
790   PRINT "I-----";
800 NEXT I

```



```

810 PRINT "I"
820 RETURN
830 REM ***** VERTICAL LINES *****
840 PRINT " ";
850 FOR I = 1 TO M1
860 PRINT "I ";
870 NEXT I
880 PRINT "I"
890 RETURN
900 REM ***** DATA ENTRIES FOLLOW *****
910 DATA BOB,FRI,1000,1100,9
920 DATA CHU,SAT,930,1000,7
930 DATA DAD,WED,930,1100,7
940 DATA MOM,WED,1030,1100,7
950 DATA MOM,WED,0930,1000,9
960 DATA END,, ,

```

```

RUN
ENTER STARTING TIME FOR THE SCHEDULE I.E., 430
? 930
ENTER STOPPING TIME FOR THE SCHEDULE I.E., 1130
? 1130

```

	SUN	MON	TUE	WED	THU	FRI	SAT
930	I	I	I	I	I	I	I
	I	I	I	I	I	I	I
	I 0 I	0 I	0 I	0 IMOM 9 I	0 I	0 I	0 ICHUC 7 I
	I	I	I	I	I	I	I
1000	I	I	I	I	I	I	I
	I	I	I	I	I	I	I
	I 0 I	0 I	0 I	0 IDAD 7 I	0 I	0 IBOB 9 I	0 I
	I	I	I	I	I	I	I
1030	I	I	I	I	I	I	I
	I	I	I	I	I	I	I
	I 0 I	0 I	0 I	0 IMOM 7 I	0 I	0 IBOB 9 I	0 I
	I	I	I	I	I	I	I
1100	I	I	I	I	I	I	I
	I	I	I	I	I	I	I
	I 0 I	0 I	0 I	0 I	0 I	0 I	0 I
	I	I	I	I	I	I	I
1130	I	I	I	I	I	I	I
	I	I	I	I	I	I	I
	I 0 I	0 I	0 I	0 I	0 I	0 I	0 I
	I	I	I	I	I	I	I
	I	I	I	I	I	I	I

BREAK IN 670

MAJOR SYMBOL TABLE - TV SCHEDULING - BASIC

I	NAME	.. DESCRIPTION	I
I	TO	.. SCHEDULE START TIME	I
I	T1	.. SCHEDULE STOP TIME	I
I	DO\$()	.. DAYS OF WEEK ARRAY	I
I	C1()	.. CHANNEL PRINT ARRAY	I
I	N1\$()	.. NAME PRINT ARRAY	I
I	X0	.. TIME INCREMENT COUNTER	I
I	N\$	.. NAME	I
I	D1\$	.. DAY OF WEEK	I
I	S0	.. START TIME OF SHOW	I
I	S1	.. STOP TIME OF SHOW	I
I	CO	.. CHANNEL	I

FUNCTIONS USED

I NAME	.. DESCRIPTION

I INT	.. CONVERTS NUMBER TO INTEGER
I GOSUB	.. BRANCHES TO AND RETURNS
I DIM	.. SINGLE DIMENSION ARRAYS

TV SCHEDULING – EXTENDED VERSION

Description

This program eliminates family television viewing conflicts by producing a daily time schedule for the specified period. All conflicts are identified and printed for your review and resolution. It can also be used to indicate scheduled viewing times for households that place restrictions on viewing time.

Functions of the Program

This program, like the previous version, is built in modules. Note the major difference is that this version produces the schedule for the specified period only.

Instructions for Use

Enter schedule items prior to running the program.

Data Entry

All data is entered using DATA statements.

Data Format

The format for entry is:

Person, Day of the week, Start time, Stop time, Channel number

Note the END data record.

Output Description

See example provided.

```
20 REM      TELEVISION SCHEDULE - EXTENDED
30 REM ***** ENTRY OF START / STOP TIMES *****
40 PRINT "ENTER THE START DAY, AND THE ENDING DAY OF THE SCHEDULE"
50 PRINT "I.E., SUN,SAT"
60 INPUT D2$,D3$
70 PRINT "ENTER START AND STOP TIMES I.E., 430,1130"
80 INPUT T0,T1
90 IF T1 > T0 THEN 110
100 T1=T1 + 1200
110 REM ***** DATA INITIALIZATION *****
120 E0=0
130 E1=0
140 M0=2
150 M1=7
160 I2=1
170 I3=7
180 DIM C1 (7)
190 DIM N1$ (7)
200 FOR I = 1 TO 7
```

```

210 N1$ (I)="
220 C1 = 0
230 NEXT I
240 DIM D0$(7)
250 D0$ (1)="SUN"
260 D0$ (2)="MON"
270 D0$ (3)="TUE"
280 D0$ (4) = "WED"
290 D0$ (5)="THU"
300 D0$ (6)="FRI"
310 D0$ (7)="SAT"
320 FOR I = 1 TO 7
330 IF D2$ <> D0$ (I) THEN 350
340 I2=I
350 IF D3$ <> D0$ (I) THEN 370
360 I3=I
370 NEXT I
380 IF T1 >T0 THEN 400
390 T1=T1 +1200
400 M1=I3-I2+1
410 IF M1>0 THEN 430
420 M1=I3-I2 +8
430 REM ***** PROCESSING LOOP *****
440 IF E1 =0 THEN 460
450 GOSUB 1120
460 X0=T0
470 X1=X0-100*(INT(X0/100))
480 IF X1 < 60 THEN 500
490 X0=X0+100-X1
500 IF E1 = 0 THEN 580
510 IF X0 <= 1200 THEN 540
520 X0 = X0-1200
530 T1 = T1-1200
540 IF INT(X0/100) >=10 THEN 560
550 PRINT " ";
560 PRINT X0;
570 GOSUB 1230
580 REM ***** CHECKS SCHEDULE ENTRIES FOR TIME *****
590 FOR J= 1 TO 336
600 READ N$,D1$,S0,S1,C0
610 IF N$="END" THEN 770
620 IF S0 > X0 THEN 760
630 IF S1 <= X0 THEN 760
640 K=I2
650 IF D1$ <> D0$ (K) THEN 710
660 IF N1$ (K)=" " THEN 690
670 IF E1 >0 THEN 690
680 GOSUB 1370
690 N1$ (K) = N$
700 C1 (K) = C0
710 IF K = I3 THEN 760
720 K=K+1
730 IF K < 8 THEN 650
740 K=1
750 GOTO 650
760 NEXT J
770 IF E1 = 0 THEN 810
780 GOSUB 1310
790 REM ***** PRINTS SCHEDULE ENTRIES *****
800 PRINT " I";
810 K=I2
820 IF E1 = 0 THEN 870
830 PRINT N1$(K);
840 IF C1 (K) >9 THEN 860

```

```

850 PRINT " ";
860 PRINT C1 (K);"I";
870 N1$(K) = " ";
880 C1 (K) = 0
890 IF K = I3 THEN 940
900 K=K+1
910 IF K<8 THEN 820
920 K=1
930 GOTO 820
940 IF E1 = 0 THEN 970
950 PRINT
960 GOSUB 1310
970 RESTORE
980 X0=X0+30
990 IF X0 < T1 + 1 THEN 470
1000 REM ***** PROGRAM TERMINATION POINT *****
1010 E1 = E1 + 1
1020 IF E1 > 1 THEN 1070
1030 IF E0=0 THEN 400
1040 PRINT "SHALL I SHOW YOU THE SCHEDULE ( Y OR N )?"
1050 INPUT A$
1060 IF A$ = "Y" THEN 400
1070 IF A$<>"Y" THEN 1100
1080 PRINT " ";
1090 GOSUB 1230
1100 STOP
1110 REM ***** SUBROUTINES FOLLOW *****
1120 REM ***** PRINTS HEADINGS *****
1130 PRINT " ";
1140 I=I2
1150 PRINT " ";DO$( I);" ";
1160 IF I=I3 THEN 1210
1170 I=I+1
1180 IF I <8 THEN 1150
1190 I=1
1200 GOTO 1150
1210 PRINT
1220 RETURN
1230 REM ***** PRINTS SCHEDULE OUTLINE *****
1240 PRINT " ";
1250 FOR I = 1 TO M1
1260 PRINT "I-----";
1270 NEXT I
1280 PRINT "I"
1290 RETURN
1300 REM ***** VERTICAL LINES *****
1310 PRINT " ";
1320 FOR I = 1 TO M1
1330 PRINT "I ";
1340 NEXT I
1350 PRINT "I"
1360 RETURN
1370 REM ***** ERROR ROUTINE FOR CONFLICTS *****
1380 IF E0 <> 0 THEN 1400
1390 PRINT" CONFLICTS IN SCHEDULE "
1400 E0 = E0 + 1
1410 PRINT D1$,S0,N1$(K);C1(K),N$;C0
1420 IF C1 (K) <> C0 THEN 1440
1430 PRINT "*** SAME CHANNEL ***"
1440 RETURN
1450 REM ***** DATA ENTRIES FOLLOW HERE *****
1460 DATA BOB ,FRI,1000,1100,9
1470 DATA CHUC,SAT,930,1000,7
1480 DATA DAD ,WED,930,1100,7

```

```

1490 DATA MOM ,WED,1030,1100,7
1500 DATA MOM ,WED,0930,1000,9
1510 DATA KIMI,SUN,0900,0930,13
1520 DATA RAE ,SAT,0830,0930,1
1530 DATA END,, ,

```

```

RUN
ENTER THE START DAY, AND THE ENDING DAY OF THE SCHEDULE
I.E., SUN,SAT
? FRI,WED
ENTER START AND STOP TIMES I.E., 430,1130
? 930,1100
CONFLICTS IN SCHEDULE
WED          930          DAD 7          MOM 9
WED          1030         DAD 7          MOM 7
*** SAME CHANNEL ***
SHALL I SHOW YOU THE SCHEDULE ( Y OR N )?
? Y

```

	FRI	SAT	SUN	MON	TUE	WED
930	I-----I-----I-----I-----I-----I-----I	I	I	I	I	I
	I	I	I	I	I	I
	I	0 ICHUC 7	I	0 I	0 I	0 IMOM 9
	I	I	I	I	I	I
1000	I-----I-----I-----I-----I-----I-----I	I	I	I	I	I
	I	I	I	I	I	I
	I	IBOB 9 I	0 I	0 I	0 I	0 IDAD 7
	I	I	I	I	I	I
1030	I-----I-----I-----I-----I-----I-----I	I	I	I	I	I
	I	I	I	I	I	I
	I	IBOB 9 I	0 I	0 I	0 I	0 IMOM 7
	I	I	I	I	I	I
1100	I-----I-----I-----I-----I-----I-----I	I	I	I	I	I
	I	I	I	I	I	I
	I	0 I	0 I	0 I	0 I	0 I
	I	I	I	I	I	I
	I	I	I	I	I	I

BREAK IN 1100

MAJOR SYMBOL TABLE - TV SCHEDULE - EXTENDED

I	NAME	.. DESCRIPTION	I
I	D2\$	.. START DAY	I
I	D3\$	.. STOP DAY	I
I	T0	.. START TIME	I
I	T1	.. STOP TIME	I
I	C1()	.. CHANNEL PRINT ARRAY	I
I	N1\$()	.. NAME PRINT ARRAY	I
I	D0\$()	.. DAY OF WEEK ARRAY	I
I	S0	.. START TIME IN	I
I	C0	.. CHANNEL IN	I
I	S1	.. STOP TIME IN	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	GOSUB	.. BRANCHES TO AND RETURNS	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

REMINDER CALENDAR – BASIC VERSION

Description

This program produces a simple reminder calendar for the busy individual or family. The items are printed in abbreviated form on the calendar, and a detailed list is printed upon request.

Functions of the Program

The program prints, for the month selected, a calendar and list of the items scheduled. Most program functions are executed using subroutines to facilitate extensions or modifications to the basic listing. The major processing loop occurs in lines 210-420. All functions occurring after the termination point are performed using GOSUBs.

Instructions for Use

All scheduled items must be entered prior to running the program.

Data Entry

All data items are entered using DATA statements.

Data Formats

There are two data formats used by the program:

1. The master month record is entered as the first item:
Month name, Days in month, Day of week that month starts on
2. Schedule items are provided in the following format:
Month, Day, Abbreviated description, Description

Output Description

See example provided. The program produces a calendar and a detailed print of the scheduled items.

```
20 REM REMINDER SCHEDULE - BASIC
30 REM ***** DATA INITIALIZATION *****
40 S0=0
50 L0=0
60 M1=7
70 M2=6
80 DIM D6$(7)
90 DIM D7$(7)
100 DIM D0$(7)
110 D0$(1)="SUN"
120 D0$(2)="MON"
130 D0$(3)="TUE"
140 D0$(4)="WED"
150 D0$(5)="THU"
160 D0$(6)="FRI"
```

```

170 D0$(7)="SAT"
180 FOR I = 1 TO 7
190   D6$(I)=" "
200 NEXT I
210 REM ***** PROCESSING LOOP *****
220 READ M$,D,D1$
230 FOR K = 1 TO 7
240   IF D1$ <> D0$(K) THEN 260
250   S0=K
260 NEXT K
270 IF S0 = 0 THEN 480
280 GOSUB 490
290 FOR J = 1 TO M2
300   GOSUB 560
310   FOR K = 1 TO 7
320     N1$(K) = " "
330   NEXT K
340   IF D <= I0 THEN 430
350   GOSUB 620
360   FOR L = 1 TO 10
370     GOSUB 950
380     IF L1 = 0 THEN 420
390     GOSUB 840
400     L0=L0+1
410   NEXT L
420 NEXT J
430 REM ***** PROGRAM TERMINATION POINT *****
440 PRINT "SMALL I PRINT THE SCHEDULED ITEMS ( Y OR N )?"
450 INPUT A$
460 IF A$ <> "Y" THEN 480
470 GOSUB 1140
480 STOP
490 REM ***** PRINTS HEADINGS *****
500 PRINT " "
510 FOR I = 1 TO 7
520   PRINT " " ; D0$(I) ; " " ;
530 NEXT I
540 PRINT
550 RETURN
560 REM ***** PRINTS SCHEDULE OUTLINE *****
570 FOR I = 1 TO M1
580   PRINT "I-----";
590 NEXT I
600 PRINT "I"
610 RETURN
620 REM ***** PRINTS CALENDAR DAY LINE *****
630 FOR I = 1 TO M1
640   IF J <> 1 THEN 670
650   IF I <> S0 THEN 670
660   I0=1
670   IF D >= I0 THEN 710
680   PRINT "I " ;
690   I0=I0+1
700   GOTO 800
710   IF I0 > 9 THEN 780
720   IF I0 <> 0 THEN 750
730   PRINT "I " ;
740   GOTO 800
750   PRINT "I " ; I0 ; " " ;
760   I0=I0+1
770   GOTO 800
780   PRINT "I " ; I0 ; " " ;
790   I0=I0+1
800 NEXT I

```



```

810 PRINT "I"
820 L0=0
830 RETURN
840 REM ***** VERTICAL LINES *****
850 FOR I = 1 TO M1
860   IF D6$(I)=" " THEN 910
870   PRINT "I";D6$(I);" ";
880   D6$(I)=" "
890   D7(I)=0
900   GOTO 920
910   PRINT "I "
920 NEXT I
930 PRINT "I"
940 RETURN
950 REM ***** REVIEWS SCHEDULE ITEMS *****
960 RESTORE
970 L1=0
980 READ M$,D,D1$
990 FOR I= 1 TO 100
1000  READ M3$,D3,D4$,D5$
1010  IF M3$="END" THEN 1130
1020  IF D3 > D THEN 1120
1030  IF M3$ <> M$ THEN 1120
1040  IF D3 >= I0 THEN 1120
1050  IF D3 < I0-7 THEN 1120
1060  I1 = D3-I0+8
1070  D7(I1)=1+D7(I1)
1080  IF D7(I1)<= L0 THEN 1120
1090  IF D6$(I1) <> " " THEN 1120
1100  D6$(I1)=D4$
1110  L1 = 1
1120 NEXT I
1130 RETURN
1140 REM ***** DETAILED PRINT OF SCHEDULE *****
1150 PRINT
1160 PRINT M$
1170 RESTORE
1180 READ M$,D,D1$
1190 FOR I = 1 TO 100
1200  READ M3$,D3,D4$,D5$
1210  IF M3$="END" THEN 1260
1220  IF D3>D THEN 1250
1230  IF M3$ <> M$ THEN 1250
1240  PRINT D3,D4$,D5$
1250 NEXT I
1260 RETURN
1270 REM ***** DATA ENTRIES FOLLOW *****
1280 DATA JAN,31,MON
1290 DATA JAN,1,DOCTOR,APPOINTMENT FOR PHYSICAL
1300 DATA JAN,2,DENTST,3 PM APPOINTMENT FOR CLEANING
1310 DATA JAN,31,E-DAY ,KENNY'S BIRTHDAY
1320 DATA JAN,99,NOTE,VISIT FARM DURING THIS MONTH
1330 DATA JAN,9,CAR ,REPAIR OF MOTOR
1340 DATA JAN,2,SCHOOL,PTA MEETING 7 PM
1350 DATA END,,

```

RUN

		JAN						
SUN	MON	TUE	WED	THU	FRI	SAT		
I	I	I	I	I	I	I	I	
I	I 1	I 2	I 3	I 4	I 5	I 6	I	
I	I DOCTOR	I DENTIST	I	I	I	I	I	
I	I	I SCHOOL	I	I	I	I	I	
I	I	I	I	I	I	I	I	
I 7	I 8	I 9	I 10	I 11	I 12	I 13	I	
I	I	I CAR	I	I	I	I	I	
I	I	I	I	I	I	I	I	
I 14	I 15	I 16	I 17	I 18	I 19	I 20	I	
I	I	I	I	I	I	I	I	
I 21	I 22	I 23	I 24	I 25	I 26	I 27	I	
I	I	I	I	I	I	I	I	
I 28	I 29	I 30	I 31	I	I	I	I	
I	I	I	I B-DAY	I	I	I	I	
I	I	I	I	I	I	I	I	

SHALL I PRINT THE SCHEDULED ITEMS (Y OR N)?

? Y

JAN

1	DOCTOR	APPOINTMENT FOR PHYSICAL
2	DENTIST	3 PM APPOINTMENT FOR CLEANING
31	B-DAY	KENNY'S BIRTHDAY
9	CAR	REPAIR OF MOTOR
2	SCHOOL	PTA MEETING 7 PM

BREAK IN 480

MAJOR SYMBOL TABLE - REMINDER

I	I	I	I
I	NAME	.. DESCRIPTION	I
I	I	I	I
I	S0	.. POINTER TO DAY OF WEEK	I
I	D0\$()	.. DAY OF WEEK	I
I	D6\$()	.. OUTPUT ARRAY	I
I	M\$	.. DAY OF WEEK IN	I
I	D	.. DAY IN	I
I	D1\$	.. DAY OF WEEK IN	I
I	I0	.. DAY OF MONTH COUNTER	I
I	D7()	.. OUTPUT ARRAY FOR COUNT	I
I	M3\$	.. MONTH IN	I
I	D3	.. DAY IN	I
I	D4\$	.. ITEM IN	I
I	D5\$	.. ITEM DESCRIPTION IN	I
I	I	I	I

FUNCTIONS USED

I	I	I	I
I	NAME	.. DESCRIPTION	I
I	I	I	I
I	GOSUB	.. BRANCH TO AND RETURN	I
I	DIM	.. SINGLE DIMENSION ARRAY	I
I	I	I	I

REMINDER CALENDAR -- EXTENDED VERSION

Description

This program is a useful assistant for the busy individual or family. It produces a reminder calendar for as many months in advance as are desired.

Functions of the Program

This program functions in a similar way to the basic reminder program given previously. There are, however, several major enhancements:

1. This program produces the calendars for the number of months specified.
2. The calendars are printed either continuously or with page alignment.
3. The calendars can be either condensed or expanded (to allow for "write-ins").
4. Month names and the number of days in each month are initialized for you.

Instructions for Use

Record your schedule items and enter them prior to running the program for the month that they are scheduled in.

Data Entry

All data is entered using DATA statements.

Data Format

One data form is required. Scheduled items are entered in the following form:

Month, Day, Abbreviated description, Description

Output Description

See example provided. The printed results will include individual prints for each of the months requested. Page alignment is allowed, if requested.

```
20 REM  REMINDER SCHEDULE AND CALENDAR -- ENHANCED
30 REM  ***** DATA INITIALIZATION *****
40 N=0
50 S0=0
60 L0=0
70 M1=7
80 M2=7
90 M4=1
```

```

100 DIM D6$(7)
110 DIM D7(7)
120 DIM D0$(7)
130 DIM N0(12)
140 DIM M0$(12)
150 READ D0$(1),D0$(2),D0$(3),D0$(4),D0$(5),D0$(6),D0$(7)
160 FOR I = 1 TO 12
170   READ M0$(I),N0(I)
180 NEXT I
190 FOR I = 1 TO 7
200   D6$(I)=" "
210 NEXT I
220 PRINT "ENTER THE FIRST MONTH AND YEAR TO BE PRINTED I.E., JAN,1980"
230 INPUT M$,Y1
240 PRINT "ENTER THE DAY OF THE WEEK THAT THE FIRST MONTH STARTS ON"
250 INPUT D1$
260 PRINT "ENTER THE NUMBER OF MONTHS TO BE PRINTED I.E., 10"
270 INPUT N
280 PRINT "SHALL I PRINT THE SCHEDULED TIMES ( Y OR N )?"
290 INPUT A$
300 PRINT "DO YOU WANT PAGE ALIGNMENT ( Y OR N )?"
310 INPUT A1$
320 PRINT "DO YOU WANT AN EXPANDED CALENDAR ( Y OR N )?"
330 INPUT A2$
340 IF A1$ <> "Y" THEN 370
350 PRINT "BEFORE THE PRINTING OF EACH MONTH A '?' WILL APPEAR"
360 PRINT "ALIGN TO THE TOP OF PAGE BEFORE PRESSING THE RETURN"
370 FOR I = 1 TO 12
380   IF M$ <> M0$(I) THEN 400
390   M4=I
400 NEXT I
410 FOR K= 1 TO 7
420   IF D1$ <> D0$(K) THEN 440
430   S0=K
440 NEXT K
450 REM ***** PROCESSING LOOP *****
460 FOR I2 = M4 TO M4+N-1
470   N0(2)=28
480   Y=Y1
490   IF INT(Y/4)<>Y/4 THEN 510
500   N0(2)=29
510   I0=0
520   M3=I2
530   IF M3 <= 12 THEN 590
540   M3=M3-12
550   Y=Y1+1
560   IF INT(Y/4)<>Y/4 THEN 580
570   N0(2)=29
580   GOTO 530
590   IF S0 = 0 THEN 820
600   GOSUB 860
610   FOR J = 1 TO M2
620     GOSUB 960
630     FOR K = 1 TO 7
640       N1$(K) = " "
650     NEXT K
660     IF N0(M3) < I0 THEN 790
670     GOSUB 1020
680     FOR L = 1 TO 10
690       GOSUB 1390
700     IF L1 <> 0 THEN 750
710     IF A2$ <> "Y" THEN 780
720     GOSUB 1280
730     GOSUB 1280

```

```

740     GOTO 780
750     GOSUB 1280
760     L0=L0+1
770     NEXT L
780     NEXT J
790     REM ***** PROGRAM TERMINATION POINT *****
800     IF A# <> "Y" THEN 820
810     GOSUB 1600
820     IF S0<>8 THEN 840
830     S0=1
840     NEXT I2
850     STOP
860     REM ***** PRINTS HEADINGS *****
870     IF A1# <> "Y" THEN 890
880     INPUT X#
890     PRINT
900     PRINT "          ";M0$(M3);" ";Y
910     FOR I = 1 TO 7
920     PRINT "          ";D0$(I);" ";
930     NEXT I
940     PRINT
950     RETURN
960     REM ***** PRINTS SCHEDULE OUTLINE *****
970     FOR I = 1 TO M1
980     PRINT "I-----";
990     NEXT I
1000    PRINT "I"
1010    RETURN
1020    REM ***** PRINTS CALENDAR DAY LINE *****
1030    FOR I = 1 TO M1
1040     IF J<> 1 THEN 1070
1050     IF I <> S0 THEN 1070
1060     I0=1
1070     IF N0(M3) >= I0 THEN 1110
1080     PRINT "I      ";
1090     I0=I0+1
1100     GOTO 1230
1110     IF I0 > 9 THEN 1190
1120     IF I0 <> 0 THEN 1150
1130     PRINT "I      ";
1140     GOTO 1230
1150     PRINT "I ";I0;" ";
1160     I0=I0+1
1170     S1=I+1
1180     GOTO 1230
1190     PRINT "I ";I0;" ";
1200     S1 = I+1
1210     I0=I0+1
1220     S0=I+1
1230    NEXT I
1240    PRINT "I"
1250    L0=0
1260    S0=S1
1270    RETURN
1280    REM ***** VERTICAL LINES *****
1290    FOR I = 1 TO M1
1300     IF D6$(I)=" " THEN 1350
1310     PRINT "I ";D6$(I);" ";
1320     D6$(I)=" "
1330     D7(I)=0
1340     GOTO 1360
1350     PRINT "I      ";
1360    NEXT I
1370    PRINT "I"

```

```

1380 RETURN
1390 REM ***** REVIEWS SCHEDULE ITEMS *****
1400 RESTORE
1410 L1=0
1420 FOR I = 1 TO 31
1430   READ X$
1440 NEXT I
1450 FOR I= 1 TO 100
1460   READ M3$,D3,D4$,D5$
1470   IF M3$="END" THEN 1590
1480   IF D3 > N0(M3) THEN 1580
1490   IF M3$ <> M0$(M3) THEN 1580
1500   IF D3 >= I0 THEN 1580
1510   IF D3 < I0-7 THEN 1580
1520   I1 = D3-I0+8
1530   D7(I1)=1+D7(I1)
1540   IF D7(I1)<= L0 THEN 1580
1550   IF D6$(I1) <> " " THEN 1580
1560   D6$(I1)=D4$
1570   L1 = 1
1580 NEXT I
1590 RETURN
1600 REM ***** DETAILED PRINT OF SCHEDULE *****
1610 PRINT
1620 PRINT M0$(M3)
1630 RESTORE
1640 FOR I = 1 TO 31
1650   READ X$
1660 NEXT I
1670 FOR I = 1 TO 100
1680   READ M3$,D3,D4$,D5$
1690   IF M3$ ="END" THEN 1730
1700   IF M3$ <> M0$(M3) THEN 1720
1710   PRINT D3,D4$,D5$
1720 NEXT I
1730 RETURN
1740 REM ***** DATA FOR INITIALIZATION *****
1750 DATA SUN,MON,TUE,WED,THU,FRI,SAT
1760 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30
1770 DATA JUL,31,AUG,31,SEP,30,OCT,31,NOV,30,DEC,31
1780 REM ***** DATA ENTRIES FOLLOW *****
1790 DATA JAN,1,DOCTOR, APPOINTMENT FOR PHYSICAL
1800 DATA JAN,2,DENTST, 3 PM APPOINTMENT DOCTOR SMITH
1810 DATA JAN,2,SCHOOL, PTA MEETING 7 PM
1820 DATA FEB,25,B-DAY ,KENNY'S BIRTHDAY
1830 DATA JAN,99,NOTE,NEXT MONTH VISIT FARM
1840 DATA END,,

```

```

RUN
ENTER THE FIRST MONTH AND YEAR TO BE PRINTED I.E., JAN,1980
? JAN,1980
ENTER THE DAY OF THE WEEK THAT THE FIRST MONTH STARTS ON
? TUE
ENTER THE NUMBER OF MONTHS TO BE PRINTED I.E., 10
? 1
SHALL I PRINT THE SCHEDULED ITEMS ( Y OR N )?
? Y
DO YOU WANT PAGE ALIGNMENT ( Y OR N )?
? Y
DO YOU WANT AN EXPANDED CALENDAR ( Y OR N )?
? Y
BEFORE THE PRINTING OF EACH MONTH A '?' WILL APPEAR
ALIGN TO THE TOP OF PAGE BEFORE PRESSING THE RETURN
?

```


JOB JAR

Description

The traditional jar of household tasks that is used to occupy idle moments is automated by this program. Odd jobs that we never seem to find the time for are placed in the computer job jar for future reference. Later, when you have free time, the computer will randomly choose one to fill that idle moment. It's a sure way of taking care of annoying household duties. Peeking is not allowed.

Functions of the Program

The program randomly selects an item from the data items supplied that meets the time availability specified.

Instructions for Use

New jobs that are to be added to the jar are entered by means of DATA statements. Completed jobs should be deleted from the data list at time of accomplishment.

Data Entry

All data is entered using DATA statements.

Data Format

Tasks are entered using the following format:

Job name/description, Estimated time to complete

Output Description

See example provided.

```
20 REM HOUSEHOLD CHORE JOB-JAR PROGRAM
30 REM ***** DATA INITIATION *****
40 M0=99
50 Y=1
60 N=0
70 P=0
80 PRINT "WOULD YOU LIKE TO REVIEW THE JOBS AVAILABLE (Y OR N)?"
90 INPUT A$
100 IF A$ <> "Y" THEN 170
110 PRINT
120 PRINT
130 S0=1
140 GOSUB 380
150 S0=0
160 N=0
170 PRINT "DO YOU HAVE A TIME LIMITATION ( Y OR N)?"
180 INPUT A$
190 IF A$="N" THEN 220
```



```

200 PRINT "ENTER THE MAXIMUM TIME AVAILABLE (IN HOURS)"
210 INPUT M0
220 REM ***** PROCESSING AREA *****
230 GOSUB 380
240 IF N <> 0 THEN 270
250 PRINT "ALL JOBS HAVE A GREATER TIME FACTOR"
260 GOTO 360
270 PRINT N;" JOBS ARE AVAILABLE FOR SELECTION"
280 Z=INT((RND(0))*N)+1
290 N=0
300 N1 =0
310 GOSUB 380
320 PRINT "DATA RECORD ";N1;" HAS BEEN SELECTED"
330 PRINT
340 PRINT "DESCRIPTION ";T0%;" - TIME ALLOWED: ";T1;" HOURS"
350 PRINT
360 REM ***** TERMINATION POINT *****
370 STOP
380 REM ***** DATA READ AREA *****
390 RESTORE
400 FOR I = 1 TO 500
410 READ T0%,T1
420 IF T0% = "END" THEN 510
430 N1=N1+1
440 IF S0 <> 1 THEN 460
450 PRINT N1;" , ";T0%;T1;" HOURS"
460 IF T1 > M0 THEN 500
470 N=N+1
480 IF F=0 THEN 500
490 IF N=Z THEN 520
500 NEXT I
510 F=1
520 RETURN
530 REM ***** DATA ENTRY AREA *****
540 DATA TASK 1,10
550 DATA TASK 2, 3
560 DATA TASK 3, 88
570 DATA TASK 4,4
580 DATA TASK 5, 7
590 DATA TASK 6, 19
600 DATA TASK 7,6
610 DATA TASK 8, 4
620 DATA END,

```

```

RUN
WOULD YOU LIKE TO REVIEW THE JOBS AVAILABLE (Y OR N )?
? Y

```

```

1 . TASK 1 10 HOURS
2 . TASK 2 3 HOURS
3 . TASK 3 88 HOURS
4 . TASK 4 4 HOURS
5 . TASK 5 7 HOURS
6 . TASK 6 19 HOURS
7 . TASK 7 6 HOURS
8 . TASK 8 4 HOURS

```

```

DO YOU HAVE A TIME LIMITATION ( Y OR N)?
? Y
ENTER THE MAXIMUM TIME AVAILABLE (IN HOURS)
? 5

```

3 JOBS ARE AVAILABLE FOR SELECTION
DATA RECORD 2 HAS BEEN SELECTED

DESCRIPTION TASK 2 - TIME ALLOWED: 3 HOURS

BREAK IN 370

RUN

WOULD YOU LIKE TO REVIEW THE JOBS AVAILABLE (Y OR N)?

? N

DO YOU HAVE A TIME LIMITATION (Y OR N)?

? N

8 JOBS ARE AVAILABLE FOR SELECTION

DATA RECORD 3 HAS BEEN SELECTED

DESCRIPTION TASK 3 - TIME ALLOWED: 88 HOURS

BREAK IN 370

MAJOR SYMBOL TABLE - JOB-JAR

I	NAME	DESCRIPTION	I
I	Y	.. SEED FOR RANDOM NUMBER GENERATOR	I
I	P	.. COUNTER FOR NUMBER OF PASSES	I
I	N	.. NUMBER OF JOBS AVAILABLE	I
I	M0	.. AVAILABLE TIME	I
I	Z	.. GENERATED RANDOM NUMBER	I
I	N1	.. RECORD NUMBER	I
I	T1	.. TIME OF JOB IN	I
I	TO\$	.. DESCRIPTION OF JOB IN	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	RND	.. GENERATES A RANDOM NUMBER	I
I	GOSUB	.. BRANCHES TO AND RETURNS	I

CHORES

Description

The computer becomes the perfect arbitrator of the question, "Whose turn is it to do the dishes?" This program produces a weekly schedule of all chores and individuals responsible for each.

Functions of the Program

This program accepts a cycle number from the keyboard and schedules the next person to perform each chore, a schedule based upon an equal sharing by all individuals eligible for the task. Consecutive cycle numbers must be used to insure equitable scheduling. Tasks are entered as either the responsibility of one person or the responsibility of all. The schedule is produced, and a checklist is provided, for a week at a time.

Instructions for Use

Determine the tasks that are required, the days of the week that they are to be accomplished on, and the individuals eligible to be scheduled for that task.

Data Entry

All data is entered by means of DATA statements except for the current cycle number.

Data Formats

Two formats are available:

1. Tasks are identified by the following format:

Task type, Task name,

Y or N (for each of the seven days of the week, Sunday first)

A Y (yes) entry for a day indicates that the task is to be performed on that day. For example: Y, N, N, Y, N, N, Y indicates that the task is to be performed on Sunday, Wednesday, and Saturday. Task types are either "*" or "A." The "*" indicates that the task is to be shared by the individuals following the item. The "A" indicates that the task is to be performed by all individuals. See example.

2. Following each task record, a list of the individuals is provided in the following form:

N, Name of the individual

Output Description

See example provided. The results are printed for one week at a time.

```

20 REM HOUSEHOLD CHORES - BASIC
30 REM ***** DATA INITIATION *****
40 M1=7
50 DIM N$(10)
60 DIM D0$(7)
70 D0$(1)="SUN"
80 D0$(2)="MON"
90 D0$(3)="TUE"
100 D0$(4)="WED"
110 D0$(5)="THU"
120 D0$(6)="FRI"
130 D0$(7)="SAT"
140 X$=""
150 PRINT "SPACE TO TOP OF PAGE"
160 INPUT G$
170 PRINT "ENTER CURRENT CYCLE NUMBER"
180 INPUT Y
190 Y=Y-1
200 IF Y<0 THEN 170
210 PRINT
220 REM ***** PROCESSING LOOP *****
230 GOSUB 510
240 GOSUB 580
250 GOSUB 650
260 FOR I = 1 TO 25
270 IF T$="END" THEN 490
280 T1$=T$
290 READ C$,D$(1),D$(2),D$(3),D$(4),D$(5),D$(6),D$(7)
300 GOSUB 650
310 PRINT
320 PRINT C$;
330 IF T1$<>"A" THEN 370
340 S=1
350 N=K1
360 GOTO 390
370 N=Y-K1*INT(Y/K1)+1
380 S=N
390 FOR J= S TO N
400 FOR L= 1 TO 7
410 IF D$(L) <>"Y" THEN 430
420 PRINT TAB(L*B-1);"(";N$(J);
430 NEXT L
440 PRINT
450 NEXT J
460 PRINT
470 GOSUB 580
480 NEXT I
490 REM ***** PROGRAM TERMINATION POINT *****
500 STOP
510 REM ***** PRINTS HEADINGS *****
520 PRINT X$;
530 FOR I = 1 TO 7
540 PRINT " ";D0$(I);" ";
550 NEXT I
560 PRINT
570 RETURN
580 REM ***** PRINTS SCHEDULE OUTLINE *****
590 PRINT X$;
600 FOR I = 1 TO M1
610 PRINT "I-----";
620 NEXT I
630 PRINT "I"
640 RETURN
650 REM ***** DATA READ PROCEDURES *****

```

```

660 FOR K= 1 TO 25
670 READ T$
680 IF T$ <> "N" THEN 710
690 READ N$(K)
700 NEXT K
710 K1=K-1
720 RETURN
730 REM ***** DATA ENTRIES FOLLOW *****
740 DATA *CHORE 1,Y,Y,Y,Y,Y,Y,Y
750 DATA N,JIM
760 DATA N,CHUCK
770 DATA N,MARY
780 DATA *CHORE 2,Y,N,Y,N,Y,N,Y
790 DATA N,JUDY
800 DATA N,MARY
810 DATA A,CHORE 3,Y,Y,Y,Y,Y,Y,Y
820 DATA N,MARY
830 DATA N,JUDY
840 DATA N,JIM
850 DATA N,CHUCK
860 DATA *CHORE 4,N,N,N,N,N,N,Y
870 DATA N,JUDY
880 DATA N,MARY
890 DATA N,JIM
900 DATA N,CHUCK
910 DATA END

```

```

RUN
SPACE TO TOP OF PAGE
?
ENTER CURRENT CYCLE NUMBER
? 4

```

	SUN	MON	TUE	WED	THU	FRI	SAT
CHORE 1	()JIM	()JIM	()JIM	()JIM	()JIM	()JIM	()JIM
CHORE 2	()MARY		()MARY		()MARY		()MARY
CHORE 3	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK
CHORE 4							()CHUCK

BREAK IN 500

MAJOR SYMBOL TABLE - CHORES

I	NAME	DESCRIPTION	I
I	D\$()	ARRAY OF TASK INDICATORS	I
I	N\$()	NAME ARRAY	I
I	DO\$()	DAY OF WEEK ARRAY	I
I	Y	CYCLE NUMBER	I
I	T\$	TASK CODE	I
I	T1\$	TASK CODE	I
I	C\$	TASK NAME	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	INT	CONVERTS NUMBER TO INTEGER	I
I	GOSUB	BRANCHES TO AND RETURNS	I
I	DIM	SINGLE DIMENSION ARRAYS	I

LAWN/PLANT CARE

Description

This gardener's assistant identifies and prints the scheduled daily and monthly gardening tasks for the specified times requested.

Functions of the Program

The program produces outputs of monthly calendars beginning with the specified month and continuing for the number of months requested. The major processing loop calls various subroutines to perform the formatted printing of the calendar. Note that the data is supplied in two sections. The first section identifies tasks that are scheduled for specific dates, and the second supplies tasks that are scheduled for the month only.

Instructions for Use

Enter scheduled items as data prior to running the program.

Data Entry

Data is entered by means of DATA statements.

Data Formats

1. Tasks that are scheduled for a specific date are entered as:
Month, Date, Abbreviated description, Extended description
2. Tasks that are identified for the month only are entered as:
Month, Task description

Output Description

See example provided.

```
20 REM LAWN/CARE SCHEDULE PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 N=0
50 S0=0
60 L0=0
70 M1=7
80 M2=7
90 M4=1
100 DIM D0$(7)
110 DIM N0(12)
120 DIM M0$(12)
130 DIM D6$(7)
140 DIM D7(7)
150 READ D0$(1),D0$(2),D0$(3),D0$(4),D0$(5),D0$(6),D0$(7)
160 FOR I = 1 TO 12
170 READ M0$(I),N0(I)
```

```

180 NEXT I
190 FOR I = 1 TO 7
200   D6$(I)="      "
210 NEXT I
220 PRINT "ENTER THE FIRST MONTH AND YEAR TO BE PRINTED I.E., JAN,1980"
230 INPUT M$,Y1
240 PRINT "ENTER THE DAY OF THE WEEK THAT THE FIRST MONTH STARTS ON"
250 INPUT D1$
260 PRINT "ENTER THE NUMBER OF MONTHS TO BE PRINTED I.E., 10"
270 INPUT N
280 PRINT "DO YOU WANT PAGE ALIGNMENT ( Y OR N )?"
290 INPUT A1$
300 IF A1$ <> "Y" THEN 330
310 PRINT "BEFORE THE PRINTING OF EACH MONTH A '?' WILL APPEAR"
320 PRINT "ALIGN TO THE TOP OF PAGE BEFORE PRESSING THE RETURN"
330 FOR I = 1 TO 12
340   IF M$ <> M0$(I) THEN 360
350   M4=I
360 NEXT I
370 FOR K= 1 TO 7
380   IF D1$ <> D0$(K) THEN 400
390   S0=K
400 NEXT K
410 REM ***** PROCESSING LOOP *****
420 FOR I2 = M4 TO M4+N-1
430   N0(2)=28
440   Y=Y1
450   IF INT(Y/4)<>Y/4 THEN 470
460   N0(2)=29
470   I0=0
480   M3=I2
490   IF M3 <= 12 THEN 550
500   M3=M3-12
510   Y=Y1+1
520   IF INT (Y/4)<>Y/4 THEN 540
530   N0(2)=29
540   GOTO 490
550   IF S0 = 0 THEN 760
560   GOSUB 800
570   FOR J = 1 TO M2
580     GOSUB 900
590     FOR K = 1 TO 7
600       N1$(K) = "      "
610     NEXT K
620     IF N0(M3) < I0 THEN 740
630     GOSUB 960
640     FOR L = 1 TO 10
650       GOSUB 1330
660       IF L1 <> 0 THEN 700
670       GOSUB 1220
680       GOSUB 1220
690       GOTO 730
700       GOSUB 1220
710       L0=L0+1
720     NEXT L
730   NEXT J
740   REM ***** PROGRAM TERMINATION POINT *****
750   GOSUB 1550
760   IF S0<>8 THEN 780
770   S0=1
780 NEXT I2
790 STOP
800 REM ***** PRINTS HEADINGS *****
810 IF A1$ <> "Y" THEN 830

```



```

820 INPUT X$
830 PRINT
840 PRINT "                ";M0$(M3);" ";Y
850 FOR I = 1 TO 7
860 PRINT " ";D0$(I);" ";
870 NEXT I
880 PRINT
890 RETURN
900 REM ***** PRINTS SCHEDULE OUTLINE *****
910 FOR I = 1 TO M1
920 PRINT "I-----";
930 NEXT I
940 PRINT "I"
950 RETURN
960 REM ***** PRINTS CALENDAR DAY LINE *****
970 FOR I = 1 TO M1
980 IF J <> 1 THEN 1010
990 IF I <> S0 THEN 1010
1000 I0=1
1010 IF N0(M3) >= I0 THEN 1050
1020 PRINT "I ";
1030 I0=I0+1
1040 GOTO 1170
1050 IF I0 > 9 THEN 1130
1060 IF I0 <> 0 THEN 1090
1070 PRINT "I ";
1080 GOTO 1170
1090 PRINT "I ";I0;" ";
1100 I0=I0+1
1110 S1=I+1
1120 GOTO 1170
1130 PRINT "I ";I0;" ";
1140 S1 = I+1
1150 I0=I0+1
1160 S0=I+1
1170 NEXT I
1180 PRINT "I"
1190 L0=0
1200 S0=S1
1210 RETURN
1220 REM ***** VERTICAL LINES *****
1230 FOR I = 1 TO M1
1240 IF D6$(I)=" " THEN 1290
1250 PRINT "I";D6$(I);" ";
1260 D6$(I)=" "
1270 D7(I)=0
1280 GOTO 1300
1290 PRINT "I ";
1300 NEXT I
1310 PRINT "I"
1320 RETURN
1330 REM ***** REVIEWS SCHEDULE ITEMS *****
1340 RESTORE
1350 L1=0
1360 FOR I = 1 TO 31
1370 READ X$
1380 NEXT I
1390 FOR I= 1 TO 100
1400 READ M3$
1410 IF M3$="END" THEN 1540
1420 READ D3,D4$,D5$
1430 IF D3 > N0(M3) THEN 1530
1440 IF M3$ <> M0$(M3) THEN 1530
1450 IF D3 >= I0 THEN 1530

```

```

1460 IF D3 < I0-7 THEN 1530
1470 I1 = D3-I0+8
1480 D7(I1)=1+D7(I1)
1490 IF D7(I1)<= L0 THEN 1530
1500 IF D6$(I1) <> " " THEN 1530
1510 D6$(I1)=D4$
1520 L1 = 1
1530 NEXT I
1540 RETURN
1550 REM ***** DETAILED PRINT OF SCHEDULE
1560 PRINT
1570 PRINT M0$(M3)
1580 RESTORE
1590 FOR I = 1 TO 31
1600 READ X$
1610 NEXT I
1620 FOR I = 1 TO 100
1630 READ M3$
1640 IF M3$="END" THEN 1690
1650 READ D3,D4$,D5$
1660 IF M3$ <> M0$(M3) THEN 1680
1670 PRINT D3,D4$,D5$
1680 NEXT I
1690 PRINT
1700 PRINT " MONTH'S TASKS "
1710 FOR I = 1 TO 100
1720 READ M3$
1730 IF M3$="END" THEN 1780
1740 READ D5$
1750 IF M3$<>M0$(M3) THEN 1770
1760 PRINT D5$
1770 NEXT I
1780 RETURN
1790 REM ***** DATA FOR INITIALIZATION *****
1800 DATA SUN,MON,TUE,WED,THU,FRI,SAT
1810 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30
1820 DATA JUL,31,AUG,31,SEP,30,OCT,31,NOV,30,DEC,31
1830 REM ***** DATA ENTRIES FOLLOW *****
1840 DATA APR,15,GARDEN,PREPARE FOR PLANTING
1850 DATA APR,20,SELECT,CHOOSE SEEDS TO PLANT
1860 DATA APR,25,PLANT ,PLANT CARROTS
1870 DATA APR,30,PLANT ,PLANT ONIONS
1880 DATA MAY,15,PLANT ,PLANT TOMATO PLANTS
1890 DATA END
1900 REM ***** MONTH'S TASKS FOLLOW *****
1910 DATA APR,SEED LAWN
1920 DATA MAY,FERTILIZE YARD
1930 DATA APR,ROLL LAWN
1940 DATA END

```

```

RUN
ENTER THE FIRST MONTH AND YEAR TO BE PRINTED I.E., JAN,1980
? APR,1980
ENTER THE DAY OF THE WEEK THAT THE FIRST MONTH STARTS ON
? TUE
ENTER THE NUMBER OF MONTHS TO BE PRINTED I.E., 10
? 1
DO YOU WANT PAGE ALIGNMENT ( Y OR N )?
? N

```


FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	INT .. CONVERTS NUMBERS TO INTEGER	I
I	GOSUB .. BRANCHES TO AND RETURNS	I
I	DIM .. SINGLE DIMENSION ARRAYS	I
I	-----	I

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CHRISTMAS CARDS

Description

This program records addresses for Christmas cards and letters and identifies those that have been sent or received.

Functions of the Program

The program reads names, addresses, and sent/received indicators and then prints a formatted listing for use in addressing and mailing your Christmas cards.

Instructions for Use

Enter your Christmas card list prior to running the program. Maintain the data entries for use in determining next year's mailing requirements, adding and deleting from the list as necessary.

Data Entry

All data is entered by means of DATA statements.

Data Format

The data is formatted as follows:

Name, Street address, City, State, Zip, Sent, Received

Output Description

See example provided.

Comments

You may not wish to use the sent/received portion of the program. This function can be eliminated easily from the program (check lines 140, 150, and 220-260).

```
20 REM      CHRISTMAS CARD LIST PROGRAM - BASIC
30 REM *****      DATA INITIALIZATION AREA      *****
40 M=1000
50 S=1
60 PRINT
70 REM *****      PROCESSING      AREA      *****
80 PRINT
90 PRINT " SENT RCVD"
100 FOR I = 1 TO M
110   A1$=" "
120   A2$=" "
130   READ N$
```

```

140 IF N$ ="Y" THEN 220
150 IF N$="N" THEN 230
160 IF S <> 1 THEN GOSUB 300
170 IF N$="END" THEN 380
180 S=0
190 N1$=N$
200 READ S1$,S2$,S3$,Z$
210 GOTO 280
220 A1$=N$
230 READ N$
240 S=0
250 IF N$<>"Y" THEN 270
260 A2$=N$
270 GOTO 130
280 NEXT I
290 REM ***** PRINT SUBROUTINE *****
300 PRINT " (";A1$;") (";A2$;");TAB(10);N1$; " ";
310 PRINT TAB(30);S1$
320 PRINT TAB(30)S2$; " ";S3$; " ";Z$
330 PRINT
340 K=K+1
350 S=1
360 RETURN
370 REM ***** PROGRAM TERMINATION POINT *****
380 PRINT
390 PRINT
400 PRINT
410 PRINT "NUMBER OF ENTRIES - ";K
420 PRINT
430 STOP
440 REM ***** DATA ENTRIES FOLLOW *****
450 DATA JIM ANYNAME,111 ANYSTREET,ANYTOWN,ANYSSTATE,00000
460 DATA Y,
470 DATA JUDY DOE,432 ANOTHER STREET,ANOTHER TOWN,STATE,11111
480 DATA N,N
490 DATA TOM AND JUDY FORREST,444 WILLOW AVE,LUMBERTOWN,ALASKA,44444
500 DATA N,Y
510 DATA END

```

RUN

```

SENT RCVD
(Y) ( ) JIM ANYNAME          111 ANYSTREET
                              ANYTOWN ANYSTATE 00000

( ) ( ) JUDY DOE            432 ANOTHER STREET
                              ANOTHER TOWN STATE 11111

( ) (Y) TOM AND JUDY FORREST 444 WILLOW AVE
                              LUMBERTOWN ALASKA 44444

```

NUMBER OF ENTRIES - 3

BREAK IN 430

MAJOR SYMBOL TABLE - CHRISTMAS CARDS

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	N\$	.. NAME/SENT-RCVD INDICATOR	I
I	N1\$	.. NAME	I
I	S1\$	.. STREET ADDRESS	I
I	S2\$	.. CITY ADDRESS	I
I	S3\$	.. STATE ADDRESS	I
I	Z\$	.. ZIP CODE	I
I	A1\$	.. CARD SENT INDICATOR FOR PRINTING	I
I	A2\$	.. CARD RCVD INDICATOR FOR PRINTING	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

ADDRESSES – VERSION 1

Description

This program produces address listings without all of the frills for you. It is the simplest version of the three programs provided in this book.

Functions of the Program

Addresses are read from DATA statements and are printed in a simple mailing label form.

Instructions for Use

Enter the addresses in the form shown prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The first record of the data contains the number of lines for spacing purposes. Its form is:

Number of lines

The remaining records are of the form:

Number of lines in address, Line 1, Line 2, etc. ...

Output Description

See example provided. Output is in mailing label format.

Comments

Instructions are contained in the program.

```
10 REM                NAMELIST1  PROGRAM
20 N=35000
30 PRINT "WOULD YOU LIKE TO SEE INSTRUCTIONS"
40 INPUT G$
50 IF G$="N" THEN 130
60 PRINT "THIS PROGRAM PRODUCES ALPHABETIC LISTINGS OF NAMES AND"
70 PRINT "ADDRESSES PROVIDED IN DATA STATEMENTS. TO ENTER THE DATA"
80 PRINT "ENTER THE NAMES AND ADDRESSES BEGINNING IN LINE"
90 PRINT "NUMBER 1000. FOR EVERY NAME ENTER THE NUMBER OF LINES OF"
100 PRINT "INFORMATION THAT IT WILL INCLUDE. AT LINE NUMBER 999"
110 PRINT "ENTER THE # OF LINES FOR PAPER MOVEMENT"
120 PRINT"END YOUR DATA ENTRIES WITH A DATA 0 CARD."
130 REM *****      ENTRY OF NUMBER TO PRINT *****
140 READ N2
150 PRINT "POSITION PAPER NOW"
160 INPUT G$
170 FOR I= 1 TO N
```

```

180 READ N1
190 IF N1=0 THEN 310
200 FOR J= 1 TO N1
210 READ G$
220 PRINT G$
230 NEXT J
240 IF N1>= N2 THEN 280
250 FOR K= N1+1 TO N2
260 PRINT
270 NEXT K
280 NEXT I
290 REM ***** TERMINATION POINT *****
300 PRINT I-1 " RECORDS WERE PRINTED"
310 STOP
320 REM *****
330 REM
340 REM EXAMPLE DATA FORMATION FOLLOWS
350 REM
360 REM *****
370 REM LINE 999 CONTAINS # OF LINES FOR PAGE MOVEMENT
380 REM LINES 1000 AND 1004 CONTAIN THE # OF LINES IN THE ADDRESSES
999 DATA 6
1000 DATA 3
1001 DATA "JOHN D. DOE"
1002 DATA "555 SMOKEY DRIVE"
1003 DATA "GROTON, MASS 87878"
1004 DATA 4
1005 DATA "JOSEPH R. WESTONBY"
1006 DATA "APARTMENT 4C"
1007 DATA "456 EASERLY ROAD"
1008 DATA "TAYLORSVILLE, MAINE 23234"
1009 DATA 0

```

```

RUN
WOULD YOU LIKE TO SEE INSTRUCTIONS
? Y

```

```

THIS PROGRAM PRODUCES ALPHABETIC LISTINGS OF NAMES AND
ADDRESSES PROVIDED IN DATA STATEMENTS. TO ENTER THE DATA
ENTER THE NAMES AND ADDRESSES BEGINNING IN LINE
NUMBER 1000. FOR EVERY NAME ENTER THE NUMBER OF LINES OF
INFORMATION THAT IT WILL INCLUDE. AT LINE NUMBER 999
ENTER THE # OF LINES FOR PAPER MOVEMENT
END YOUR DATA ENTRIES WITH A DATA 0 CARD.
POSITION PAPER NOW
?

```

```

JOHN D. DOE
555 SMOKEY DRIVE
GROTON, MASS 87878

```

```

JOSEPH R. WESTONBY
APARTMENT 4C
456 EASERLY ROAD
TAYLORSVILLE, MAINE 23234

```

```

BREAK IN 310

```

MAJOR SYMBOL TABLE - ADDRESSES - VERSION 1

I NAME	.. DESCRIPTION

I N	.. MAXIMUM NUMBER OF DATA READS
I N2	.. NUMBER OF LINES FOR PAPER MOVEMENT
I G\$	.. TEXT INFORMATION IN
I N1	.. NUMBER OF LINES IN THE ADDRESS

ADDRESSES – VERSION 2

Description

This version of the addressing program allows the selected printing of the records in groups.

Functions of the Program

The program prints the record numbers (inclusive) requested during the question/answer sequence. The records preceding the specified start point are ignored, and the program terminates after it has completed the printing of the last record requested.

Instructions for Use

Enter the addresses as data prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Formats

The first data record is the number of lines for spacing purposes. Its form is:

Number of lines for each record print

The remaining records in the data are of the following form:

Number of lines in address, Line 1, Line 2, etc. . . .

Note the 0 card to identify the end of the data.

Output Description

See example provided.

Comments

Instructions are provided in the program.

```
10 REM          NAMELIST2    PROGRAM
20 LET N=3500
30 PRINT "WOULD YOU LIKE TO SEE INSTRUCTIONS "
40 INPUT G$
50 IF G$="N" THEN 140
60 PRINT "THIS PROGRAM PRODUCES ALPHABETIC LISTINGS OF NAMES AND"
70 PRINT "ADDRESSES PROVIDED IN DATA STATEMENTS. TO ENTER THE DATA"
80 PRINT "ENTER THE NAMES AND ADDRESSES BEGINNING IN LINE"
90 PRINT "NUMBER 1000. FOR EVERY NAME ENTER THE NUMBER OF LINES OF"
100 PRINT "INFORMATION THAT IT WILL INCLUDE. AT LINE NUMBER 999"
110 PRINT "ENTER THE NUMBER OF LINES FOR PAPER MOVEMENT."
120 PRINT "END YOUR DATA ENTRIES WITH A DATA 0 CARD."
```

```

130 PRINT
140 REM *****      ENTRY OF NUMBER TO PRINT *****
150 READ N2
160 PRINT "RECORDS ARE TO BE PRINTED "N2" LINES EACH"
170 PRINT"DO YOU WANT TO PRINT ALL OF THE RECORDS"
180 INPUT G$
190 IF G$="Y" THEN 310
200 PRINT "ENTER STARTING AND ENDING RECORD NUMBERS (IE 4,55)"
210 INPUT NO,N3
220 LET N=N3-NO+1
230 REM                      SKIP APPROPRIATE # OF RECORDS
240 IF NO=<1 THEN 310
250 FOR I = 1 TO NO-1
260   READ N1
270   FOR J= 1 TO N1
280     READ G$
290   NEXT J
300 NEXT I
310 PRINT "POSITION PAPER NOW"
320 INPUT G$
330 REM                      OUTPUT OF RECORDS
340 FOR I= 1 TO N
350   READ N1
360   IF N1=0 THEN 470
370   FOR J= 1 TO N1
380     READ G$
390     PRINT G$
400   NEXT J
410   IF N1>= N2 THEN 450
420   FOR K= N1+1 TO N2
430     PRINT
440   NEXT K
450 NEXT I
460 REM *****      TERMINATION POINT *****
470 PRINT I-1 "RECORDS WERE PRINTED"
480 STOP
490 REM*****
500 REM
510 REM      DATA ENTRIES FOLLOW
520 REM*****
530 REM LINE 999 CONTAINS # OF LINES FOR PAGE MOVEMENT
540 REM LINES 1000 AND 1004 CONTAIN THE # OF LINES IN THE ADDRESSES
999 DATA 6
1000 DATA 3
1001 DATA "JOHN D. DOE"
1002 DATA "555 SMOKEY DRIVE"
1003 DATA "GROTON, MASS      87878"
1004 DATA 4
1005 DATA "JOSEPH R. WESTONBY"
1006 DATA "APARTMENT 4C"
1007 DATA "456 EASERLY ROAD"
1008 DATA "TAYLORSVILLE, MAINE 23234"
1009 DATA 1,"RECORD3"
1010 DATA 1,"RECORD4"
1011 DATA 1,"RECORD5"
1012 DATA 1,"RECORD6"
1013 DATA 1,"RECORD7"
1014 DATA 1,RECORD8
1015 DATA 1,RECORD9
1016 DATA 1,RECORD10
1017 DATA 1,RECORD 11
1018 DATA 1,RECORD12
1019 DATA 0

```

RUN
 WOULD YOU LIKE TO SEE INSTRUCTIONS
 ? N
 RECORDS ARE TO BE PRINTED 6 LINES EACH
 DO YOU WANT TO PRINT ALL OF THE RECORDS
 ? N
 ENTER STARTING AND ENDING RECORD NUMBERS (IE 4,55)
 ? 2,4
 POSITION PAPER NOW
 ?

JOSEPH R. WESTONBY
 APARTMENT 4C
 456 EASERLY ROAD
 TAYLORSVILLE, MAINE 23234

RECORD3

RECORD4

3 RECORDS WERE PRINTED
 BREAK IN 480

MAJOR SYMBOL TABLE - ADDRESSES - VERSION 2

I	NAME	DESCRIPTION	I
I	N	.. MAXIMUM NUMBER OF DATA READS	I
I	N1	.. NUMBER OF LINES FOR THE ADDRESS	I
I	N2	.. NUMBER OF LINES FOR PAPER MOVEMENT	I
I	N0	.. STARTING RECORD NUMBER	I
I	N3	.. ENDING RECORD NUMBER TO PRINT	I
I	G\$	.. ADDRESS LINE IN	I

ADDRESSES – VERSION 3

Description

This version allows individualized print formats and provides test print patterns for verification and alignment.

Functions of the Program

The program determines, through the question and answer sequence, the format of the printed output. Test prints are then provided for verification and alignment.

Instructions for Use

Address items are entered as data prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Format

The single format used is:

Number of lines in address, Line 1, Line 2, etc. . . .

Output Description

See example provided. Output format is uniquely specified by your selections, however.

```
10 REM          NAMELIST3      PROGRAM
20 LET N3=5000
30 PRINT "WOULD YOU LIKE TO SEE INSTRUCTIONS"
40 INPUT G$
50 IF G$="N" THEN 130
60 PRINT "THIS PROGRAM PRODUCES ALPHABETIC LISTINGS OF NAMES AND"
70 PRINT "ADDRESSES PROVIDED IN DATA STATEMENTS. TO ENTER THE DATA"
80 PRINT "ENTER THE NAMES AND ADDRESSES BEGINNING IN LINE"
90 PRINT "NUMBER 2000. FOR EVERY NAME ENTER THE NUMBER OF LINES OF"
100 PRINT "INFORMATION THAT IT WILL INCLUDE."
110 PRINT "END YOUR DATA ENTRIES WITH A DATA 0 CARD."
120 PRINT
130 REM *****      ENTRY OF NUMBER TO PRINT *****
140 PRINT
150 PRINT"DO YOU WANT TO PRINT ALL OF THE RECORDS"
160 INPUT G$
170 IF G$="Y" THEN 280
180 PRINT "ENTER STARTING AND ENDING RECORD NUMBERS (IE 4,55)"
190 INPUT NO,N3
200 REM ***** SKIP OF UNUSED RECORDS *****
210 IF NO=<1 THEN 280
220 FOR I = 1 TO NO-1
230   READ N1
240   FOR J= 1 TO N1
```



```

250     READ G$
260     NEXT J
270     NEXT I
280     REM ***** CALL TO ALIGNMENT ROUTINE *****
290     GOSUB 540
300     DIM A$(N2,C)
310     REM ***** OUTPUT OF GOOD RECORDS *****
320     LET N=(N3+1-N0)/C
330     FOR I= 1 TO N
340         FOR K=1 TO C
350             READ N1
360             IF N1=0 THEN 420
370             LET R0=R0+1
380             FOR J= 1 TO N1
390                 READ A$(J,K)
400                 NEXT J
410             NEXT K
420             LET J=0
430             LET J=J+1
440             FOR K= 1 TO C
450                 PRINT TAB(T(K)) A$(J,K);
460                 A$(J,K)=" "
470             NEXT K
480             PRINT
490             IF J<N2 THEN 430
500             IF N1=0 THEN 520
510         NEXT I
520     PRINT R0 "RECORDS WERE PRINTED"
530     STOP
540     REM ***** PRINT ALIGNMENT ROUTINE *****
550     PRINT "ENTER THE NUMBER OF VERTICAL LINES PER ADDRESS"
560     INPUT N2
570     PRINT "ENTER THE NUMBER OF ADDRESSES PER LINE"
580     INPUT C
590     DIM T(C)
600     DIM X$(12)
610     PRINT "ENTER THE TAB POSITIONS OF EACH COLUMN"
620     FOR I= 1 TO C
630         INPUT T(I)
640     NEXT I
650     LET X$(1)="11111111111111111111111111111111"
660     LET X$(2)="22222222222222222222222222222222"
670     LET X$(3)="33333333333333333333333333333333"
680     LET X$(4)="44444444444444444444444444444444"
690     LET X$(5)="55555555555555555555555555555555"
700     LET X$(6)="66666666666666666666666666666666"
710     LET X$(N2)="*****"
720     PRINT "POSITION PAPER NOW"
730     LET IO=N2
740     INPUT G$
750     C1=0
760     FOR M=1 TO 2
770         FOR I= 1 TO IO
780             FOR J= 1 TO C
790                 PRINT TAB(T(J)) X$(I);
800             NEXT J
810             PRINT
820         NEXT I
830     NEXT M
840     PRINT "ARE THE NUMBER OF VERTICAL LINES CORRECT"
850     INPUT V$
860     IF V$="Y" THEN 900
870     PRINT "ENTER THE NUMBER OF VERTICAL LINES PER ADDRESS"
880     INPUT N2

```

```

890 GOTO 710
900 PRINT "ARE THE HORIZONTAL TABS CORRECT"
910 INPUT H$
920 IF H$="Y" THEN 970
930 PRINT"RE-ENTER TABS"
940 FOR I= 1 TO C
950   INPUT T(I)
960 NEXT I
970 PRINT "WOULD YOU LIKE ANOTHER TEST PATTERN PRINT"
980 INPUT G$
990 IF G$="Y" THEN 710
1000 LET C1=C1+6
1010 IF C1=2*N2 THEN 1050
1020 PRINT
1030 LET C1=C1+1
1035 IF C1>6*N2 THEN 1050
1040 GOTO 1010
1050 RETURN
1060 REM*****
1070 REM
1080 REM   EXAMPLE DATA FORMATION FOLLOWS
1090 REM
1100 REM*****
1110 REM LINES 2000 AND 2004 CONTAIN THE # OF LINES IN THE ADDRESSES
2000 DATA 3
2001 DATA "JOHN D. DOE"
2002 DATA "555 SMOKEY DRIVE"
2003 DATA "GROTON, MASS      87878"
2004 DATA 4
2005 DATA "JOSEPH R. WESTONBY"
2006 DATA "APARTMENT 4C"
2007 DATA "456 EASERLY ROAD"
2008 DATA "TAYLORSVILLE, MAINE 23234"
2009 DATA 1,"RECORD3"
2010 DATA 1,"RECORD4"
2020 DATA 0

```

```

RUN
WOULD YOU LIKE TO SEE INSTRUCTIONS
? Y
THIS PROGRAM PRODUCES ALPHABETIC LISTINGS OF NAMES AND
ADDRESSES PROVIDED IN DATA STATEMENTS. TO ENTER THE DATA
ENTER THE NAMES AND ADDRESSES BEGINNING IN LINE
NUMBER 2000. FOR EVERY NAME ENTER THE NUMBER OF LINES OF
INFORMATION THAT IT WILL INCLUDE.
END YOUR DATA ENTRIES WITH A DATA 0 CARD.

```

```

DO YOU WANT TO PRINT ALL OF THE RECORDS
? Y
ENTER THE NUMBER OF VERTICAL LINES PER ADDRESS
? 5
ENTER THE NUMBER OF ADDRESSES PER LINE
? 2
ENTER THE TAB POSITIONS OF EACH COLUMN
? 1
? 32
POSITION PAPER NOW
?

```


RECORD LISTS

Description

This program maintains your record library. It identifies the records owned and their locations.

Functions of the Program

The program reads the record information from DATA statements and produces a list in the order specified. Multiple passes through the data are used for the ordering process to minimize the use of files or arrays.

Instructions for Use

Enter the record information prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The form of the data is:

Artist, Title of the record, Location

Output Description

See examples provided. The order of the output is determined by the option selected.

```
20 REM      RECORDS LIST PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "SHALL I PRINT THE ENTRIES IN THE ORDER I HAVE THEM (Y OR N)?"
60 INPUT A0$
70 IF A0$="Y" THEN 100
80 PRINT "IN ORDER: BY ARTIST (A) OR LOCATION (L)"
90 INPUT A$
100 PRINT
110 PRINT
120 PRINT
130 IF A$="A" THEN 290
140 IF A$="L" THEN 590
150 REM ***** PROCESSING AREA *****
160 PRINT "  ARTIST";TAB(25);"TITLE";TAB(47);"LOCATION"
170 PRINT "-----";TAB(25);"-----";TAB(47)"-----"
180 FOR I = 1 TO M
190   READ G$
200   IF G$ ="END" THEN 240
210   READ T$,L$
220   PRINT G$;TAB(25);T$;TAB(47);L$
230 NEXT I
240 REM ***** TERMINATION POINT *****
```

```

250 PRINT
260 PRINT
270 PRINT
280 STOP
290 REM ***** ARTIST SORT AND PRINT *****
300 PRINT " ARTIST";TAB(25);"TITLE";TAB(47);"LOCATION"
310 PRINT "-----";TAB(25);"-----";TAB(47);"-----"
320 I = 1
330 FOR J = 1 TO M
340 READ G$
350 IF G$="END" THEN 510
360 READ T$,L$
370 IF J>I THEN 480
380 IF J<I THEN 500
390 S#=G$
400 IF I = 1 THEN 480
410 RESTORE
420 FOR K = 1 TO J
430 READ G$,T$,L$
440 IF S#<>G$ THEN 460
450 C=C+1
460 NEXT K
470 IF C>1 THEN 510
480 IF G#<>S$ THEN 500
490 PRINT S$;TAB(25);T$;TAB(47);L$
500 NEXT J
510 RESTORE
520 C=0
530 IF I>1 THEN 550
540 M=J-1
550 PRINT
560 I = I +1
570 IF I <= M THEN 330
580 GOTO 240
590 REM *****LOCATION SORT AND PRINT *****
600 PRINT "LOCATION";TAB(15);"TITLE";TAB(40);"ARTIST"
610 PRINT "-----";TAB(15);"-----";TAB(40);"-----"
620 I=1
630 FOR J = 1 TO M
640 READ G$
650 IF G$ ="END" THEN 810
660 READ T$,L$
670 IF J>I THEN 780
680 IF J< I THEN 800
690 S#=L$
700 IF I = 1 THEN 780
710 RESTORE
720 FOR K = 1 TO J
730 READ G$,T$,L$
740 IF S#<>L$ THEN 760
750 C=C+1
760 NEXT K
770 IF C>1 THEN 810
780 IF L#<>S$ THEN 800
790 PRINT S$;TAB(15);T$;TAB(40);G$
800 NEXT J
810 RESTORE
820 C=0
830 IF I > 1 THEN 850
840 M=J-1
850 PRINT
860 I=I+1
870 IF I <=M THEN 630
880 GOTO 240

```

```

B90 REM      ***** DATA ENTRY FOLLOWS *****
900 DATA THE HORSEFLIES,BUZZIN AROUND,ATTIC
910 DATA THE BUMBLEBEES, MAKIN HONEY,RECORD CABINET
920 DATA THE SINGIN SONGSTRESS,HAPPY SONGS,RECORD CABINET
930 DATA THE STATUES,QUIET SOUNDS,ATTIC
940 DATA THE HORSEFLIES,VOLUME 2,ATTIC
950 DATA END

```

```

RUN
SHALL I PRINT THE ENTRIES IN THE ORDER I HAVE THEM (Y OR N)?
? Y

```

ARTIST	TITLE	LOCATION
THE HORSEFLIES	BUZZIN AROUND	ATTIC
THE BUMBLEBEES	MAKIN HONEY	RECORD CABINET
THE SINGIN SONGSTRESS	HAPPY SONGS	RECORD CABINET
THE STATUES	QUIET SOUNDS	ATTIC
THE HORSEFLIES	VOLUME 2	ATTIC

BREAK IN 280

```

RUN
SHALL I PRINT THE ENTRIES IN THE ORDER I HAVE THEM (Y OR N)?
? N
IN ORDER: BY ARTIST (A) OR LOCATION (L)
? A

```

ARTIST	TITLE	LOCATION
THE HORSEFLIES	BUZZIN AROUND	ATTIC
THE HORSEFLIES	VOLUME 2	ATTIC
THE BUMBLEBEES	MAKIN HONEY	RECORD CABINET
THE SINGIN SONGSTRESS	HAPPY SONGS	RECORD CABINET
THE STATUES	QUIET SOUNDS	ATTIC

BREAK IN 280

MAJOR SYMBOL TABLE - RECORD LISTS

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I M	.. MAXIMUM NUMBER OF DATA READS
I A\$	.. ORDER INDICATOR
I G\$	.. ARTIST
I T\$	.. TITLE
I L\$	.. LOCATION
I S\$	.. HOLD AREA FOR COMPARE
I C	.. COUNTER
I-----I	

FUNCTIONS USED

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I TAB	.. FORMATS PRINT LINES
I-----I	

RECORD SEARCH

Description

This program maintains your record library and allows both the printing of its contents and searches for any specific artist or record title.

Functions of the Program

The program reads the record information from DATA statements and prints all records in the order specified or locates all items that match a selection criteria that you supply.

Instructions for Use

The record information must be entered as DATA statements prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the record inventory information is:

Artist name, Title of record, Location

Output Description

See example provided. Note the various printing options that are available.

```
20 REM      RECORD SEARCH AND LIST PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 S=1
50 M=1000
60 PRINT "SHALL I PRINT ITEMS (Y OR N)?"
70 INPUT A1$
80 IF A1$="Y" THEN 180
90 PRINT"WOULD YOU LIKE TO SEARCH FOR A TITLE (T), OR ARTIST (A)?"
100 INPUT A$
110 IF A$="A" THEN 150
120 PRINT"ENTER THE TITLE TO SEARCH FOR"
130 INPUT S$
140 GOTO 280
150 PRINT"ENTER THE ARTIST TO SEARCH FOR"
160 INPUT S$
170 GOTO 280
180 PRINT"SHALL I PRINT THE ENTRIES IN THE ORDER I HAVE THEM (Y OR N)?"
190 INPUT A0$
200 IF A0$="Y" THEN 230
210 PRINT"IN ORDER: BY ARTIST (A) OR LOCATION (L)"
220 INPUT A$
230 PRINT
```



```

240 PRINT
250 PRINT
260 IF A$="A" THEN 560
270 IF A$="L" THEN 860
280 REM ***** PROCESSING AREA *****
290 PRINT
300 PRINT
310 PRINT "ARTIST";TAB(25);"TITLE";TAB(48);"LOCATION"
320 PRINT "-----";TAB(25);"-----";TAB(48);"-----"
330 FOR I=1 TO M
340 READ G$
350 IF G$="END" THEN 420
360 READ T$,L$
370 IF A1$="Y" THEN 400
380 GOSUB 470
390 IF S<>1 THEN 410
400 PRINTG$;TAB(25);T$;TAB(48);L$
410 NEXT I
420 REM ***** TERMINATION POINT *****
430 PRINT
440 PRINT
450 PRINT
460 STOP
470 REM ***** SUBROUTINE TO COMPARE ITEMS *****
480 S=0
490 IF A$="A" THEN 530
500 IF T$<>S$ THEN 550
510 S=1
520 GOTO 550
530 IF G$<>S$ THEN 550
540 S=1
550 RETURN
560 REM ***** ARTIST SORT AND PRINT *****
570 PRINT "ARTIST";TAB(25);"TITLE";TAB(48);"LOCATION"
580 PRINT "-----";TAB(25);"-----";TAB(48);"-----"
590 I=1
600 FOR J=1 TO M
610 READ G$
620 IF G$="END" THEN 780
630 READ T$,L$
640 IF J>I THEN 750
650 IF J<I THEN 770
660 S=G$
670 IF I = 1 THEN 750
680 RESTORE
690 FOR K = 1 TO J
700 READ G$,T$,L$
710 IF S<>G$ THEN 730
720 C=C+1
730 NEXT K
740 IF C>1 THEN 780
750 IF G$<>S$ THEN 770
760 PRINTS$;TAB(25);T$;TAB(48);L$
770 NEXT J
780 RESTORE
790 C=0
800 IF I>1 THEN 820
810 M=J-1
820 PRINT
830 I=I+1
840 IF I<=M THEN 600
850 GOTO 420
860 REM ***** LOCATION SORT AND PRINT *****
870 PRINT "LOCATION";TAB(15);"TITLE";TAB(42);"ARTIST"

```

```

880 PRINT "-----";TAB(15);"-----";TAB(42);"-----"
890 I=1
900 FOR J= 1 TO M
910   READ G$
920   IF G$="END" THEN 1080
930   READ T$,L$
940   IF J>I THEN 1050
950   IF J<I THEN 1070
960   S$=L$
970   IF I = 1 THEN 1050
980   RESTORE
990   FOR K= 1 TO J
1000    READ G$,T$,L$
1010    IF S$<>L$ THEN 1030
1020    C=C+1
1030   NEXT K
1040   IF C>1 THEN 1080
1050   IF L$<>S$ THEN 1070
1060   PRINTS$;TAB(15);T$;TAB(42);G$
1070   NEXT J
1080   RESTORE
1090   C=0
1100   IF I>1 THEN 1120
1110   M=M-1
1120   PRINT
1130   I=I+1
1140   IF I <= M THEN 900
1150   GOTO 420
1160   REM ***** DATA ENTRY FOLLOWS *****
1170   DATA THE HORSEFLIES,BUZZIN AROUND,ATTIC
1180   DATA THE BUMBLEBEES, MAKIN HONEY,RECORD CABINET
1190   DATA THE SINGIN SONGSTRESS,HAPPY SONGS,RECORD CABINET
1200   DATA THE STATUES,QUIET SOUNDS,ATTIC
1210   DATA THE HORSEFLIES,VOLUME 2,ATTIC
1220   DATA END

```

```

RUN
SHALL I PRINT ALL ITEMS ( Y OR N)?
? Y
SHALL I PRINT THE ENTRIES IN THE ORDER I HAVE THEM (Y OR N)?
? Y

```

ARTIST	TITLE	LOCATION
THE HORSEFLIES	BUZZIN AROUND	ATTIC
THE BUMBLEBEES	MAKIN HONEY	RECORD CABINET
THE SINGIN SONGSTRESS	HAPPY SONGS	RECORD CABINET
THE STATUES	QUIET SOUNDS	ATTIC
THE HORSEFLIES	VOLUME 2	ATTIC

BREAK IN 460

```

RUN
SHALL I PRINT ALL ITEMS ( Y OR N)?
? N
WOULD YOU LIKE TO SEARCH FOR A TITLE (T), OR ARTIST (A)?
? A
ENTER THE ARTIST TO SEARCH FOR
? HARRIED HUSTLERS

```

ARTIST	TITLE	LOCATION
--------	-------	----------

BREAK IN 460

```

RUN
SHALL I PRINT ALL ITEMS ( Y OR N)?
? N
WOULD YOU LIKE TO SEARCH FOR A TITLE (T), OR ARTIST (A)?
? A
ENTER THE ARTIST TO SEARCH FOR
? THE HORSEFLIES

```

ARTIST	TITLE	LOCATION
THE HORSEFLIES	BUZZIN AROUND	ATTIC
THE HORSEFLIES	VOLUME 2	ATTIC

BREAK IN 460

MAJOR SYMBOL TABLE - RECORD SEARCH

I	NAME	DESCRIPTION	I
I	S	.. SWITCH INDICATOR	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	S\$	.. ITEM TO SEARCH FOR	I
I	A\$	.. ORDER INDICATOR	I
I	G\$	.. ARTIST/GROUP	I
I	T\$	.. TITLE	I
I	L\$	.. LOCATION	I
I	C	.. COUNTER	I
I	I	.. COUNTER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	GOSUB	.. BRANCHES TO AND RETURNS	I

REFERENCES FILING

Description

This program offers the user the opportunity to record important references for school, hobby, or home use, and to retrieve selected references when required.

Functions of the Program

The program accepts the reference entries from the data and prints either all entries or just those that match the user supplied selection criteria. Selection is based upon the reference code given to each item.

Instructions for Use

Categorize the references within appropriate reference codes, and then enter them as data prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the reference entries is:

Reference code, Item, Location, page number

Output Description

See example provided.

```
20 REM ***** REFERENCE LOCATING PROGRAM ***
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT"SHALL I PRINT ALL ENTRIES ( Y OR N )?"
60 INPUT A$
70 PRINT
80 IF A$="Y" THEN 110
90 PRINT"ENTER THE REFERENCE CODE FOR THE SEARCH"
100 INPUT X$
110 PRINT
120 PRINT
130 PRINT
140 PRINT
150 PRINT"CODE";TAB(10);"ITEM";TAB(32);"LOCATION";TAB(55);"PAGE NBR"
160 PRINTTAB(10);"-----";TAB(32);"-----";TAB(55);"-----"
170 PRINT
180 REM ***** PROCESSING AREA *****
190 FOR I=1 TO M
200   READ C$
210   IF C$="END" THEN 320
220   READ R$,L$,P$
230   IF A$<>"Y" THEN 260
```

```

240 PRINT C$;TAB(9)R$;TAB(32);L$;TAB(60);P$
250 GOTO310
260 IF C$<>X$ THEN 310
270 C=C+1
280 IF C=1 THEN 300
290 C$=" "
300 PRINT C$;TAB(9)R$;TAB(32);L$;TAB(62);P$
310 NEXT I
320 REM ***** PROGRAM TERMINATION POINT *****
330 PRINT
340 PRINT
350 PRINT
360 STOP
370 REM ***** DATA ENTRIES FOLLOW *****
380 DATA SOFTWARE,REFERENCE PROGRAM,BASIC PROGRAMS FOR THE HOME,56
390 DATA HARDWARE,INSTALLING A DISK,MAGAZINE #1,28
400 DATA SOFTWARE,FISHERMAN'S DIARY,BASIC PROGRAMS FOR THE HOME,89
410 DATA HARDWARE,FIXING MACHINE X,MAGAZINE 2,98
420 DATA SOFTWARE,8080 ASSEMBLER SORT,MAGAZINE 4,13
430 DATA SOFTWARE,LSI 11 INSTRUCTION SET,REFERENCE BOOK 2,345
440 DATA SOFTWARE,BASIC PROGRAMMING,MAGAZINE 3,67
450 DATA END

```

```

RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? Y

```

CODE	ITEM	LOCATION	PAGE NBR
SOFTWARE	REFERENCE PROGRAM	BASIC PROGRAMS FOR THE HOME	56
HARDWARE	INSTALLING A DISK	MAGAZINE # 1	28
SOFTWARE	FISHERMAN'S DIARY	BASIC PROGRAMS FOR THE HOME	89
HARDWARE	FIXING MACHINE X	MAGAZINE 2	98
SOFTWARE	8080 ASSEMBLER SORT	MAGAZINE 4	13
SOFTWARE	LSI 11 INSTRUCTION SET	REFERENCE BOOK 2	345
SOFTWARE	BASIC PROGRAMMING	MAGAZINE 3	67

BREAK IN 360

```

RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? N

```

```

ENTER THE REFERENCE CODE FOR THE SEARCH
? HARDWARE

```

CODE	ITEM	LOCATION	PAGE NBR
HARDWARE	INSTALLING A DISK	MAGAZINE # 1	28
	FIXING MACHINE X	MAGAZINE 2	98

BREAK IN 360

MAJOR SYMBOL TABLE - REFERENCES

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	M .. MAXIMUM NUMBER OF DATA READS	I
I	X\$.. CODE TO SEARCH FOR	I
I	C\$.. CODE IN	I
I	R\$.. REFERENCE ITEM IN	I
I	P\$.. PAGE NUMBER/SUB LOCATION IN	I
I	-----	I

FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	TAB .. FORMATS PRINT LINES	I
I	-----	I

MUSIC COLLECTIONS

Description

This program offers the musically inclined an able assistant to locate and print the location of all their favorite pieces. Selected pieces can be searched for and printed, if desired.

Functions of the Program

The program accepts the music entries from the data and prints either all items or just those that match the user-supplied selection criteria. The selection of items is based upon a search through the titles of the data entered.

Instructions for Use

Enter the items as DATA prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Format

The musical pieces are entered in the form:

Title, Location, Page number

Output Description

See example provided. Printed output is either a formatted list of all items or a print of those items that match the title being searched for.

```
20 REM ****MUSIC/SONG LOCATING PROGRAM** **
30 REM **** DATA INITIALIZATION ****
40 M=1000:S=0
50 PRINT"SHALL I PRINT ALL ENTRIES ( Y OR N )?"
60 INPUT A$
70 PRINT
80 IF A$="Y" THEN 150
90 PRINT"ENTER THE SONG TO FIND"
100 INPUT X$
110 PRINT
120 PRINT
130 PRINT
140 PRINT
150 PRINTTAB(5)"SONG";TAB(30);"LOCATION";TAB(53);"PAGE NBR"
160 PRINT"-----";TAB(30);"-----";TAB(52);"-----"
170 PRINT
180 REM **** PROCESSING AREA ****
190 FOR I=1 TO M
200   READ R$
210   IF R$="END" THEN 320
220   READ L$,P$
```

```

230 IF A#="Y" THEN 260
240 PRINT R#;TAB(30);L#;TAB(55);P#
250 GOTO310
260 IF R#>X# THEN 310
270 R=R+1
280 IF R=1 THEN 300
290 R#=" "
300 PRINT R#;TAB(30);L#;TAB(55);P#
310 NEXT I
320 REM ***** PROGRAM TERMINATION POINT *****
330 PRINT
340 PRINT
350 STOP
360 REM ***** DATA ENTRIES FOLLOW *****
370 DATA JINGLE BELLS,INTRO MUSIC BOOK 1,34
380 DATA THE CHRISTMAS SONG,MUSIC FOR CHRISTMAS,86
390 DATA GOD REST YE MERRY GENTLEMEN,BOOK 2,190
400 DATA SILVER BELLS,BOOK #3,56
410 DATA JINGLE BELLS,ADVANCED BOOK 4,123
420 DATA DECK THE HALLS,BOOK 7,23
430 DATA WHITE CHRISTMAS,CHRISTMAS BOOK 4,67
440 DATA JINGLE BELLS,BOOK 8,67
450 DATA END

```

```

RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? Y

```

SONG	LOCATION	PAGE NBR
JINGLE BELLS	INTRO MUSIC BOOK 1	34
THE CHRISTMAS SONG	MUSIC FOR CHRISTMAS	86
GOD REST YE MERRY GENTLEMEN	BOOK 2	190
SILVER BELLS	BOOK #3	56
JINGLE BELLS	ADVANCED BOOK 4	123
DECK THE HALLS	BOOK 7	23
WHITE CHRISTMAS	CHRISTMAS BOOK 4	67
JINGLE BELLS	BOOK 8	67

BREAK IN 350

```

RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? N

```

```

ENTER THE SONG TO FIND
? JINGLE BELLS

```

SONG	LOCATION	PAGE NBR
JINGLE BELLS	INTRO MUSIC BOOK 1	34
	ADVANCED BOOK 4	123
	BOOK 8	67

BREAK IN 350

MAJOR SYMBOL TABLE - MUSIC

```
I-----I
I NAME  .. DESCRIPTION                      I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS   I
I X$    .. SONG/MUSIC TO SEARCH FOR        I
I R$    .. SONG/MUSIC IN                   I
I L$    .. LOCATION                         I
I P$    .. PAGE NUMBER/SUB LOCATION        I
I-----I
```

FUNCTIONS USED

```
I-----I
I NAME  .. DESCRIPTION                      I
I-----I
I TAB   .. FORMATS PRINT LINES             I
I-----I
```

COIN COLLECTIONS

Description

This program offers the numismatist an able assistant to keep track of his collection. The collection can be listed in its entirety, or selected dates, coin denominations, mints, or coin types can be printed upon request.

Functions of the Program

The program accepts the coin information from the data and prints the items specified. The selection of items to be printed can be based upon most of the items included in the data.

Instructions for Use

Enter the individual collection items into the program prior to running it.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format for the data is:

Coin date, Denomination, Mint, Coin type,
Number minted (in millions), Condition

Output Description

See example provided. Output is either a formatted list of all items or a print of those that satisfy the selection criteria.

```
20 REM      COIN COLLECTION PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 REM ***** PROCESSING STARTS *****
60 PRINT "SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?"
70 INPUT A$
80 IF A$="Y" THEN 230
90 REM ***** PRINT ROUTINE FOR "ALL" ENTRIES *****
100 PRINT
110 PRINT
120 PRINT
130 PRINT "DATE";TAB(8);"SIZE";TAB(14);"MINT";TAB(22);"TYPE";TAB(36);
140 PRINT "NER (MIL)";TAB(47);"CONDITION"
150 PRINT "-----";TAB(8);"-----";TAB(14);"-----";TAB(20);"-----";
160 PRINT TAB(36);"-----";TAB(47);"-----"
170 FOR I =1 TO M
180   READ D$
190   IF D$="END" THEN 990
200   READ S$,M$,T$,N,C$
```

```

210 PRINT D$;TAB(8);S$;TAB(15);M$;TAB(20);T$;TAB(36);N$;TAB(47);C$
220 NEXT I
230 PRINT "WHAT SHALL I SEARCH FOR: DATE(D), DENOMINATION SIZE (S)"
240 PRINT "MINT(M), OR TYPE (T)?"
250 INPUT A$
260 IF A$="T" THEN 820
270 IF A$="S" THEN 460
280 IF A$="M" THEN 640
290 REM ***** DATE SEARCH AND PRINT *****
300 PRINT "ENTER THE DATE TO SEARCH FOR"
310 INPUT X$
320 PRINT
330 PRINT
340 PRINT " ;X$;TAB(8);"SIZE";TAB(14);"MINT";TAB(22);"TYPE";
350 PRINT TAB(36);"NBR (MIL)";TAB(47);"CONDITION"
360 PRINTTAB(8);"-----";TAB(14);"-----";TAB(20);"-----";
370 PRINTTAB(36);"-----";TAB(47);"-----"
380 FOR I=1 TO M
390 READ D$
400 IF D$="END" THEN 990
410 READ S$,M$,T$,N$,C$
420 IF D$<>X$ THEN 440
430 PRINT TAB(8);S$;TAB(15);M$;TAB(20);T$;TAB(36);N$;TAB(47);C$
440 NEXT I
450 GOTO 990
460 REM ***** DENOMINATION SIZE SEARCH AND PRINT *****
470 PRINT "ENTER THE DENOMINATION SIZE TO SEARCH FOR"
480 INPUT X$
490 PRINT
500 PRINT
510 PRINT
520 PRINT " ;X$;TAB(8);"DATE";TAB(14);"MINT";TAB(22);"TYPE";
530 PRINTTAB(36);"NBR (MIL)";TAB(47);"CONDITION"
540 PRINTTAB(8);"-----";TAB(14);"-----";TAB(20);"-----";
550 PRINTTAB(36);"-----";TAB(47);"-----"
560 FOR I=1 TO M
570 READ D$
580 IF D$="END" THEN 990
590 READ S$,M$,T$,N$,C$
600 IF S$<>X$ THEN 620
610 PRINTTAB(8);D$;TAB(15);M$;TAB(20);T$;TAB(36);N$;TAB(45);C$
620 NEXT I
630 GOTO 990
640 REM ***** MINT SEARCH AND PRINT *****
650 PRINT "ENTER THE MINT TO SEARCH FOR "
660 INPUT X$
670 PRINT
680 PRINT
690 PRINT
700 PRINT " ;X$;TAB(8);"DATE";TAB(15);"SIZE";TAB(22);"TYPE";
710 PRINTTAB(36);"NBR (MIL)";TAB(47);"CONDITION"
720 PRINTTAB(8);"-----";TAB(15);"-----";TAB(20);"-----";
730 PRINTTAB(36);"-----";TAB(47);"-----"
740 FOR I = 1 TO M
750 READ D$
760 IF D$="END" THEN 990
770 READ S$,M$,T$,N$,C$
780 IF M$<>X$ THEN 800
790 PRINTTAB(8);D$;TAB(15);S$;TAB(20);T$;TAB(36);N$;TAB(47);C$
800 NEXT I
810 GOTO 990
820 REM ***** TYPE SEARCH AND PRINT *****
830 PRINT "ENTER THE TYPE TO SEARCH FOR"
840 INPUT X$

```

```

850 PRINT
860 PRINT
870 PRINT
880 PRINT " X$;TAB(16);"DATE";TAB(24);"SIZE";TAB(31);"MINT";
890 PRINTTAB(36);"NBR (MIL)";TAB(47);"CONDITION"
900 PRINTTAB(16);"-----";TAB(24);"-----";TAB(31);"-----";TAB(36);
910 PRINT"-----";TAB(47);"-----"
920 FOR I= 1 TO M
930   READ D$
940   IF D$="END" THEN 990
950   READ S$,M$,T$,N$,C$
960   IF T$<>X$ THEN 980
970   PRINTTAB(16);D$;TAB(24);S$;TAB(32);M$;TAB(36);N$;TAB(45);C$
980 NEXT I
990 REM ***** PROGRAM TERMINATION POINT *****
1000 PRINT
1010 PRINT
1020 STOP
1030 REM ***** DATA ENTRIES FOLLOW *****
1040 DATA 1947,.25,D,FRANKLIN,10.00,VF
1050 DATA 1944,.05,S,SILVER,22.00,PROOF
1060 DATA 1965,.10,D,FLAW,114.1,F
1070 DATA 1978,M,S,PROOF SET,3.2,PROOF
1080 DATA 1979,M,P,MINT SET,4.50,UNC
1090 DATA 1945,.05,D,SILVER,16.47,VF
1100 DATA 1907,.01,S,.35,G
1110 DATA 1901,.01,,INDIAN,.86,G
1120 DATA 1865,1.00,CC,,65.17,G
1130 DATA 1945,.25,S,FRANKLIN,8.89,F
1140 DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?
? Y

```

DATE	SIZE	MINT	TYPE	NBR (MIL)	CONDITION
1947	.25	D	FRANKLIN	10	VF
1944	.05	S	SILVER	22	PROOF
1965	.10	D	FLAW	114.1	F
1978	M	S	PROOF SET	3.2	PROOF
1979	M	P	MINT SET	4.5	UNC
1945	.05	D	SILVER	16.47	VF
1907	.01	S		.35	G
1901	.01		INDIAN	.86	G
1865	1.00	CC		65.17	G
1945	.25	S	FRANKLIN	8.89	F

```

BREAK IN 1020

```

```

RUN
SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?
? N
WHAT SHALL I SEARCH FOR: DATE(D), DENOMINATION SIZE (S)
MINT (M), OR TYPE (T)?
? S
ENTER THE DENOMINATION SIZE TO SEARCH FOR
? M

```

M	DATE	MINT	TYPE	NBR (MIL)	CONDITION
	1978	S	PROOF SET	3.2	PROOF
	1979	P	MINT SET	4.5	UNC

BREAK IN 1020

MAJOR SYMBOL TABLE - COINS

I	NAME	..	DESCRIPTION	I
I	M	..	MAXIMUM NUMBER OF DATA READS	I
I	D\$	..	DATE OF COIN	I
I	S\$	..	SIZE (DENOMINATION) OF COIN	I
I	M\$	..	MINT OF COIN	I
I	T\$	..	COIN TYPE	I
I	N	..	NBR MINTED (MILLIONS)	I
I	C\$	..	COIN CONDITION	I
I	X\$	..	ITEM TO SEARCH FOR	I

FUNCTIONS USED

I	NAME	..	DESCRIPTION	I
I	TAB	..	FORMATS PRINT LINES	I

COIN INVESTMENTS

Description

This program offers additional information to the numismatist that considers the collection as an investment. The collection information maintained by this program differs slightly from the previous version.

Functions of the Program

This program accepts the coin information from the data items and prints it as specified by your responses to the program's questions. The list can include all, or selected categories of, items and can, if desired, include total cost and current value information.

Instructions for Use

The individual item information must be entered prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the data is:

Coin date, Denomination, Mint, Type,
Number minted (in millions), Purchase date, Quantity, Cost, Value

Output Description

See example provided.

```
20 REM COIN INVESTMENT RECORD PROGRAM
30 REM **** DATA INITIALIZATION ****
40 M=1000
50 REM **** PROCESSING STARTS ****
60 PRINT"SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?"
70 INPUT A$
80 PRINT"SHALL I PRODUCE TOTAL COSTS/VALUES FOR YOU ( Y OR N )?"
90 INPUT A1$
100 IF A$<>"Y" THEN 310
110 REM **** PRINT ROUTINE FOR "ALL" ENTRIES ****
120 PRINT
130 PRINT
140 PRINT
150 PRINT"DATE";TAB(7);"SIZE";TAB(12);"COND";TAB(19);"TYPE";TAB(28);
160 PRINT"NBR(MIL)";TAB(39);"PRCH";TAB(46);"QTY";TAB(52);"COST";
170 PRINTTAB(59);"VAL"
180 PRINT"-----";TAB(7);"-----";TAB(12);"-----";TAB(19);"-----";
190 PRINTTAB(28);"-----";TAB(39);"-----";TAB(46);"-----";
200 PRINTTAB(52);"-----";TAB(59);"-----"
```

```

210 FOR I =1 TO M
220   READ D$
230 IF D$="END" THEN 1310
240   READ S$,M$,T$,N,C$,F$,Q,C,V
250   PRINTD$;M$;TAB(7);S$;TAB(12);C$;TAB(17);T$;TAB(28);N;TAB(37);
260 PRINT F$;TAB(45);Q;TAB(51);C;TAB(57);V
270 IF A1$ <> "Y" THEN 300
280 C1=C1+(C*Q)
290 V1=V1+(V*Q)
300 NEXT I
310 PRINT"WHAT SHALL I SEARCH FOR: DATE(D), DENOMINATION SIZE(S)"
320 PRINT"
MINT(M), OR TYPE (T)?"
330 INPUT A$
340 IF A$="T" THEN 1080
350 IF A$="S" THEN 600
360 IF A$="M" THEN B40
370 REM ***** DATE SEARCH AND PRINT *****
380 PRINT"ENTER THE DATE TO SEARCH FOR"
390 INPUT X$
400 PRINT
410 PRINT
420 PRINTX$;TAB(7);"SIZE";TAB(12);"COND";TAB(19);"TYPE";TAB(28);
430 PRINT "NBR(MIL)";TAB(39);"PRCH";TAB(46);"QTY";TAB(52);"COST";
440 PRINTTAB(59);"VALUE"
450 PRINTTAB(7);"-----";TAB(12);"-----";TAB(19);"-----";
460 PRINTTAB(28);"-----";TAB(39);"-----";TAB(46);"-----";
470 PRINTTAB(52);"-----";TAB(59);"-----"
480 FOR I = 1 TO M
490   READ D$
500   IF D$="END" THEN 1310
510   READ S$,M$,T$,N,C$,F$,Q,C,V
520 IF D$ <> X$ THEN 580
530   PRINTTAB(1)M$;TAB(7);S$;TAB(12);C$;TAB(17);T$;TAB(28);N;TAB(37);
540   PRINTF$;TAB(45);Q;TAB(51);C;TAB(57);V
550   IF A$ <> "Y" THEN 580
560   C1=C1+(C*Q)
570   V1=V1+(V*Q)
580 NEXT I
590 GOTO 1310
600 REM ***** DENOMINATION SIZE SEARCH AND PRINT *****
610 PRINT"ENTER THE DENOMINATION SIZE TO SEARCH FOR"
620 INPUT X$
630 PRINT
640 PRINT
650 PRINT
660 PRINTX$;TAB(5);"DATE";TAB(12);"COND";TAB(19);"TYPE";TAB(28);
670 PRINT"NBR(MIL)";TAB(39);"PRCH";TAB(46);"QTY";TAB(52);"COST";
680 PRINTTAB(59);"VALUE"
690 PRINTTAB(5);"-----";TAB(12);"-----";TAB(19);"-----";
700 PRINTTAB(28);"-----";TAB(39);"-----";TAB(46);"-----";
710 PRINTTAB(52);"-----";TAB(59);"-----"
720 FOR I=1 TO M
730   READ D$
740   IF D$="END" THEN 1310
750   READ S$,M$,T$,N,C$,F$,Q,C,V
760   IF S$ <> X$ THEN B20
770 PRINTTAB(5);D$;M$;TAB(12);C$;TAB(19);T$;TAB(28);N;TAB(37);
780 PRINTF$;TAB(45);Q;TAB(51);C;TAB(57);V
790   IF A1$ <> "Y" THEN B20
800   C1=C1+(C*Q)
810   V1=V1+(V*Q)
820 NEXT I
830 GOTO 1310
840 REM ***** MINT SEARCH AND PRINT *****

```

```

850 PRINT"ENTER THE MINT TO SEARCH FOR"
860 INPUT X$
870 PRINT
880 PRINT
890 PRINT
900 PRINTX$;TAB(2);"DATE CD";TAB(12);"SIZE";TAB(19);"TYPE";
910 PRINTTAB(28);"NBR(MIL)";TAB(39);"PRCH";TAB(46);"QTY";TAB(52);
920 PRINT"COST";TAB(59);"VALUE"
930 PRINTTAB(2);"-----";TAB(12);"-----";TAB(19);"-----";
940 PRINTTAB(28);"-----";TAB(39);"-----";TAB(46);"-----";TAB(52);
950 PRINT"-----";TAB(59);"-----"
960 FOR I=1 TO M
970   READ D$
980   IF D$="END" THEN 1310
990   READ S$,M$,T$,N$,C$,P$,Q$,C$,V
1000  IF M$<>X$ THEN 1060
1010 PRINTTAB(2);D$;TAB(8);C$;TAB(12);S$;TAB(19);T$;TAB(29);N$;
1020 PRINTTAB(36);P$;TAB(45);Q$;TAB(51);C$;TAB(57);V
1030  IF A1$<>"Y" THEN 1060
1040   C1=C1+(C*Q)
1050   V1=V1+(V*Q)
1060 NEXT I
1070 GOTO 1310
1080 REM ***** TYPE SEARCH AND PRINT *****
1090 PRINT"ENTER THE TYPE TO SEARCH FOR"
1100 INPUT X$
1110 PRINT
1120 PRINT
1130 PRINT
1140 PRINTX$;TAB(9);"DATE";TAB(15);"SIZE";TAB(22);"COND";
1150 PRINTTAB(28);"NBR(MIL)";TAB(39);"PRCH";TAB(46);"QTY";TAB(52);
1160 PRINT"COST";TAB(59);"VALUE"
1170 PRINTTAB(9);"-----";TAB(15);"-----";TAB(22);"-----";TAB(28);
1180 PRINT"-----";TAB(39);"-----";TAB(46);"-----";
1190 PRINTTAB(51);"-----";TAB(58);"-----"
1200 FOR I=1 TO M
1210   READ D$
1220   IF D$="END" THEN 1310
1230   READ S$,M$,T$,N$,C$,P$,Q$,C$,V
1240   IF T$<>X$ THEN 1300
1250 PRINTTAB(9);D$;TAB(15);S$;TAB(22);C$;TAB(28);N$;TAB(37);
1260 PRINTP$;TAB(46);Q$;TAB(52);C$;TAB(58);V
1270   IF A1$<>"Y" THEN 1300
1280   C1=C1+(C*Q)
1290   V1=V1+(V*Q)
1300 NEXT I
1310 REM ***** PROGRAM TERMINATION POINT *****
1320 PRINT
1330 PRINT
1340 IF A1$<>"Y" THEN 1430
1350 PRINT"*****"
1360 PRINT" TOTAL COST WAS ";C1
1370 PRINT"*****"
1380 PRINT" TOTAL VALUE IS ";V1
1390 PRINT"*****"
1400 PRINT
1410 PRINT
1420 PRINT
1430 STOP
1440 REM ***** DATA ENTRIES FOLLOW *****
1450 DATA 1947,.25,D,WASHINGTON,10,VF,DEC 1978,1,1.50,1.50
1460 DATA 1944,.05,S,SILVER,11,1,VG,JAN 1979,50,1.50,1.75
1470 DATA 1965,.10,D,FLAW,114.1,F,FEB 1979,1,10,11.50
1480 DATA 1978,M,S,PROOF SET,3.2,FR,OCT 1978,10,7.00,17.50

```


1490 DATA 1978,M,S,MINT SET,4.50,BU,OCT 1978,10,4.00,14.00
 1500 DATA 1945,.05,D,SILVER,16.47,VF,JUL 1978,100,.40,.55
 1510 DATA 1907,.01,,INDIAN,.35,G,AUG 1979,1000,.75,.80
 1520 DATA 1901,.01,,INDIAN,.86,G,SEP 1979,2000,.75,.80
 1530 DATA 1875,1.00,CC,,65.17,G,SEPT 1979,1,65,75
 1540 DATA 1945,.25,S,WASHINGTON,8.89,F,SEP 1979,5,1.75,2.10
 1550 DATA END

RUN
 SHALL I PRINT ALL OF THE ENTRIES (Y OR N)?
 ? Y
 SHALL I PRODUCE TOTAL COSTS/VALUES FOR YOU (Y OR N)?
 ? Y

DATE	SIZE	COND	TYPE	NBR (MIL)	PRCH	QTY	COST	VALUE
1947D	.25	VF	WASHINGTON	10	DEC 1978	1	1.5	1.5
1944S	.05	VG	SILVER	11.1	JAN 1979	50	1.5	1.75
1965D	.10	F	FLAW	114.1	FEB 1979	1	10	11.5
1978S	M	PR	PROOF SET	3.2	OCT 1978	10	7	17.5
1978S	M	BU	MINT SET	4.5	OCT 1978	10	4	14
1945D	.05	VF	SILVER	16.47	JUL 1978	100	.4	.55
1907	.01	G	INDIAN	.35	AUG 1979	1000	.75	.8
1901	.01	G	INDIAN	.86	SEP 1979	2000	.75	.8
1875CC	1.00	G		65.17	SEPT 1979	1	65	75
1945S	.25	F	WASHINGTON	8.89	SEP 1979	5	1.75	2.1

 TOTAL COST WAS 2560.25

 TOTAL VALUE IS 2956

BREAK IN 1430

RUN
 SHALL I PRINT ALL OF THE ENTRIES (Y OR N)?
 ? N
 SHALL I PRODUCE TOTAL COSTS/VALUES FOR YOU (Y OR N)?
 ? N
 WHAT SHALL I SEARCH FOR: DATE(D), DENOMINATION SIZE (S)
 MINT (M), OR TYPE (T)?
 ? D
 ENTER THE DATE TO SEARCH FOR
 ? 1945

1945	SIZE	COND	TYPE	NBR (MIL)	PRCH	QTY	COST	VALUE
D	.05	VF	SILVER	16.47	JUL 1978	100	.4	.55
S	.25	F	WASHINGTON	8.89	SEP 1979	5	1.75	2.1

BREAK IN 1430

MAJOR SYMBOL TABLE - COIN INVESTMENTS

```

I-----I
I NAME .. DESCRIPTION I
I-----I
I M .. MAXIMUM NUMBER OF DATA READS I
I D$ .. DATE OF COIN I
I S$ .. SIZE (DENOMINATION) OF COIN I
I M$ .. MINT OF COIN I
I T$ .. TYPE OF COIN I
I N .. NUMBER MINTED (MILLIONS) I
I C$ .. CONDITION I
I P$ .. PURCHASE DATE I
I Q .. QTY OWNED I
I C .. COST I
I V .. VALUE I
I C1 .. TOTAL COSTS I
I V1 .. TOTAL VALUE I
I X$ .. ITEM TO SEARCH FOR I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME .. DESCRIPTION I
I-----I
I TAB .. FORMATS PRINT LINES I
I-----I

```

BEER CAN COLLECTION

Description

This program offers beer can collectors (young or old) the capability to control their collections and take advantage of opportunities for trades.

Functions of the Program

The program accepts from the data the information concerning the individual cans in the collection and then prints the items specified. The items printed can include all or just a part of the collection, depending upon the selection criteria provided.

Instructions for Use

Enter the individual items of the collection as data prior to running the program. Items sold or traded should be deleted when the transaction occurs.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format for the collection data is:

Brand name, Size, Can type, Material, Color/Condition

Output Description

See example provided. Output is either a formatted list of all items or a list of those that match the selection criteria specified.

```
20 REM BEERCAN COLLECTION PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 REM ***** PROCESSING STARTS *****
60 PRINT "SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?"
70 INPUT A$
80 IF A$ <> "Y" THEN 230
90 REM ***** PRINT ROUTINE FOR "ALL" ENTRIES *****
100 PRINT
110 PRINT
120 PRINT
130 PRINTTAB(3); "BRAND"; TAB(20); "SIZE"; TAB(30); "TYPE"; TAB(39); "MAT";
140 PRINTTAB(46); "COLOR/CONDITION"
150 PRINTTAB(1); "-----"; TAB(20); "-----"; TAB(30);
160 PRINT "-----"; TAB(39); "-----"; TAB(46); "-----"
170 FOR I = 1 TO M
180 READ B$
190 IF B$ = "END" THEN 790
200 READ S$, T$, M$, C$
```

```

210 PRINTB$;TAB(20);S$;TAB(29);T$;TAB(39);M$;TAB(46);C$
220 NEXT I
230 PRINT"WHAT SHALL I SEARCH FOR: BRAND(B), SIZE(S), OR TYPE(T)?"
240 INPUT A$
250 IF A$="T" THEN 620
260 IF A$="S" THEN 440
270 REM ***** BRAND SEARCH AND PRINT *****
280 PRINT"ENTER THE BRAND TO SEARCH FOR "
290 INPUT X$
300 PRINT
310 PRINT
320 PRINTX$;TAB(20);"SIZE";TAB(30);"TYPE";TAB(39);"MAT";TAB(46);
330 PRINT"COLOR/CONDITION"
340 PRINTTAB(20);"-----";TAB(30);"-----";TAB(39);"-----";
350 PRINTTAB(46);"-----"
360 FOR I=1 TO M
370 READ B$
380 IF B$="END" THEN 790
390 READ S$,T$,M$,C$
400 IF B$<>X$ THEN 420
410 PRINTTAB(20);S$;TAB(30);T$;TAB(39);M$;TAB(46);C$
420 NEXT I
430 GOTO 790
440 REM ***** SIZE SEARCH AND PRINT *****
450 PRINT"ENTER THE SIZE TO SEARCH FOR "
460 INPUT X$
470 PRINT
480 PRINT
490 PRINT
500 PRINTX$;TAB(8);"BRAND";TAB(28);"TYPE";TAB(37);"MAT";TAB(46);
510 PRINT"COLOR/CONDITION"
520 PRINTTAB(8);"-----";TAB(28);"-----";
530 PRINTTAB(37);"-----";TAB(46);"-----"
540 FOR I = 1 TO M
550 READ B$
560 IF B$="END" THEN 790
570 READ S$,T$,M$,C$
580 IF S$ <>X$ THEN 600
590 PRINTTAB(8);B$;TAB(28);T$;TAB(37);M$;TAB(46);C$
600 NEXT I
610 GOTO 790
620 REM ***** TYPE SEARCH AND PRINT *****
630 PRINT"ENTER THE TYPE TO SEARCH FOR"
640 INPUT X$
650 PRINT
660 PRINT
670 PRINT
680 PRINTX$;TAB(8);"BRAND";TAB(28);"SIZE";TAB(36);"MAT";TAB(46);
690 PRINT"COLOR/CONDITION"
700 PRINTTAB(8);"-----";TAB(28);"-----";
710 PRINTTAB(36);"-----";TAB(46);"-----"
720 FOR I= 1 TO M
730 READ B$
740 IF B$="END" THEN 790
750 READ S$,T$,M$,C$
760 IF T$<>X$ THEN 780
770 PRINTTAB(8);B$;TAB(28);S$;TAB(36);M$;TAB(46);C$
780 NEXT I
790 REM ***** PROGRAM TERMINATION POINT *****
800 PRINT
810 PRINT
820 STOP
830 REM *** DATA ELEMENTS FOLLW *****
840 DATA BRAND X,8 OZ,TAB TOP,ALUM,YELLOW GOOD

```

```

850 DATA BRAND Y SPECIAL,16 OZ,TAB TOP,STEEL,R/W EXCELLENT
860 DATA BRAND X SPECIAL,8 OZ,PCH TOP,ALUM,RED POOR
870 DATA BRAND Y SPECIAL,8 OZ,TAB TOP,ALUM,GREEN GOOD
880 DATA BRAND X,16 OZ,PCH TOP,STEEL,R/W GOOD
890 DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?
? Y

```

BRAND	SIZE	TYPE	MAT	COLOR/CONDITION
BRAND X	8 OZ	TAB TOP	ALUM	YELLOW GOOD
BRAND Y SPECIAL	16 OZ	TAB TOP	STEEL	R/W EXCELLENT
BRAND X SPECIAL	8 OZ	PCH TOP	ALUM	RED POOR
BRAND Y SPECIAL	8 OZ	TAB TOP	ALUM	GREEN GOOD
BRAND X	16 OZ	PCH TOP	STEEL	R/W GOOD

BREAK IN 820

```

RUN
SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?
? N
WHAT SHALL I SEARCH FOR: BRAND(B), SIZE (S), OR TYPE(T)?
? T
ENTER THE TYPE TO SEARCH FOR
? TAB TOP

```

TAB TOP	BRAND	SIZE	MAT	COLOR/CONDITION
	BRAND X	8 OZ	ALUM	YELLOW GOOD
	BRAND Y SPECIAL	16 OZ	STEEL	R/W EXCELLENT
	BRAND Y SPECIAL	8 OZ	ALUM	GREEN GOOD

BREAK IN 820

MAJOR SYMBOL TABLE - BEER CANS

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS I
I B$    .. BRAND NAME   I
I S$    .. SIZE OF CAN  I
I T$    .. TYPE OF CAN  I
I M$    .. CAN MATERIAL  I
I C$    .. COLOR/CONDITION I
I X$    .. ITEM TO SEARCH FOR I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I TAB   .. FORMATS PRINT LINES I
I-----I

```

BOOK COLLECTIONS

Description

The computer really becomes a librarian with this program. Books in your private collection can be listed or searched, as you desire, thus allowing you to control your library.

Functions of the Program

The program accepts the information about each book from the data and then prints the entries or selects those that match the criteria specified.

Instructions for Use

Prior to running the program, information about the books in the collection must be provided.

Data Entry

All data is entered as DATA statements.

Data Format

The form of the data input is:

Title, Author, Location

Output Description

See example provided. Output is a formatted list of all items or just those that satisfy the selection criteria specified.

```
20 REM   BOOK COLLECTION PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 M=1000
50 REM   ***** PROCESSING STARTS *****
60 PRINT"SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?"
70 INPUT A$
80 IF A$<>"Y" THEN 220
90 REM   ***** PRINT ROUTINE FOR "ALL" ENTRIES *****
100 PRINT
110 PRINT
120 PRINT
130 PRINTTAB(6);"TITLE";TAB(36);"AUTHOR";TAB(55);"LOCATION"
140 PRINTTAB(1);"-----";TAB(30);"-----";
150 PRINTTAB(55);"-----"
160 FOR I= 1 TO M
170   READ T$
180   IF T$="END" THEN 720
190   READ A$,L$
200   PRINTT$,TAB(32);A$,TAB(55);L$
210 NEXT I
220 PRINT"WHAT SHALL I SEARCH FOR: AUTHOR(A), TITLE(T), OR LOCATION(L)?"
```

```

230 INPUT A$
240 IF A$="L" THEN 570
250 IF A$="A" THEN 410
260 REM ***** TITLE SEARCH AND PRINT *****
270 PRINT"ENTER THE TITLE TO SEARCH FOR "
280 INPUT X$
290 PRINT
300 PRINT
310 PRINT X$;TAB(35);"AUTHOR";TAB(55);"LOCATION"
320 PRINTTAB(30);"-----";TAB(55);"-----"
330 FOR I = 1 TO M
340   READ T$
350   IF T$="END" THEN 720
360   READ A$,L$
370   IF T$<>X$ THEN 390
380   PRINTTAB(30);A$;TAB(55);L$
390 NEXT I
400 GOTO 720
410 REM ***** AUTHOR SEARCH AND PRINT *****
420 PRINT"ENTER THE AUTHOR TO SEARCH FOR"
430 INPUT X$
440 PRINT
450 PRINT
460 PRINT
470 PRINTX$;TAB(21);"TITLE";TAB(55);"LOCATION"
480 PRINTTAB(18);"-----";TAB(55);"-----"
490 FOR I = 1 TO M
500   READ T$
510   IF T$="END" THEN 720
520   READ A$,L$
530   IF A$<>X$ THEN 550
540   PRINTTAB(18);T$;TAB(55);L$
550 NEXT I
560 GOTO 720
570 REM ***** LOCATION SEARCH AND PRINT *****
580 PRINT"ENTER THE LOCATION TO SEARCH FOR"
590 INPUT X$
600 PRINT
610 PRINT
620 PRINT
630 PRINTX$;TAB(15);"TITLE";TAB(45);"AUTHOR"
640 PRINTTAB(15);"-----";TAB(45);"-----"
650 FOR I = 1 TO M
660   READ T$
670   IF T$="END" THEN 720
680   READ A$,L$
690   IF L$<>X$ THEN 710
700   PRINTTAB(15);T$;TAB(45);A$
710 NEXT I
720 REM ***** PROGRAM TERMINATION POINT *****
730 PRINT
740 PRINT
750 STOP
760 REM ***** DATA ENTRIES FOLLOW *****
770 DATA BASIC PROGRAMS FOR THE HOME,CHARLES STERNBERG,SHELF 1
780 DATA BOOK2,ANOTHER AUTHOR,SHELF 2
790 DATA BOOK 3,ANOTHER AUTHOR,SHELF 1
800 DATA BOOK 4,CHARLES STERNBERG,SHELF 2
810 DATA BOOK 5,DAVID JONES,SHELF 2
820 DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?
? Y

```

TITLE	AUTHOR	LOCATION
BASIC PROGRAMS FOR THE HOME	CHARLES STERNBERG	SHELF 1
BOOK2	ANOTHER AUTHOR	SHELF 2
BOOK 3	ANOTHER AUTHOR	SHELF 1
BOOK 4	CHARLES STERNBERG	SHELF 2
BOOK 5	DAVID JONES	SHELF 2

```

BREAK IN 750

```

```

RUN
SHALL I PRINT ALL OF THE ENTRIES ( Y OR N )?
? N
WHAT SHALL I SEARCH FOR: AUTHOR(A), TITLE(T), OR LOCATION(L)?
? A
ENTER THE AUTHOR TO SEARCH FOR
? CHARLES STERNBERG

```

CHARLES STERNBERG	TITLE	LOCATION
	BASIC PROGRAMS FOR THE HOME	SHELF 1
	BOOK 4	SHELF 2

```

BREAK IN 750

```

```

MAJOR SYMBOL TABLE - BOOKS
I-----I
I NAME  .. DESCRIPTION          I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS I
I T$    .. TITLE                I
I A$    .. AUTHOR                I
I L$    .. LOCATION              I
I X$    .. ITEM TO SEARCH FOR    I
I-----I

```

```

FUNCTIONS USED
I-----I
I NAME  .. DESCRIPTION          I
I-----I
I TAB   .. FORMATS PRINT LINES  I
I-----I

```


SERVICE CALLS

Description

Service information and repair points are recalled at the touch of a button with this program for recording service information on your major home appliances.

Functions of the Program

This program provides little processing capability as it merely produces a formatted list of the service items included in the data. It does provide, however, a simple means of eliminating nagging household problems.

Instructions for Use

Enter information about the appliances and their service points prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The form of the data is:

Appliance, Repair company, Address, Telephone number

Output Description

See example provided.

Comments

This program is ideally suited for experimentation in adding functions or extensions to the possibilities provided. As a start, consider adding a selection function to print specified items.

```
20 REM SERVICE CALL PROGRAM - BASIC
30 REM ***** DATA INITIATION *****
40 M=1000
50 REM ***** PROCESSING AREA *****
60 FOR I = 1 TO M
70 READ I$
80 IF I$="END" THEN 140
90 PRINT
100 READ S$,X$,T$
110 PRINTI$;TAB(20);S$;TAB(50);T$
120 PRINTTAB(20) X$
130 NEXT I
140 REM ***** PROGRAM TERMINATION POINT *****
150 PRINT
```

```

160 PRINT
170 STOP
180 **** DATA ENTRIES FOLLOW ****
190 DATA TELEVISION,XYZ CORPORATION,415 ANY STREET,545-1234
200 DATA SEWING MACHINE,ABC CORP,678 WADSWORTH AVE.,345-8765
210 DATA END

```

RUN

```

TELEVISION          XYZ CORPORATION          545-1234
                   415 ANY STREET
SEWING MACHINE      ABC CORP                345-8765
                   678 WADSWORTH AVE.

```

BREAK IN 170

MAJOR SYMBOL TABLE - SERVICE CALLS

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS I
I I$    .. ITEM        I
I S$    .. COMPANY FOR SERVICE I
I X$    .. ADDRESS OF COMPANY I
I T$    .. TELEPHONE OF COMPANY I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I TAB   .. FORMATS PRINT LINES I
I-----I

```

RECORDING TAPES

Description

There is no reason to search manually through tape reels and hand-written notes to find a particular recording when this program can do it for you in much less time.

Functions of the Program

The program reads the tape information from the data supplied and prints an index of any or all tapes, or locates all items that meet the criteria specified.

Instructions for Use

The tape information and recorded items must be entered prior to running the program for the first time.

Data Entry

All data is entered by means of DATA statements.

Data Formats

1. A master record is required for each tape. The form is:
Tape number, Speed
2. Recorded items are entered using the form:
A, Artist name, Title, Location on the tape

Output Description

See examples provided. The formatted output clearly identifies the contents of the tapes printed and the location of all items on the tape.

```
20 REM    TAPE RECORD PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 C0=1
50 M=1000
60 PRINT "SHALL I PRINT ALL ITEMS ( Y OR N)?"
70 INPUT A0$
80 IF A0$="Y" THEN 160
90 PRINT "SHALL I SEARCH FOR A TAPE(T), ARTIST(A), OR SONG(S)?"
100 INPUT A1$
110 PRINT "ENTER THE ITEM TO SEARCH FOR"
120 INPUT X$
130 PRINT
140 PRINT
150 C0=0
160 REM ***** PROCESSING AREA *****
170 FOR I= 1 TO M
180     READ T$
```

```

190 IF T$="END" THEN 390
200 IF T$ <> "A" THEN 270
210 READ A$,P$,L$
220 IF A0$<>"Y" THEN 250
230 PRINTTAB(5)A$;TAB(25);P$;TAB(50);L$
240 GOTO 380
250 GOSUB 440
260 GOTO 380
270 REM ***** TAPE MASTER ITEM PRINT *****
280 T1$=T$
290 READ S$
300 C=0
310 IF A0$<>"Y" THEN 380
320 PRINT
330 GOTO 340
340 PRINT"TAPE - ";T$;TAB(18);"SPEED - ";S$
350 PRINT
360 PRINTTAB(5) "ARTIST";TAB(25);"SONG";TAB(50);"LOCATION"
370 PRINTTAB(5) "-----";TAB(25);"-----";TAB(50);"-----"
380 NEXT I
390 REM ***** TERMINATION POINT *****
400 IF C0<>0 THEN 420
410 PRINT"ITEM NOT FOUND"
420 PRINT
430 STOP
440 REM ***** SELECTION PROCESSING AREA *****
450 IF A1$<>"T" THEN 580
460 IF T$<>"A" THEN 730
470 IF T1$<>X$ THEN 730
480 IF C>0 THEN 540
490 PRINT"TAPE - ";T1$;TAB(18);"SPEED - ";S$
500 PRINT
510 IF C0>0 THEN 540
520 PRINTTAB(5) "ARTIST";TAB(25);"SONG";TAB(50);"LOCATION"
530 PRINTTAB(5) "-----";TAB(25);"-----";TAB(50);"-----"
540 PRINTTAB(5);A$;TAB(25);P$;TAB(50);L$
550 C0=C0+1
560 C=C+1
570 GOTO 730
580 IF A1$<>"A" THEN 660
590 IF A$<>X$ THEN 730
600 IF C0>0 THEN 640
610 PRINTTAB(5) "ARTIST";TAB(25);"SONG";TAB(40);"TAPE";TAB(50);"LOCATION"
620 PRINTTAB(5) "-----";TAB(25);"-----";TAB(40);"-----";TAB(50);"-----"
630 C0=C0+1
640 PRINTTAB(5)A$;TAB(25);P$;TAB(40);T1$;TAB(50);L$
650 GOTO 730
660 IF A1$<>"S" THEN 730
670 IF P$<>X$ THEN 730
680 IF C0>0 THEN 720
690 PRINTTAB(5) "SONG";TAB(25);"ARTIST";TAB(45);"TAPE";TAB(55);"LOCATION"
700 PRINTTAB(5);"-----";TAB(25);"-----";TAB(45);"-----";TAB(55);"-----"
710 C0=C0+1
720 PRINTTAB(5);P$;TAB(25);A$;TAB(45);T1$;TAB(55);L$
730 RETURN
740 REM ***** DATA ENTRIES FOLLOW *****
750 DATA 100,3 5/8
760 DATA A,SINGER1,SONG 1,1
770 DATA A,SONGSTRESS 2,PIECE 2,2
780 DATA 101,7 1/2
790 DATA A,REDDY,NEWSONG,7523
800 DATA A,REDDY,OLD SONG,516
810 DATA A,ANOTHER,NEWSONG,865
820 DATA TAPE3,7 1/2

```

830 DATA A,REDDY,ANOTHER SONG,14
 840 DATA A,SOMEONE,NEWSONG,56
 850 DATA END

RUN
 SHALL I PRINT ALL ITEMS (Y OR N)?
 ? Y

TAPE - 100 SPEED - 3 5/8

ARTIST	SONG	LOCATION
SINGER1	SONG 1	1
SONGSTRESS 2	PIECE 2	2

TAPE - 101 SPEED - 7 1/2

ARTIST	SONG	LOCATION
REDDY	NEWSONG	7523
REDDY	OLD SONG	516
ANOTHER	NEWSONG	865

TAPE - TAPE3 SPEED - 7 1/2

ARTIST	SONG	LOCATION
REDDY	ANOTHER SONG	14
SOMEONE	NEWSONG	56

BREAK IN 430

RUN
 SHALL I PRINT ALL ITEMS (Y OR N)?
 ? N
 SHALL I SEARCH FOR A TAPE (T), ARTIST (A), OR SONG (S)?
 ? S
 ENTER THE ITEM TO SEARCH FOR
 ? NEWSONG

SONG	ARTIST	TAPE	LOCATION
NEWSONG	REDDY	101	7523
NEWSONG	ANOTHER	101	865
NEWSONG	SOMEONE	TAPE3	56

BREAK IN 430

MAJOR SYMBOL TABLE - RECORDING TAPES

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	X\$	ITEM TO SEARCH FOR	I
I	T\$	TAPE NUMBER/TRANSACTION TYPE	I
I	A\$	ARTIST	I
I	P\$	SONG	I
I	L\$	LOCATION ON TAPE	I
I	S\$	TAPE SPEED	I
I	T1\$	TEMPORARY TAPE NUMBER SAVE	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

CLUB LISTS

Description

For the individual involved in club activities, this program can save hours of manual typing and calculation efforts.

Functions of the Program

The program reads club member information from the DATA statements and performs the requested processing. Processing requirements are determined by the option number entered. All options are separated in the program for clarity. The options available are:

1. Printing mailing labels
2. Computing and printing members' dues status
3. Printing a list of names and telephone numbers
4. Printing a member listing in checklist form

Instructions for Use

Enter and store the member information, prior to the program's use.

Data Entry

All data is entered by means of DATA statements.

Data Formats

1. The first data record contains spacing and dues information:
Lines to print per address, Dues required for each period
2. Individual member information is entered in the form:
Name, Telephone, Street, City-State-Zip code, Dues paid

Output Description

See examples provided. Option choices determine the format of the output produced.

```
20 REM CLUB LISTING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=10000
50 PRINT
60 PRINT
70 PRINT" FOUR OPTIONS ARE AVAILABLE"
80 PRINTTAB(10);"1. PRINT IN MAILING LABEL FORMAT"
90 PRINTTAB(10);"2. PRINT OF MEMBER'S DUES STATUS"
100 PRINTTAB(10);"3. PRINT OF NAMES AND TELEPHONES"
110 PRINTTAB(10);"4. PRINT IN CHECKLIST FORMAT"
120 PRINT
130 PRINT"ENTER OPTION NUMBER DESIRED"
140 INPUT O
150 REM ***** ENTRY OF NUMBER TO PRINT *****
160 N1=3
```

```

170 READ N2,D
180 REM **** PROCESSING STARTS ***
190 PRINT"POSITION PAPER NOW"
200 INPUT G$
210 FOR I=1 TO M
220   READ N$
230   IF N$="END" THEN 590
240   READ T$,A1$,A2$,P
250   IF O=1 THEN 360
260   IF O=2 THEN 440
270   IF O=3 THEN 520
280 REM **** OPTION 4 ****
290   IF I<>1 THEN 320
300   PRINT"CHK";TAB(8);"NAME/ADDRESS";TAB(35);"TELEPHONE"
310   PRINT"-----";TAB(8);"-----";TAB(35);"-----"
320   PRINT"(< )   ";N$;TAB(35);T$
330   PRINTTAB(10);A1$;" , ";A2$
340   PRINT
350   GOTO 570
360 REM **** OPTION 1 ****
370   PRINTN$
380   PRINTA1$
390   PRINTA2$
400   FOR K=N1+1 TO N2
410     PRINT
420   NEXT K
430   GOTO 570
440 REM **** OPTION 2 ****
450   IF I<>1 THEN 480
460   PRINT"NAME";TAB(30);"DWED"
470   PRINT"-----";TAB(30);"-----"
480   T1=D-F
490   T2=T2+T1
500   PRINTN$;TAB(30);T1
510   GOTO 570
520 REM **** OPTION 3 ****
530   IF I <> 1 THEN 560
540   PRINT"NAME";TAB(30);"TELEPHONE"
550   PRINT"-----";TAB(30);"-----"
560   PRINTN$;TAB(30);T$
570 NEXT I
580 REM *****
590 REM **** TERMINATION POINT ****
600 IF O<>2 THEN 630
610 PRINTTAB(30);"-----"
620 PRINTTAB(16);"TOTAL DWED ";TAB(30);T2
630 PRINT
640 PRINTI-1;" RECORDS WERE PRINTED"
650 PRINT
660 PRINT
670 STOP
680 REM *****
690 REM   EXAMPLE DATA FORMATION FOLLOWS
700 REM *****
710 DATA 6,15
720 DATA JOHN D. DOE,243-1234
730 DATA 555 SMOKEY DRIVE
740 DATA "GROTON, MASS      87878"
750 DATA 12.00
760 DATA JOSEPH R. WESTONBY,345-2345
770 DATA 456 EASERLY ROAD
780 DATA "TAYLORSVILLE, MAINE  23234"
790 DATA 11
800 DATA END

```


RUN

FOUR OPTIONS ARE AVAILABLE

1. PRINT IN MAILING LABEL FORMAT
2. PRINT OF MEMBER'S DUES STATUS
3. PRINT OF NAMES AND TELEPHONES
4. PRINT IN CHECKLIST FORMAT

ENTER OPTION NUMBER DESIRED

? 1

POSITION PAPER NOW

?

JOHN D. DOE
555 SMOKEY DRIVE
GROTON, MASS 07878

JOSEPH R. WESTONBY
456 EASERLY ROAD
TAYLORSVILLE, MAINE 23234

2 RECORDS WERE PRINTED

BREAK IN 670

RUN

FOUR OPTIONS ARE AVAILABLE

1. PRINT IN MAILING LABEL FORMAT
2. PRINT OF MEMBER'S DUES STATUS
3. PRINT OF NAMES AND TELEPHONES
4. PRINT IN CHECKLIST FORMAT

ENTER OPTION NUMBER DESIRED

? 2

POSITION PAPER NOW

?

NAME	OWED
-----	----
JOHN D. DOE	3
JOSEPH R. WESTONBY	4

TOTAL OWED	7

2 RECORDS WERE PRINTED

BREAK IN 670

RUN

FOUR OPTIONS ARE AVAILABLE

1. PRINT IN MAILING LABEL FORMAT
2. PRINT OF MEMBER'S DUES STATUS
3. PRINT OF NAMES AND TELEPHONES
4. PRINT IN CHECKLIST FORMAT

ENTER OPTION NUMBER DESIRED

? 3

POSITION PAPER NOW

?

NAME	TELEPHONE
-----	-----
JOHN D. DOE	243-1234
JOSEPH R. WESTONBY	345-2345

2 RECORDS WERE PRINTED

BREAK IN 670

RUN

FOUR OPTIONS ARE AVAILABLE

1. PRINT IN MAILING LABEL FORMAT
2. PRINT OF MEMBER'S DUES STATUS
3. PRINT OF NAMES AND TELEPHONES
4. PRINT IN CHECKLIST FORMAT

ENTER OPTION NUMBER DESIRED

? 4

POSITION PAPER NOW

?

CHK	NAME/ADDRESS	TELEPHONE
()	JOHN D. DOE	243-1234
	555 SMOKEY DRIVE, GROTON, MASS	87878
()	JOSEPH R. WESTONBY	345-2345
	456 EASERLY ROAD, TAYLORSVILLE, MAINE	23234

2 RECORDS WERE PRINTED

BREAK IN 670

MAJOR SYMBOL TABLE - CLUB LISTS

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	O	OPTION NUMBER	I
I	N1	LINES IN EACH ADDRESS	I
I	N2	LINES TO PRINT FOR EACH ADDRESS	I
I	D	REQUIRED DUES FOR PERIOD	I
I	N\$	NAME	I
I	T\$	TELEPHONE	I
I	A1\$	ADDRESS LINE 1	I
I	A2\$	ADDRESS LINE 2	I
I	P	DUES PAID FOR PERIOD	I
I	T1	DUES OWED	I
I	T2	TOTAL DUES OWED - ALL	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

TABLE OF CONTENTS

Description

This program can satisfy a number of school, hobby, and home needs. With a little thought, it can be applied to everything from creating outlines for school to recording the contents of your program cassettes.

Functions of the Program

The program will either locate and print specific items from the data items or produce a formatted listing with user-controlled indentation.

Instructions for Use

Determine the level number (for indentation) for each of the items, and enter the information prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The form for data entry is:

Item level, Item, Page number/Location

Note the 0 END card.

Output Description

See example provided. Output is produced with indentation based upon five spaces multiplied by the level number supplied with the item.

```
20 REM TABLE OF CONTENTS (LOCATOR) PROGRAM
30 REM **** DATA INITIALIZATION ****
40 T1=50
50 T2=45
60 M=1000
70 PRINT "SHALL I PRINT ALL ENTRIES ( Y OR N)?"
80 INPUT A$
90 PRINT
100 IF A$="Y" THEN 130
110 PRINT "ENTER THE ITEM TO SEARCH FOR "
120 INPUT X$
130 PRINT
140 PRINT
150 PRINT
160 PRINT
170 PRINTTAB(30); "ITEM"; TAB(T1); "LOCATION"
180 PRINTTAB(10); "-----"; TAB(T1);
190 PRINT "-----"
200 REM *****
210 REM ***** PROCESSING AREA *****
220 FOR I=1 TO M
```

```

230 READ T
240 IF T=0 THEN 510
250 READ I$,R$
260 IF T<>1 THEN 300
270 S1$=I$
280 S2$=R$
290 T1=45
300 IF A$<>"Y" THEN 370
310 PRINTTAB(T*5);"- ";I$;
320 IF R$="" THEN 350
330 PRINTTAB(T1);"- ";R$;
340 T1=50
350 PRINT
360 GOTO 490
370 IF T<>1 THEN 390
380 PRINT
390 IF I$<>X$ THEN 490
400 PRINTTAB(5);S1$;
410 IF S2$="" THEN 440
420 PRINTTAB(T2);"- ";S2$;
430 IF T = 1 THEN 480
440 PRINT
450 PRINTTAB(T*5);I$;
460 IF R$="" THEN 480
470 PRINTTAB(T1);"- ";R$;
480 PRINT
490 T1=50
500 NEXT I
510 REM ***** PROGRAM TERMINATION POINT *****
520 PRINT
530 PRINT
540 PRINT
550 STOP
560 REM *****
570 REM ***** DATA ENTRIES FOLLOW *****
580 DATA 1,TAPE 1,RACK 1
590 DATA 2,FINANCIAL PROGRAMS,
600 DATA 3,CHECKBOOK BALANCE,132
610 DATA 3,HOUSEHOLD EXPENSES,240
620 DATA 3,INTEREST PROJECTIONS,356
630 DATA 3,STOCK ANALYSIS,762
640 DATA 2,TUTORS,
650 DATA 3,MATH ADDITION,850
660 DATA 3,MATH SUBTRACTION,1000
670 DATA 1,TAPE 2,RACK 1
680 DATA 2,KITCHEN,
690 DATA 3,DIET,10
700 DATA 3,DIET PLANNING,457
710 DATA 2,MISC,
720 DATA 3,SCHEDULES,25
730 DATA 1,TAPE 3,RACK 2
740 DATA 3,DIET,123
750 DATA 0

```

```

RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? Y

```

ITEM	LOCATION
TAPE 1	- RACK 1
FINANCIAL PROGRAMS	
CHECKBOOK BALANCE	- 132
HOUSEHOLD EXPENSES	- 240
INTEREST PROJECTIONS	- 356
STOCK ANALYSIS	- 762
TUTORS	
MATH ADDITION	- 850
MATH SUBTRACTION	- 1000
TAPE 2	- RACK 1
KITCHEN	
DIET	- 10
DIET PLANNING	- 457
MISC	
SCHEDULES	- 25
TAPE 3	- RACK 2
DIET	- 123

BREAK IN 550

MAJOR SYMBOL TABLE - TABLE OF CONTENTS

I	NAME	.. DESCRIPTION	I
I	T1	.. TAB CONTROL USE	I
I	T2	.. TAB CONTROL USE	I
I	X\$	.. ITEM TO SEARCH FOR	I
I	T	.. NUMBER OF SPACES TO TAB - IN	I
I	I\$	.. ITEM IN	I
I	R\$	.. PAGE NUMBER/REFERENCE LOCATION IN	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

Miscellaneous Programs

for the Home

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UTILITY BILL ANALYSIS

Description

The rising cost and dwindling supply of energy indicates the need for careful control and analysis of energy usage. This program was designed to assist with these tasks.

Functions of the Program

The program accepts periodic readings of any utility meter and computes daily use and cost information. Totals and averages for the period are produced after all data items have been processed and printed in a tabular form.

Instructions for Use

Determine the unit cost of the energy use from your statement. Read the meter and enter the information to the program, as frequently as possible. Daily readings are best for thorough interpretation of the results.

Data Entry

All data is entered as DATA statements.

Data Formats

The first record provided is the cost per unit of the item. The second and succeeding records are of the form:

Date of reading, Meter reading

Output Description

See example provided.

```

20 REM          UTILITY ANALYSIS PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 REM *****
60 REM ***** PROCESSING AREA *****
70 PRINT
80 PRINT
90 PRINT
100 READ C
110 READ D,S
120 PRINT"INITIAL READING WAS ";S;" ON DAY ";D
130 PRINT"COST PER UNIT IS ";C
140 PRINT
150 PRINT"DATE";TAB(28);"USE COST"
160 PRINT "READ";TAB(7);"READ";TAB(16);"USED";TAB(28);"THIS DAY"
170 PRINT"-----";TAB(7);"-----";TAB(15);"-----";TAB(28);"-----"
180 T2=S
190 D2=D
200 FOR I=1 TO M
210   N=1
220   READ D
230   IF D=0 THEN 380
240   IF D<D2 THEN 260
250   N=D-D2
260   D2=D
270   READ R
280   T0=R-T2
290   T1=T0*C
300   PRINTD;TAB(5);R;TAB(15);T0;TAB(28);T1;
310   IF N=1 THEN 330
320   PRINT"*** (";N;" DAYS)";
330   T2=R
340   T3=T3+T1
350   N1=N1+N
360   PRINT
370 NEXT I
380 REM *****
390 REM ***** PROGRAM TERMINATION POINT *****
400 T4=R-S
410 PRINTTAB(15);"-----";TAB(28);"-----"
420 PRINT"  TOTALS";TAB(15);T4;TAB(28);T3
430 PRINT
440 PRINT"*****"
450 PRINT"FOR ";N1;" DAYS"
460 PRINT"AVERAGE DAILY USE WAS:";T4/N1
470 PRINT"AVERAGE DAILY COST WAS:";T3/N1
480 PRINT"*****"
490 PRINT
500 PRINT
510 STOP
520 REM *****
530 REM ***** DATA ENTRY FOLLOWS *****
540 DATA .025
550 DATA 24,1500
560 DATA 25,1590
570 DATA 26,1700
580 DATA 27,1800
590 DATA 28,2200
600 DATA 30,2600
610 DATA 1,3000
620 DATA 2,3100
630 DATA 3,3200
640 DATA 5,3500
650 DATA 0

```

RUN

INITIAL READING WAS 1500 ON DAY 24
COST PER UNIT IS .025

DATE READ	READ	USED	USE COST THIS DAY
25	1590	90	2.25
26	1700	110	2.75
27	1800	100	2.5
28	2200	400	10
30	2600	400	10 *** (2 DAYS)
1	3000	400	10
2	3100	100	2.5
3	3200	100	2.5
5	3500	300	7.5 *** (2 DAYS)
TOTALS		2000	50

FOR 11 DAYS
AVERAGE DAILY USE WAS: 181.818
AVERAGE DAILY COST WAS: 4.54545

BREAK IN 510

MAJOR SYMBOL TABLE - UTILITY BILL ANALYSIS

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	C	COST PER UNIT	I
I	D	INITIAL READING DAY	I
I	S	INITIAL READING	I
I	R	READING	I
I	TO	UNITS USED	I
I	T1	COST PER DAY	I
I	N1	DAY COUNT	I
I	T4	TOTAL USE	I
I	T3	TOTAL COST	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

HEALTH RECORDS

Description

Maintaining family health histories and immunization information is frequently a source of difficulty in many households. With this program to assist you, the task may be simplified.

Functions of the Program

The program reads the various data items provided and prints either all items or only those for the specified individual. Note that the processing of the data for the two printing options has been totally separated for your ease of interpretation and modification, if desired.

Instructions for Use

Data items should be provided for illnesses and immunizations prior to running the program. New items should be added as they occur.

Data Entry

All data is entered using DATA statements.

Data Format

The format for all data is:

Individual's name, Month-Day-Year, Type code, Description

Type codes are specified during data initialization.

Output Description

See examples provided. Two forms of output are available.

```
20 REM      HEALTH RECORD RECORDING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M1=3
50 DIM C0$(3)
60 DIM C1$(4)
70 C0$(1)="IM"
80 C1$(1)="IMMUNIZATION"
90 C0$(2)="V"
100 C1$(2)="VISITED DOCTOR"
110 C0$(3)="IL"
120 C1$(3)="ILLNESSES"
130 C1$(4)=" "
140 M=1000
150 PRINT"SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?"
160 INPUT A$
170 IF A$<>"N" THEN 240
180 PRINT"ENTER THE NAME TO SELECT"
190 INPUT X$
200 PRINT
```

```

210 PRINT
220 PRINT
230 GOTO 500
240 PRINT "WOULD YOU LIKE THE RECORDS IN ENTRY ORDER (E) OR SORTED (S)?"
250 INPUT A1$
260 PRINT
270 PRINT
280 PRINT
290 IF A1$="S" THEN 680
300 REM *****
310 REM **** PRINT ALL ITEMS IN ENTRY ORDER ****
320 PRINT "NAME";TAB(13);"DATE";TAB(40);"DESCRIPTION"
330 PRINT "-----";TAB(10);"-----";TAB(30);
340 PRINT "-----"
350 FOR I = 1 TO M
360   READ N$
370   IF N$="END" THEN 450
380   READ D$,C$,I$
390   FOR K= 1 TO M1
400     IF C$=C0$(K) THEN 420
410     NEXT K
420     PRINTN$;TAB(10);D$;TAB(30);C1$(K);TAB(45);I$
430   NEXT I
440 REM *****
450 REM ***** TERMINATION POINT *****
460 PRINT
470 PRINT
480 STOP
490 REM *****
500 REM **** PRINT OF SELECTED RECORDS ****
510 PRINT "NAME";TAB(13);"DATE";TAB(40);"DESCRIPTION"
520 PRINT "-----";TAB(10);"-----";TAB(30);
530 PRINT "-----"
540 FOR I= 1 TO M
550   READ N$
560   IF N$="END" THEN 450
570   READ D$,C$,I$
580   IF N$<>X$ THEN 650
590   FOR K= 1 TO M1
600     IF C$=C0$(K) THEN 640
610     NEXT K
620     IF J > 1 THEN 640
630     N$= " "
640     PRINTN$;TAB(10);D$;TAB(30);C1$(K);TAB(45);I$
650   NEXT I
660 GOTO 450
670 REM *****
680 REM **** PRINT OF ITEMS IN SELECTED ORDER ****
690 PRINT "NAME";TAB(13);"DATE";TAB(40);"DESCRIPTION"
700 PRINT "-----";TAB(10);"-----";TAB(30);"-----";
710 PRINT "-----"
720 I=1
730 FOR J=1 TO M
740   READ N$
750   IF N$="END" THEN 940
760   READ D$,C$,I$
770   IF J>I THEN 880
780   IF J<I THEN 930
790   S$=N$
800   IF I = 1 THEN 880
810   RESTORE
820   FOR K = 1 TO J
830     READ N$,D$,C$,I$
840     IF S$<>N$ THEN 860

```

```

850      C=C+1
860      NEXT K
870      IF C>1 THEN 940
880      IF N#<>S# THEN 930
890      FOR K = 1 TO M1
900      IF C#=C0#(K) THEN 920
910      NEXT K
920      PRINTS#;TAB(10);D#;TAB(30);C1#(K);TAB(45);I#
930      NEXT J
940      RESTORE
950      C=0
960      IF I > 1 THEN 980
970      M=J-1
980      PRINT
990      I=I+1
1000     IF I<=M THEN 730
1010     GOTO 450
1020     REM *****
1030     REM ****  DATA ENTRIES FOLLOW *****
1040     DATA ED,JUL 1 1967,IM,DPT # 1 SHOT
1050     DATA ED,AUG 1 1967,IM,DPT # 2 SHOT
1060     DATA JIM,SEP 1 1967,IM,TETANUS SHOT
1070     DATA ED,NOV 1 1967,IM,DPT # 3 SHOT
1080     DATA JIM,JAN 1 1968,IL,CHICKEN POX
1090     DATA ED,JAN 14 1968,IL,CHICKEN POX
1100     DATA JEAN,JAN 15 1968,IL,CHICKEN POX
1110     DATA JIM,JUN 1 1968,U,PHYSICAL CHECK
1120     DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? Y
WOULD LIKE THE RECORDS IN ENTRY ORDER (E) OR SORTED (S)?
? E

```

NAME	DATE	DESCRIPTION
ED	JUL 1 1967	IMMUNIZATION DPT # 1 SHOT
ED	AUG 1 1967	IMMUNIZATION DPT # 2 SHOT
JIM	SEP 1 1967	IMMUNIZATION TETANUS SHOT
ED	NOV 1 1967	IMMUNIZATION DPT #3 SHOT
JIM	JAN 1 1968	ILLNESSES CHICKEN POX
ED	JAN 14 1968	ILLNESSES CHICKEN POX
JEAN	JAN 15 1968	ILLNESSES CHICKEN POX
JIM	JUN 1 1968	VISITED DOCTOR PHYSICAL CHECK

BREAK IN 480

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
ENTER THE NAME TO SELECT
? JIM

```

NAME	DATE	DESCRIPTION
JIM	SEP 1 1967	IMMUNIZATION TETANUS SHOT
JIM	JAN 1 1968	ILLNESSES CHICKEN POX
JIM	JUN 1 1968	VISITED DOCTOR PHYSICAL CHECK

BREAK IN 480

MAJOR SYMBOL TABLE - HEALTH RECORDS

I	NAME	.. DESCRIPTION	I
I	CO\$()	.. MASTER CATEGORY CODE ARRAY	I
I	C1\$()	.. MASTER CATEGORY DESCRIPTION ARRAY	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	X\$	.. NAME TO SELECT	I
I	N\$	.. NAME IN	I
I	D\$	.. DATE IN	I
I	I\$	.. DESCRIPTION IN	I
I	C\$	.. CATEGORY CODE IN	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMAT PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

BULLETIN BOARD

Description

A computer never forgets. This program allows the storage of notes and reminders for family members.

Functions of the Program

The program searches the data items and identifies messages and the individual they they are directed to. It prints the messages when requested.

Instructions for Use

Messages must be recorded in DATA statements and deleted as their usefulness passes. Avoid the use of commas (,) in the message text.

Data Entry

All data is entered by means of DATA statements.

Data Format

All messages are entered in the following form:

* , Individual directed to, Message contents, Message initiator

Output Description

See example provided. Message is free-form, without restrictions (except for potential formatting problems caused by commas).

```
20 REM BULLETIN BOARD PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M = 1000
50 REM ***** PROCESSING AREA *****
60 FOR I = 1 TO M
70 READ T$
80 IF T$="END" THEN 250
90 IF T$<>"*" THEN 240
100 READ I$
110 PRINT"MESSAGE FOR ";I$;" SHOULD I PRINT IT ( Y OR N )?"
120 INPUT A$
130 IF A$<>"Y" THEN 70
140 PRINT
150 READ T$
160 IF T$="END" THEN 250
170 IF T$<>"*" THEN 220
180 PRINT
190 PRINT"END OF MESSAGE - I'LL LOOK FOR OTHERS"
200 PRINT
210 GOTO 100
220 PRINT T$
230 GOTO 150
240 NEXT I
250 REM ***** PROGRAM TERMINATION POINT *****
```



```

240 PRINT
270 PRINT
280 STOP
290 REM *****
300 REM **** DATA ENTRIES FOLLOW ****
310 DATA *,JIM,MOM HAS GONE TO THE STORE BE BACK AT 6,GEORGE
320 DATA *,JOAN,FEED THE DOG BEFORE YOU LEAVE THE HOUSE
330 DATA AFTER SCHOOL, HER FOOD IS IN THE PANTRY
340 DATA MOM
350 DATA *,ALL,
360 DATA I HAVE GONE TO THE HARDWARE STORE BE BACK AT 6
370 DATA DAD
380 DATA END

```

```

RUN
MESSAGE FOR JIM SHOULD I PRINT IT ( Y OR N )? Y

```

```

MOM HAS GONE TO THE STORE BE BACK AT 6
GEORGE

```

```

END OF MESSAGE - I'LL LOOK FOR OTHERS

```

```

MESSAGE FOR JOAN SHOULD I PRINT IT ( Y OR N )? N
MESSAGE FOR ALL SHOULD I PRINT IT ( Y OR N )? Y

```

```

I HAVE GONE TO THE HARDWARE STORE BE BACK AT 6
DAD

```

```

BREAK IN 280

```

MAJOR SYMBOL TABLE - BULLETIN BOARD

```

I-----I
I NAME    .. DESCRIPTION                               I
I-----I
I M       .. MAXIMUM NUMBER OF DATA READS          I
I T$      .. CODE/TEXT                               I
I I$      .. NAME OF MESSAGE RECIPIENT              I
I-----I

```

SCHOOL GRADE RECORDING

Description

This program maintains course grade information for the review of academic status between report cards and provides continual progress analysis.

Functions of the Program

This program will print all information entered (in course sequence) or will print the grades associated with a specified course only. Courses and grading devices are initiated prior to reading the grade data items. Note the sample data provided.

Instructions for Use

Determine the number of courses to be monitored, and enter this number and the course names as the first data record. Following this, determine the number of grading devices (tests, homework, etc.) that will be recorded, and enter this information as the second data record. Grades for course activities can then be entered and reviewed as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The first two data records initialize the course and grading device information. Their form is:

Number of courses, Course code, Course name, . . .

Number of devices, Device code, Device name, . . .

For each of these forms the codes and names are repeated for the number of times specified. Course grade information can then be entered in the form:

Course code, Device code, Number score, Letter grade, Date

Output Description

See example provided.

Suggested Enhancements

If your school system is consistent in its grading policies, an ideal enhancement would be the computation of current averages during the semester.

```

20 REM SCHOOL GRADE RECORDING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 DIM C$(20)
50 DIM C1$(20)
60 DIM T$(20)
70 DIM T1$(20)
80 PRINT"SHALL I PRINT ALL ENTRIES ( Y OR N )?"
90 INPUT A$
100 F=1
110 K=1
120 IF A$<>"N" THEN 240
130 PRINT"ENTER THE COURSE TO PRINT "
140 INPUT C3$
150 READ N
160 FOR I=1 TO N
170 READ C$(I),C1$(I)
180 IF C3$=C1$(I) THEN 230
190 NEXT I
200 PRINT"COURSE NOT FOUND"
210 RESTORE
220 GOTO 80
230 K=I
240 PRINT
250 RESTORE
260 PRINT
270 PRINT
280 REM ***** PROCESSING AREA *****
290 READ N
300 FOR I=1 TO N
310 READ C$(I),C1$(I)
320 NEXT I
330 READ N2
340 FOR I=1 TO N2
350 READ T$(I),T1$(I)
360 NEXT I
370 PRINTC1$(K)
380 READ C0$
390 IF C0$="END" THEN 470
400 READ T0$,S,G$,D$
410 IF C0$<>C$(K) THEN 380
420 FOR J=1 TO N2
430 IF T$(J)=T0$ THEN 450
440 NEXT J
450 PRINTTAB(P);S;"(";G$;") ";T1$(J);" - ";D$
460 GOTO 380
470 PRINT
480 RESTORE
490 PRINT
500 K=K+1
510 IF A$<>"Y" THEN 530
520 IF K<=N THEN 280
530 REM ***** PROGRAM TERMINATION POINT *****
540 PRINT
550 PRINT
560 STOP
570 REM *****
580 REM ***** DATA ENTRIES FOLLOW *****
590 DATA S,E,ENGLISH,B,BIOLOGY,H,HISTORY,F,FRENCH,A,ALGEBRA

```

```
600 DATA 3,H,HOMEWORK,T,TEST,G,QUIZ
610 REM **** GRADE DATA FOLLOWS ****
620 DATA E,H,78,C,JUN 8
630 DATA F,T,89,B+,JUN 9
640 DATA E,H,84,B,JUN 11
650 DATA B,T,95,A,JUN 12
660 DATA H,H,,B,JUN 14
670 DATA END
```

```
RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? Y
```

```
ENGLISH
  78 (C) HOMEWORK - JUN 8
  84 (B) HOMEWORK - JUN 11
```

```
BIOLOGY
  95 (A) TEST - JUN 12
```

```
HISTORY
  0 (B) HOMEWORK - JUN 14
```

```
FRENCH
  89 (B+) TEST - JUN 9
```

```
ALGEBRA
```

```
BREAK IN 560
```

```
RUN
SHALL I PRINT ALL ENTRIES ( Y OR N )?
? N
ENTER THE COURSE TO PRINT
? ENGLISH
```

```
ENGLISH
  78 (C) HOMEWORK - JUN 8
  84 (B) HOMEWORK - JUN 11
```

```
BREAK IN 560
```

MAJOR SYMBOL TABLE - SCHOOL GRADE RECORDING

I	NAME	DESCRIPTION	I
I	C\$()	MASTER COURSE CODE ARRAY	I
I	C1\$()	MASTER COURSE NAME ARRAY	I
I	T\$()	MASTER TYPE CODE ARRAY	I
I	T1\$()	MASTER TYPE DESCRIPTION ARRAY	I
I	P	TAB CHARACTER	I
I	K	POINTER TO SELECTED COURSE	I
I	C3\$	COURSE TO PRINT	I
I	N	NUMBER OF COURSES RECORDED	I
I	N2	NUMBER OF TYPES RECORDED	I
I	T0\$	TRANSACTION TYPE IN	I
I	S	TRANSACTION NUMBER GRADE IN	I
I	G\$	TRANSACTION LETTER GRADE IN	I
I	D\$	TRANSACTION DATE IN	I
I	CO\$	TRANSACTION COURSE IN	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMAT PRINT LINES	I
I	DIM	SINGLE DIMENSION ARRAYS	I

ACHIEVEMENT RECORDING

Description

This program monitors progress toward satisfying the requirements necessary to achieve a goal. An ideal application is recording progress toward the completion of Scouting requirements for progression to the next rank.

Functions of the Program

The program determines the number of individuals (or groups) that will be recorded. Following this, the achievement requirements and the individual's status on each item is read, interpreted, and printed.

Instructions for Use

Enter the number of individuals recorded, followed by their names. Achievements and requirements are then determined and entered, followed by a status indicator for each individual.

Data Entry

All data is entered by means of DATA statements.

Data Formats

1. The first data item initializes the individual's names:
Number of individuals recorded, Individual's names,
2. Each achievement (goal) is then identified by the form:
*, Achievement name
3. The requirements for attaining each goal and the status of progress toward that goal is entered in the following form:
Requirement, Status codes, (one for each individual)

Output Description

See example provided.

Suggested Enhancements

The status indicators are ideal candidates for storage on disk or tape-storage devices.

```
20 REM  ACHIEVEMENT RECORDING PROGRAM
30 REM  ***** DATA INITIALIZATION *****
40 DIM N$(10)
50 DIM S$(10)
60 M=10000
70 READ N
```

```

80 FOR I=1 TO N
90 READ N$(I)
100 NEXT I
110 PRINT
120 PRINT
130 PRINT
140 REM ***** PROCESSING AREA *****
150 PRINT"ACHIEVEMENT/REQUIREMENT";
160 FOR K= 1 TO N
170 PRINTTAB((K-1)*7+30);N$(K);
180 NEXT K
190 PRINT
200 PRINT"-----";
210 FOR K=1 TO N
220 PRINTTAB((K-1)*7+30);"-----";
230 NEXT K
240 PRINT
250 FOR I=1 TO M
260 READ T$
270 IF T$="END" THEN 420
280 IF T$<>"*" THEN 340
290 READ A$
300 PRINT
310 PRINTA$
320 PRINT
330 GOTO 410
340 PRINTTAB(3);T$;
350 FOR K = 1 TO N
360 S$(K)=" "
370 READ S$(K)
380 PRINTTAB((K-1)*7+30);"(";S$(K);")";
390 NEXT K
400 PRINT
410 NEXT I
420 REM ***** PROGRAM TERMINATION POINT *****
430 PRINT
440 PRINT
450 STOP
460 REM *****
470 REM ***** DATA ENTRIES FOLLOW *****
480 DATA 5,JIM,CHUCK,JACK,BOB,CARL
490 DATA *,OUTDOORSMAN
500 DATA BUILDING A CAMPFIRE
510 DATA Y,N,Y,N,Y
520 DATA SWIMMING 3 LAPS
530 DATA Y,Y,N,N,N
540 DATA CAMPING OVERNIGHT
550 DATA Y,Y,Y,Y,Y
560 DATA *,CRAFTSMAN
570 DATA BUILDING A BOOKCASE
580 DATA N,N,N,N,N
590 DATA REPAIRING A BENCH
600 DATA Y,N,N,N,N
610 DATA END

```

RUN

ACHIEVEMENT/REQUIREMENT	JIM	CHUCK	JACK	BOB	CARL
OUTDOORSMAN					
BUILDING A CAMPFIRE	(Y)	(N)	(Y)	(N)	(Y)
SWIMMING 3 LAPS	(Y)	(Y)	(N)	(N)	(N)
CAMPING OVERNIGHT	(Y)	(Y)	(Y)	(Y)	(Y)
CRAFTSMAN					
BUILDING A BOOKCASE	(N)	(N)	(N)	(N)	(N)
REPAIRING A BENCH	(Y)	(N)	(N)	(N)	(N)

BREAK IN 450

MAJOR SYMBOL TABLE - ACHIEVEMENT RECORDING

I	NAME	.. DESCRIPTION	I
I	N\$()	.. NAMES OF PEOPLE ENTERED	I
I	S\$	.. COMPLETION CODE INDICATOR ARRAY	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	N	.. NUMBER OF PEOPLE RECORDED	I
I	A\$	.. ACHIEVEMENT	I
I	T\$	.. CODE IN/TEXT	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

CALENDARS

Description

You'll never need to buy another calendar with this program that produces calendars for any month or year in a form that permits writing in comments.

Functions of the Program

The program's functions are primarily directed toward the printing of a nicely formatted calendar. Each major printing function is separated into an independent module for clarity and your extension or modification.

Instructions for Use

Run the program.

Data Entry

Not applicable. The starting month and year, and the number of months to be printed, are entered in response to program requests.

Data Format

Not applicable.

Output Description

See example provided. The number of months printed is determined during the program's execution.

```
20 REM CALENDAR PRODUCING PROGRAM
30 REM ***** DATA, INITIALIZATION *****
40 N=0
50 S0=0
60 L0=0
70 M1=7
80 M2=7
90 M4=1
100 DIM D0$(7)
110 DIM N0(12)
120 DIM M0$(12)
130 READ D0$(1),D0$(2),D0$(3),D0$(4),D0$(5),D0$(6),D0$(7)
140 FOR I =1 TO 12
150   READ M0$(I),N0(I)
160 NEXT I
170 PRINT"ENTER THE FIRST MONTH AND YEAR TO BE PRINTED I.E., JAN,1980"
180 INPUT M$,Y1
190 PRINT"ENTER THE DAY OF THE WEEK THAT THE FIRST MONTH STARTS ON"
200 INPUT D1$
210 PRINT"ENTER THE NUMBER OF MONTHS TO BE PRINTED I.E., 10"
220 INPUT N
230 PRINT"DO YOU WANT A PAGE ALIGNMENT ( Y OR N )?"
240 INPUT A1$
```

```

250 IF A1$<>"Y" THEN 280
260 PRINT"BEFORE THE PRINTING OF EACH MONTH A '?' WILL APPEAR"
270 PRINT"ALIGN TO THE TOP OF PAGE BEFORE PRESSING THE RETURN"
280 FOR I=1TO12
290   IF M$<>M0$(I) THEN 310
300   M4=I
310 NEXT I
320 FOR K = 1TO 7
330 IF D1$<>D0$(K) THEN 350
340   S0=K
350 NEXT K
360 REM *****
370 REM ***** PROCESSING LOOP *****
380 FOR I2=M4 TO M4+N-1
390   N0(2)=28
400   Y=Y1
410   IF INT(Y/4)<>Y/4 THEN 430
420   N0(2)=29
430   I0=0
440   M3=I2
450   IF M3<=12 THEN 510
460   M3=M3-12
470   Y=Y1+1
480   IF INT(Y/4)<>Y/4 THEN 500
490   N0(2)=29
500   GOTO 450
510 IF S0=0 THEN 620
520 GOSUB 690
530 FOR J=1 TO M2
540   GOSUB 790
550   IF N0(M3)<I0 THEN 610
560   GOSUB 850
570   GOSUB 1110
580   GOSUB 1110
590 L0=L0+1
600 NEXT J
610 REM ***** PROGRAM TERMINATION POINT *****
620 IF S0<>8 THEN 640
630 S0=1
640 NEXT I2
650 PRINT
660 PRINT
670 STOP
680 REM ***** SUBROUTINES FOLLOW *****
690 REM ***** PRINTS HEADINGS *****
700 IF A1$<>"Y" THEN 720
710 INPUT X$
720 PRINT
730 PRINT"                                     ";M0$(M3);" ";Y
740 FOR I = 1 TO 7
750 PRINT"      ";D0$(I);" ";
760 NEXT I
770 PRINT
780 RETURN
790 REM ***** PRINTS SCHEDULE OUTLINE *****
800 FOR I=1 TO M1
810 PRINT"I-----";
820 NEXT I
830 PRINT"I"
840 RETURN
850 REM ***** PRINTS CALENDAR DAY LINE *****
860 FOR I = 1 TO M1
870 IF J<>1 THEN 900
880 IF I<>S0 THEN 900

```

```

890 I0=1
900 IF N0(M3) >=I0 THEN 940
910 PRINT"I      ";
920 I0=I0+1
930 GOTO 1060
940 IF I0>9 THEN 1020
950 IF I0<>0 THEN 980
960 PRINT "I      ";
970 GOTO 1060
980 IF I0<10 THEN PRINT"I ";I0;" ";GOTO 990
985 PRINT"I ";I0;" ";
990 I0=I0+1
1000 S1=I+1
1010 GOTO 1060
1020 IF I0<10 THEN PRINT"I ";I0;" ";GOTO 1030
1025 PRINT"I ";I0;" ";
1030 S1=I+1
1040 I0=I0+1
1050 S0=I+1
1060 NEXT I
1070 PRINT"I"
1080 L0=0
1090 S0=S1
1100 RETURN
1110 REM ***** VERTICAL LINES *****
1120 FOR I=1 TO M1
1130 PRINT "I      ";
1140 NEXT I
1150 PRINT"I"
1160 RETURN
1170 REM ***** DATA FOR INITIALIZATION *****
1180 DATA SUN,MUN,TUE,WED,THU,FRI,SAT
1190 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30
1200 DATA JUL,31,AUG,31,SEP,30,OCT,31,NOV,30,DEC,31
1210 REM *****

```

```

RUN
ENTER THE FIRST MONTH AND YEAR TO BE PRINTED I.E., JAN,1980
? DEC,1979
ENTER THE DAY OF THE WEEK THAT THE FIRST MONTH STARTS ON
? SAT
ENTER THE NUMBER OF MONTHS TO BE PRINTED I.E., 10
? 1
DO YOU WANT PAGE ALIGNMENT ( Y OR N )?
? Y
BEFORE THE PRINTING OF EACH MONTH A '?' WILL APPEAR
ALIGN TO THE TOP OF PAGE BEFORE PRESSING THE RETURN
?

```


MULTIPLE PRINTS

Description

This program will assist in the solution of the problem associated with producing multiple copies of a single item.

Functions of the Program

The program accepts text from DATA items and prints the number of copies, and in the form, specified.

Instructions for Use

Format your information, and enter it as data prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format for data entry is free-form. Note that commas will affect formatting.

Output Description

See example provided. The form, spacing, and number of copies is determined by your response to the program's questions.

```
20 REM  MULTIPLE LIST PROGRAM
30 REM  ***** PROCESSING AREA *****
40 PRINT"HOW MANY COPIES OF THE ITEM ARE TO BE PRINTED?"
50 INPUT C
60 PRINT"DO YOU WANT TO ALIGN TO TOP OF PAGE BETWEEN PRINTS (Y OR N) "
70 INPUT A$
80 IF A$<>"Y" THEN 150
90 PRINT"ENTER THE NUMBER OF LINES PER PAGE"
100 INPUT L0
110 PRINT"ENTER THE NUMBER OF SPACES FROM THE TOP FOR PRINTING "
120 INPUT S
130 L=S
140 GOTO 170
150 PRINT"HOW MANY SPACES BETWEEN PRINTS?"
160 INPUT S
170 PRINT"ALIGN PAPER AND PRESS RETURN (I'LL SPACE " & S & " SPACES)"
180 INPUT G$
190 FOR J=1 TO S
200   PRINT
210 NEXT J
220 FOR I=1 TO C
230   READ T$
240   IF T$="END" THEN 280
250   PRINT T$
```

```

260 L=L+1
270 GOTO 230
280 REM ***** END OF A PRINT *****
290 IF A$="Y" THEN 340
300 FOR J=1 TO S
310 PRINT
320 NEXT J
330 GOTO 380
340 FOR J=L TO L0+S
350 PRINT
360 NEXT J
370 L=S
380 RESTORE
390 NEXT I
400 REM *****
410 REM ***** PROGRAM TERMINATION POINT *****
420 PRINT
430 PRINT
440 PRINT
450 STOP
460 REM *****
470 REM ***** TEXT FOR PRINTING FOLLOWS *****
480 DATA " HERE IS THE TEXT THAT IS TO BE PRINTED. I HAVE"
490 DATA "PLACED IT IN QUOTES TO ALLOW THE USE OF COMMAS IN THE"
500 DATA CONTENTS. THE DATA WILL BE ACCEPTED CORRECTLY (AS THIS
510 DATA LINE IS IF I HAVEN'T USED ANY COMMAS. THE TEXT IS TERMINATED
520 DATA "WITH A DATA END CARD, THIS IS THE LAST CARD IN THE PROGRAM."
530 DATA END

```

```

RUN
HOW MANY COPIES OF THE ITEM ARE TO BE PRINTED?
? 2
DO YOU WANT TO ALIGN TO TOP OF PAGE BETWEEN PRINTS (Y OR N)?
? N
HOW MANY SPACES BETWEEN PRINTS
? 5
ALIGN PAPER AND PRESS RETURN (I'LL SPACE 5 SPACES)
?

```

```

HERE IS THE TEXT THAT IS TO BE PRINTED. I HAVE
PLACED IT IN QUOTES TO ALLOW THE USE OF COMMAS IN THE
CONTENTS. THE DATA WILL BE ACCEPTED CORRECTLY (AS THIS
LINE IS IF I HAVEN'T USED ANY COMMAS. THE TEXT IS TERMINATED
WITH A DATA END CARD, THIS IS THE LAST CARD IN THE PROGRAM.

```

BREAK IN 450

```

MAJOR SYMBOL TABLE - MULTIPLE PRINTS
I-----I
I NAME .. DESCRIPTION I
I-----I
I C .. NUMBER OF COPIES TO PRINT I
I L0 .. LINES PER PAGE I
I S .. SPACES BEFORE PRINTING I
I T$ .. TEXT I
I L .. LINE COUNT I
I-----I

```

PAPER ROUTE – BASIC VERSION

Description

Paper route delivery schedule records and collection lists can be a tedious and time-consuming task for the young entrepreneur. This program can provide much needed assistance in these tasks.

Functions of the Program

The program accepts customer and price information from DATA statements and produces either a collection list or a route delivery list. Following the completion of the delivery list, customer and paper counts are produced to assist in ordering for the week.

Instructions for Use

The price of the various delivery options must be supplied along with a customer list, complete with their delivery requirements, prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The following data formats are required:

1. The first data record provides the price of delivery information for collection list use:

Sun cost, Mon cost, . . . , Sat cost, Weekly cost, Monthly cost

2. Customer delivery items are entered using the following form:

Name, House number, Street name, Delivery schedule

The delivery schedule is coded as follows:

1. M is entered for monthly deliveries.
2. W is entered for full weekly deliveries.
3. D is entered to indicate that the customer receives papers only on selected days. It is followed (separated by a comma) by the days that the customer receives delivery (1-Sun, 2-Mon, . . . 7-Sat). See example data provided.

Output Description

See example provided. Two forms of output can be selected:

1. A list for collection purposes.
2. A daily delivery list for the route.

```

20 REM PAPER ROUTE PROGRAM - BASIC
30 REM **** DATA INITIALIZATION ****
40 M=10000
50 DIM P(7)
60 DIM D$(7)
70 DIM C0(7)
80 PRINT
90 PRINT
100 PRINT " TWO OPTIONS ARE AVAILAABLE"
110 PRINTTAB(10);"1. PRINT OF COLLECTION LIST"
120 PRINTTAB(10);"2. PRINT OF ROUTE LIST"
130 PRINT
140 PRINT"ENTER OPTION NUMBER DESIRED"
150 INPUT O
160 REM **** ENTRY OF NUMBER TO PRINT ****
170 READ C0(1),C0(2),C0(3),C0(4),C0(5),C0(6),C0(7),C1,C2
180 IF O<>1 THEN 220
190 IF C2<>0 THEN 220
200 PRINT"ENTER THE NUMBER OF WEEKS FOR MONTHLY CHARGES"
210 INPUT N0
220 REM **** PROCESSING STARTS ****
230 PRINT"POSITION PAPER NOW"
240 INPUT G$
250 FOR I=1 TO M
260 READ N$
270 IF N$="END" THEN 800
280 READ A1$,A2$,T$
290 IF T$="D" THEN 340
300 FOR J=1 TO 7
310 D$(J)=" "
320 NEXT J
330 GOTO 430
340 K=1
350 FOR J=1 TO 7
360 D$(J)="*"
370 NEXT J
380 READ D0
390 IF D0=0 THEN 430
400 D$(D0)=" "
410 K=K+1
420 IF K<=7 THEN 380
430 IF O=1 THEN 560
440 REM *** OPTION 2 ****
450 IF I<>1 THEN 490
460 PRINT " S M T W T F S ";TAB(25);"ADDRESS";TAB(45);"NAME"
470 PRINT"-----";TAB(25);"-----";
480 PRINTTAB(45);"-----"
490 FOR J=1 TO 7
500 IF D$(J)="*" THEN 520
510 P(J)=P(J)+1
520 NEXT J
530 PRINT "(";D$(1);")(";D$(2);")(";D$(3);")(";D$(4);")(";D$(5);
540 PRINT")(";D$(6);")(";D$(7);")";TAB(25);A1$;" ";A2$;TAB(45);N$
550 GOTO 780
560 REM **** OPTION 1 ****
570 IF I<>1 THEN 600
580 PRINT"ADDRESS";TAB(30);"OWED";TAB(42);"NAME"
590 PRINT"-----";TAB(30);"-----";TAB(42);"-----"
600 REM **** COMPUTE BILL ****
610 IF T$<>"M" THEN 670
620 IF C2=0 THEN 650
630 T1=C2
640 GOTO 750
650 T1=C1*N0

```



```

660 GOTO 750
670 IF T$<>"W" THEN 700
680 T1=C1
690 GOTO 750
700 J=1
710 IF D$(J)="*" THEN 730
720 T1=T1+C0(J)
730 J=J+1
740 IF J<=7 THEN 710
750 T2=T2+T1
760 PRINTA1$;" ";A2$;TAB(30);T1;TAB(42);N$
770 T1=0
780 NEXT I
790 REM *****
800 REM ***** TERMINATION POINT *****
810 IF O<>1 THEN 860
820 PRINTTAB(30);"-----"
830 PRINTTAB(16);"TOTAL OWED ";TAB(30);T2
840 PRINT
850 GOTO 990
860 PRINT
870 PRINT"*****"
880 PRINT"CUSTOMER COUNT = ";I-1
890 PRINT
900 PRINT"DAILY COUNT"
910 PRINT"SUNDAY ";P(1)
920 PRINT"MONDAY ";P(2)
930 PRINT"TUESDAY ";P(3)
940 PRINT"WEDNESDAY ";P(4)
950 PRINT"THURSDAY ";P(5)
960 PRINT"FRIDAY ";P(6)
970 PRINT"SATURDAY ";P(7)
980 PRINT"*****"
990 PRINT
1000 STOP
1010 REM *****
1020 REM DATA ENTRIES FOLLOW
1030 REM *****
1040 REM FIRST ENTRY IS COST PER DAY (1-7), COST PER WEEK, PER MONTH
1050 REM IF MONTH=0 THEN MONTH CHARGE WILL BE BASED ON # WEEKS
1060 DATA .50,.10,.10,.10,.10,.10,.10,1.25,4.75
1070 DATA JOHN R. DOE
1080 DATA 555,SMOKEY DRIVE
1090 DATA W
1100 DATA JOSEPH R. WESTONEY
1110 DATA 456,EASERLY ROAD
1120 DATA M
1130 DATA JANE H. SMITH
1140 DATA 1700,SMOKEY DRIVE,M
1150 DATA RICHARD F. JONES
1160 DATA 1213,EASERLY ROAD,D,1,3,0
1170 DATA WILLIAM WILLIAMS
1180 DATA 1234,EASERLY ROAD,D,1,2,3,4,5,6,0
1190 DATA END

```

RUN

- TWO OPTIONS ARE AVAILABLE
1. PRINT OF COLLECTION LIST
 2. PRINT OF ROUTE LIST

ENTER OPTION NUMBER DESIRED

? 1

POSITION PAPER NOW

?

ADDRESS	OWED	NAME
555 SMOKEY DRIVE	1.25	JOHN R. DOE
456 EASERLY ROAD	4.75	JOSEPH R. WESTONBY
1700 SMOKEY DRIVE	4.75	JANE H. SMITH
1213 EASERLY ROAD	.6	RICHARD F. JONES
1234 EASERLY ROAD	1	WILLIAM WILLIAMS
TOTAL OWED		12.35

BREAK IN 1000

RUN

- TWO OPTIONS ARE AVAILABLE
1. PRINT OF COLLECTION LIST
 2. PRINT OF ROUTE LIST

ENTER OPTION NUMBER DESIRED

? 2

POSITION PAPER NOW

?

S M T W T F S	ADDRESS	NAME
() () () () () () ()	555 SMOKEY DRIVE	JOHN R. DOE
() () () () () () ()	456 EASERLY ROAD	JOSEPH R. WESTONBY
() () () () () () ()	1700 SMOKEY DRIVE	JANE H. SMITH
() (*) () (*) (*) (*) (*) (*)	1213 EASERLY ROAD	RICHARD F. JONES
() () () () () () (*)	1234 EASERLY ROAD	WILLIAM WILLIAMS

 CUSTOMER COUNT = 5

DAILY COUNT

SUNDAY 5

MONDAY 4

TUESDAY 5

WEDNESDAY 4

THURSDAY 4

FRIDAY 4

SATURDAY 3

MAJOR SYMBOL TABLE - PAPER ROUTE - BASIC VERSION

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	P()	DAILY PAPER COUNT	I
I	D\$()	DAILY DELIVERY INDICATOR	I
I	C0()	PRICE OF DAILY PAPER	I
I	0	OPTION NUMBER	I
I	C1	PRICE OF WEEKLY DELIVERY	I
I	C2	PRICE FOR MONTHLY DELIVERY	I
I	N\$	CUSTOMER NAME	I
I	A1\$	CUSTOMER HOUSE NUMBER	I
I	A2\$	CUSTOMER STREET ADDRESS	I
I	T\$	FREQUENCY OF DELIVERY	I
I	T1	AMOUNT OWED BY INDIVIDUAL	I
I	T2	TOTAL OWED	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	DIM	SINGLE DIMENSION ARRAYS	I

PAPER ROUTE – EXTENDED VERSION

Description

This program extends the basic version by allowing the carry over of noncollected items from the previous collection period and assists the user by projecting his expenses for the period.

Functions of the Program

The functions of this program are identical to the basic version except that computations have been added to carry over money owed from the previous period. An additional function has been added to accept additional charges/credit items and compute a projected bill for the papers and services received.

Instructions for Use

See the basic version. Additional information must be supplied for the amounts owed from previous periods.

Data Entry

Data is entered using DATA statements. Additional charges and credits are entered at the keyboard.

Data Formats

Data formats are identical to the basic version except that the customer record is of the form:

Name, House number, Street name, Delivery schedule,
Amount owed from the previous period

Output Description

See example provided. The third option prints paper counts and the costs of delivery.

```
20 REM PAPER ROUTE PROGRAM - EXTENDED
30 REM **** DATA INITIALIZATION ****
40 M=10000
50 DIM P(7)
60 DIM T(8)
70 DIM B0(7)
80 DIM D$(7)
90 DIM C0(7)
100 PRINT
110 PRINT
120 PRINT " THREE OPTIONS ARE AVAILAELE"
130 PRINTTAB(10);"1. PRINT OF COLLECTION LIST"
140 PRINTTAB(10);"2. PRINT OF ROUTE LIST"
150 PRINTTAB(10);"3. BILL COMPUTATION"
```

```

160 PRINT
170 PRINT"ENTER OPTION DESIRED"
180 INPUT O
190 REM ***** ENTRY OF NUMBER TO PRINT *****
200 READ C0(1),C0(2),C0(3),C0(4),C0(5),C0(6),C0(7),C1,C2
210 READ B0(1),B0(2),B0(3),B0(4),B0(5),B0(6),B0(7)
220 IF O<>1 THEN 260
230 IF C2 <=0 THEN 260
240 PRINT"ENTER THE NUMBER OF WEEKS FOR MONTHLY CHARGES"
250 INPUT N0
260 REM ***** PROCESSING STARTS *****
270 PRINT"POSITION PAPER NOW"
280 INPUT G$
290 FOR I=1 TO M
300   READ N$
310   IF N$="END" THEN 930
320   READ A1$,A2$,T$
330   IF T$="D" THEN 380
340   FOR J=1 TO 7
350     D$(J)=" "
360   NEXT J
370   GOTO 470
380   K=1
390   FOR J=1 TO 7
400     D$(J)="*"
410   NEXT J
420   READ D0
430   IF D0=0 THEN 470
440   D$(D0)=" "
450   K=K+1
460   IF K<=7 THEN 420
470   READ B
480   IF O=3 THEN 860
490   IF O=1 THEN 620
500 REM ***** OPTION 2 *****
510   IF I<>1 THEN 550
520   PRINT" S M T W T F S";TAB(25);"ADDRESS";TAB(45);"NAME"
530   PRINT"-----";TAB(25);"-----";
540   PRINTTAB(45);"-----"
550   FOR J=1 TO 7
560     IF D$(J)="*" THEN 580
570     P(J)=P(J)+1
580   NEXT J
590   PRINT"("D$(1);")("D$(2);")("D$(3);")("D$(4);")("D$(5);
600   PRINT")("D$(6);")("D$(7);")";TAB(25);A1$;" "A2$;TAB(45);N$
610   GOTO 910
620 REM ***** OPTION 1 *****
630   IF I<>1 THEN 660
640   PRINT"ADDRESS";TAB(30);"OWED";TAB(42);"NAME"
650   PRINT"-----";TAB(30);"-----";TAB(42);"-----"
660 REM ***** COMPUTE BILL
670   IF T$<>"M" THEN 730
680   IF C2=0 THEN 710
690   T1=C2+B
700   GOTO 820
710   T1=C1*N0+B
720   GOTO 820
730   IF T$<>"W" THEN 760
740   T1=C1+B
750   GOTO 820
760   J=1
770   T1=B
780   IF D$(J)="*" THEN 800
790   T1=T1+C0(J)

```

```

800   J=J+1
810   IF J<=7 THEN 780
820   T2=T2+T1
830   PRINTA1$;" ";A2$;TAB(30);T1;TAB(42);N$
840   T1=0
850   GOTO 910
860   REM *** OPTION 3 PREP ***
870   FOR J= 1 TO 7
880     IF D$(J)="*" THEN 900
890     F(J)=F(J)+1
900   NEXT J
910 NEXT I
920 REM *****
930 REM **** TERMINATION POINT ****
940 IF O<>1 THEN 990
950 PRINTTAB(30)"-----"
960 PRINTTAB(16);"TOTAL DWED ";TAB(30);T2
970 PRINT
980 GOTO 1430
990 PRINT
1000 PRINT"*****"
1010 PRINT"CUSTOMER COUNT = ";I-1
1020 PRINT
1030 PRINT"DAILY COUNT"
1040 PRINT"1 SUNDAY      ";P(1)
1050 PRINT"2 MONDAY       ";P(2)
1060 PRINT"3 TUESDAY      ";P(3)
1070 PRINT"4 WEDNESDAY    ";P(4)
1080 PRINT"5 THURSDAY     ";P(5)
1090 PRINT"6 FRIDAY        ";P(6)
1100 PRINT"7 SATURDAY     ";P(7)
1110 PRINT"*****"
1120 IF O<>3 THEN 1430
1130 PRINT"ARE THERE ANY CHANGES TO THESE COUNTS (Y OR N)?"
1140 INPUT A$
1150 IF A$="N" THEN 1220
1160 FOR I=1 TO 7
1170   PRINT"ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY ";I;" ";
1180   C=0
1190   INPUT C
1200   P(I)=P(I)+C
1210 NEXT I
1220 PRINT"ENTER ANY ADDITIONAL CHANGES OR CREDITS TO YOUR BILL"
1230 FOR I=1 TO 10
1240   B1=0
1250   INPUT B1
1260   IF B1=0 THEN 1290
1270   B2=B2+B1
1280 NEXT I
1290 PRINT
1300 PRINT
1310 PRINT"DAY COUNT";TAB(12);"BILL"
1320 PRINT"-----";TAB(12);"-----"
1330 FOR I =1 TO 7
1340   T(I)=P(I)*B0(I)
1350   PRINTI;TAB(5);P(I);TAB(12);T(I)
1360   T(8)=T(8)+T(I)
1370 NEXT I
1380 PRINTTAB(12)"-----"
1390 PRINT"PAPER COSTS ";TAB(12);T(8)
1400 PRINT"OTHER COSTS";TAB(12);B2
1410 PRINTTAB(12);"-----"
1420 PRINT"TOTAL BILL";TAB(12);T(8)+B2
1430 PRINT

```

```

1440 STOP
1450 REM *****
1460 REM ***** DATA ENTRIES FOLLOW *****
1470 *****
1480 REM FIRST ENTRY IS COST PER DAY (1-7), COST PER WEEK, PER MONTH
1490 REM IF MONTH=0 THEN MONTH CHARGE WILL BE BASED ON # WEEKS
1500 DATA .50,.10,.10,.10,.10,.10,.10,1.25,4.75
1510 DATA .35,.07,.07,.07,.07,.07,.07
1520 DATA JOHN R. DOE
1530 DATA 555,SMOKEY DRIVE,W
1540 DATA .11
1550 DATA JOSEPH R. WESTONBY
1560 DATA 456,EASERLY ROAD,M
1570 DATA .12
1580 DATA JANE H. SMITH
1590 DATA 1700,SMOKEY DRIVE,M
1600 DATA .13
1610 DATA RICHARD F. JONES
1620 DATA 1213,EASERLY ROAD,D,1,3,0
1630 DATA .14
1640 DATA WILLIAM WILLIAMS
1650 DATA 1234,EASERLY ROAD,D,1,2,3,4,5,6,0
1660 DATA .15
1670 DATA END

```

RUN

```

THREE OPTIONS ARE AVAILABLE
1. PRINT OF COLLECTION LIST
2. PRINT OF ROUTE LIST
3. BILL COMPUTATION

```

ENTER OPTION NUMBER DESIRED

? 1

POSITION PAPER NOW

?

ADDRESS	OWED	NAME
555 SMOKEY DRIVE	1.36	JOHN R. DOE
456 EASERLY ROAD	4.87	JOSEPH R. WESTONBY
1700 SMOKEY DRIVE	4.88	JANE H. SMITH
1213 EASERLY ROAD	.74	RICHARD F. JONES
1234 EASERLY ROAD	1.15	WILLIAM WILLIAMS
TOTAL OWED	13	

BREAK IN 1440

RUN

```

THREE OPTIONS ARE AVAILABLE
1. PRINT OF COLLECTION LIST
2. PRINT OF ROUTE LIST
3. BILL COMPUTATION

```

ENTER OPTION NUMBER DESIRED

? 2

POSITION PAPER NOW

?

S	M	T	W	T	F	S	ADDRESS	NAME
(	)	(	)	(	)	(	555 SMOKEY DRIVE	JOHN R. DOE
(	)	(	)	(	)	(	456 EASERLY ROAD	JOSEPH R. WESTONBY
(	)	(	)	(	)	(	1700 SMOKEY DRIVE	JANE H. SMITH
(	)	(	)	(	*)	(	1213 EASERLY ROAD	RICHARD F. JONES
(	)	(	)	(	)	(	1234 EASERLY ROAD	WILLIAM WILLIAMS

CUSTOMER COUNT = 5

DAILY COUNT
1 SUNDAY 5
2 MONDAY 4
3 TUESDAY 5
4 WEDNESDAY 4
5 THURSDAY 4
6 FRIDAY 4
7 SATURDAY 3

BREAK IN 1440

RUN

- THREE OPTIONS ARE AVAILABLE
1. PRINT OF COLLECTION LIST
 2. PRINT OF ROUTE LIST
 3. BILL COMPUTATION

ENTER OPTION NUMBER DESIRED
? 3
POSITION PAPER NOW
?

CUSTOMER COUNT = 5

DAILY COUNT
1 SUNDAY 5
2 MONDAY 4
3 TUESDAY 5
4 WEDNESDAY 4
5 THURSDAY 4
6 FRIDAY 4
7 SATURDAY 3

ARE THERE ANY CHANGES TO THESE COUNTS (Y OR N)?
? Y
ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY 1 ? 6
ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY 2 ? 6
ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY 3 ? 6
ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY 4 ? 6
ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY 5 ? 6
ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY 6 ? 6
ENTER CHANGES FROM THE NUMBER SHOWN FOR DAY 7 ? 6
ENTER ANY ADDITIONAL CHARGES OR CREDITS TO YOUR BILL
? 9.99
?

DAY COUNT	BILL	
1	11	3.85
2	10	.7
3	11	.77
4	10	.7
5	10	.7
6	10	.7
7	9	.63

PAPER COSTS	8.05	
OTHER COSTS	9.99	

TOTAL BILL	18.04	

BREAK IN 1440

MAJOR SYMBOL TABLE - PAPER ROUTE -EXTENDED

I	NAME	DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	P()	.. DAILY PAPER COUNT	I
I	D\$()	.. DAILY DELIVERY INDICATORS	I
I	CO()	.. PRICE OF DAYS DELIVERY	I
I	T()	.. TOTAL PRICE OF DAYS PAPER	I
I	BO()	.. COST OF DAILY PAPER	I
I	O	.. OPTION NUMBER	I
I	C1	.. PRICE OF WEEKLY DELIVERY	I
I	C2	.. PRICE FOR MONTHLY DELIVERY	I
I	N\$	.. CUSTOMER NAME	I
I	A1\$	.. CUSTOMER HOUSE NUMBER	I
I	A2\$	.. CUSTOMER STREET	I
I	T\$	.. FREQUENCY OF DELIVERY	I
I	T1	.. INDIVIDUAL BILL	I
I	T2	.. TOTAL TO COLLECT	I
I	B	.. OWED FROM PAST PERIODS	I
I	B1	.. CHARGES CREDITS TO YOUR BILL	I
I	B2	.. TOTAL CHARGES/CREDITS TO YOUR BILL	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMAT PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

WEIGHT CONTROL

Description

Keeping records of weight for reviewing progress and analyzing diets is practiced consistently by weight clinics and health clubs. This program provides the capability to accomplish this effectively in your own home with your microcomputer.

Functions of the Program

The program determines the starting date for analysis and computes results achieved from that day forward. All data items read prior to the starting date are ignored by the program. The printed results provide daily weight information and a summarization of total results after completion of all processing.

Instructions for Use

Weight information should be recorded daily and entered as data prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Format

The data format of the records is:

Month, Day, Weight

Output Description

See example provided.

```
20 REM WEIGHT CONTROL PROGRAM
30 REM *** DATA INITIALIZATION ***
40 M=1000
50 REM ****
60 REM *** PROCESSING AREA ***
70 PRINT "SHALL WE START AT THE BEGINNING (Y OR N)?"
80 INPUT A$
90 IF A$="Y" THEN 240
100 REM **** FINDING START POINT ****
110 PRINT "ENTER THE STARTING MONTH, DAY FOR THE REPORT I.E., JUN, 30"
120 INPUT M1$, D1
130 FOR I=1 TO M
140 READ M$
150 IF M$="END" THEN 220
160 READ D$, S
170 IF M$ <> M1$ THEN 210
180 IF D$ <> D1 THEN 210
190 PRINT
```

```

200     GOTO 290
210 NEXT I
220 PRINT "THAT DATE WAS NOT FOUND"
230 GOTO 520
240 PRINT
250 PRINT
260 PRINT
270 READ M$,D$,S
280 REM ***** PROCESSING ENTRIES TO PRINT *****
290 PRINT "INITIAL WEIGHT WAS ";S;" ON ";D;M$
300 PRINT
310 PRINT "  DATE";TAB(9);"WEIGHT";TAB(16);"+/- "
320 PRINT "  -----";TAB(9);"-----";TAB(16);"-----"
330 T2=S
340 D2=D
350 FOR I=1 TO M
360     N=1
370     READ M$
380     IF M$="END" THEN 510
390     READ D,W
400     IF D<D2 THEN 420
410     N=D-D2
420     D2=D
430     T0=W-T2
440     PRINTD;M$;TAB(9);W;TAB(16);T0;
450     IF N=1 THEN 470
460     PRINT"*** ( ";N;" DAYS)";
470     T2=W
480     N1=N1+N
490     PRINT
500 NEXT I
510 REM *****
520 REM *** PROGRAM TERMINATION POINT ****
530 T4=W-S
540 PRINTTAB(15);"-----"
550 PRINT "  TOTAL ";TAB(15);T4
560 PRINT
570 PRINT"*****"
580 PRINT"FOR ";N1;" DAYS"
590 PRINT"AVERAGE DAILY RESULT WAS ";T4/N1
600 PRINT"*****"
610 PRINT
620 PRINT
630 STOP
640 REM *****
650 REM *** DATA ENTRY FOLLOWS ***
660 DATA JUN,28,234
670 DATA JUN,29,237
680 DATA JUN,30,235
690 DATA JUL,1,231
700 DATA JUL,2,230
710 DATA JUL,3,230
720 DATA JUL,5,228
730 DATA JUL,6,226
740 DATA JUL,8,220
750 DATA JUL,31,199
760 DATA END

```

RUN
SHALL WE START AT THE BEGINNING (Y OR N)?
? Y

INITIAL WEIGHT WAS 234 ON 28 JUN

DATE	WEIGHT	+/-
29 JUN	237	3
30 JUN	235	-2
1 JUL	231	-4
2 JUL	230	-1
3 JUL	230	0
5 JUL	228	-2 *** (2 DAYS)
6 JUL	226	-2
8 JUL	220	-6 *** (2 DAYS)
31 JUL	199	-21 *** (23 DAYS)
TOTAL		-35

FOR 33 DAYS
AVERAGE DAILY RESULT WAS:-1.06061

BREAK IN 630

RUN
SHALL WE START AT THE BEGINNING (Y OR N)?
? N
ENTER THE STARTING MONTH, DAY FOR THE REPORT I.E., JUN,30
? JUL,5

INITIAL WEIGHT WAS 228 ON 5 JUL

DATE	WEIGHT	+/-
6 JUL	226	-2
8 JUL	220	-6 *** (2 DAYS)
31 JUL	199	-21 *** (23 DAYS)
TOTAL		-29

FOR 26 DAYS
AVERAGE DAILY RESULT WAS:-1.11538

BREAK IN 630

MAJOR SYMBOL TABLE - WEIGHT CONTROL

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	M1\$	START MONTH	I
I	D1	START DAY	I
I	M\$	MONTH IN	I
I	D	DAY IN	I
I	S	START WEIGHT IN	I
I	W	WEIGHT IN	I
I	TO	WEIGHT CHANGE	I
I	N	NUMBER OF DAYS MISSED	I
I	T4	TOTAL WEIGHT CHANGE	I
I	N1	TOTAL NUMBER OF DAYS	I
I	T2	WEIGHT PREVIOUS DAY	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

HOUSEHOLD INVENTORY

Description

For a wide variety of uses, including insurance requirements, it is advantageous to have a detailed record of all household property that includes purchase dates and costs. This program provides this information in a convenient form that can offer many supplemental benefits to the home.

Functions of the Program

The program accepts data from DATA statements and prints them in the order requested. The code for each printing option is kept separate to allow clarity and ease of extension.

Instructions for Use

Record information concerning your household items, and enter them as data prior to running the program.

Data Entry

All data is entered using DATA statements.

Data Format

The format of the entries is:

Item name, Location, Purchase date, Cost, Mfr, Serial Number

Output Description

See example provided. Output is presented in two forms as illustrated by the examples. All items can be printed in their original order or sorted by location.

```
20 REM      HOUSEHOLD INVENTORY PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 M0=40
60 PRINT"SHALL I PRINT THE ENTRIES IN ORDER BY LOCATION?"
70 INPUT A$
80 PRINT
90 PRINT
100 PRINT
110 IF A$="Y" THEN 290
120 PRINT"  ITEM";TAB(17);"LOCATION";TAB(27);"PURCHASED";TAB(38);
130 PRINT"COST";TAB(46);"MFR";TAB(53);"SER. NBR"
140 PRINT"-----";TAB(17);"-----";TAB(27);"-----";
150 PRINTTAB(38);"-----";TAB(46);"-----";TAB(53);"-----"
160 REM *****XXXXXXXXXXXXXXXXXXXX
170 REM *** PRINTING IN THEIR PRESENT ORDER ***
180 FOR I=1 TO M
```

```

190 READ I$
200 IF I$="END" THEN 250
210 READ L$,D$,C,M$,S$
220 PRINT I$;TAB(17);L$;TAB(27);D$;TAB(37);C;TAB(45);M$;TAB(54);S$
230 NEXT I
240 REM *****
250 REM *** PROGRAM TERMINATION POINT ***
260 PRINT
270 PRINT
280 STOP
290 REM *****
300 REM *** PROCESSING ORDERING AND PRINT BY LOCATION ***
310 PRINT "LOCATION";TAB(11);"ITEM";TAB(26);"PURCHASED";TAB(37);
320 PRINT "COST";TAB(46);"MFR";TAB(55);"SER. NBR"
330 PRINT "-----";TAB(11);"-----";TAB(26);"-----";
340 PRINTTAB(37);"-----";TAB(46);"-----";TAB(55);"-----"
350 I=1
360 FOR J= 1 TO M
370 READ I$
380 IF I$="END" THEN 540
390 READ L$,D$,C,M$,S$
400 IF J>I THEN 510
410 IF J<I THEN 530
420 X$=L$
430 IF I=1 THEN 510
440 RESTORE
450 FOR K= 1 TO J
460 READ I$,L$,D$,C,M$,S$
470 IF X$<>L$ THEN 490
480 I1=I1+1
490 NEXT K
500 IF I1>1 THEN 540
510 IF L$<>X$ THEN 530
520 PRINTL$;TAB(11);I$;TAB(26);D$;TAB(36);C;TAB(45);M$;TAB(55);S$
530 NEXT J
540 RESTORE
550 I1=0
560 IF I<>1 THEN 580
570 M=M-1
580 PRINT
590 I=I+1
600 IF I<=M THEN 360
610 GOTO 250
620 REM *****
630 REM *** DATA ENTRIES FOLLOW ***
640 DATA TELEVISION,LIVING RM,DEC 1979,333.45,BRAND X,M123456
650 DATA RADIO,BEDROOM 1,JUN 1978,11.23,BRAND Y,345-123
660 DATA DISHWASHER,KITCHEN,JAN 1978,189.45,BRAND Z,12-12-M12
670 DATA WATER SOFTENER,HOUSE 2,JUL 1945,432.56,BRAND Q,129876
680 DATA RANGE,KITCHEN,DEC 1945,234.20,BRAND X,26543
690 DATA END

```

```

RUN
SHALL I PRINT THE ENTRIES IN ORDER BY LOCATION ?
? Y

```

LOCATION	ITEM	PURCHASED	COST	MFR	SER. NBR
LIVING RM	TELEVISION	DEC 1979	333.45	BRAND X	M123456
BEDROOM 1	RADIO	JUN 1978	11.23	BRAND Y	345-1213
KITCHEN	DISHWASHER	JAN 1978	189.45	BRAND Z	12-12-M12
KITCHEN	RANGE	DEC 1945	234.2	BRAND X	26543
HOUSE 2	WATER SOFTENER	JUL 1945	432.56	BRAND Q	129876

BREAK IN 280

RUN
SHALL I PRINT THE ENTRIES IN ORDER BY LOCATION ?
? N

ITEM	LOCATION	PURCHASED	COST	MFR	SER. NBR
TELEVISION	LIVING RM	DEC 1979	333.45	BRAND X	M123456
RADIO	BEDROOM 1	JUN 1978	11.23	BRAND Y	345-1213
DISHWASHER	KITCHEN	JAN 1978	189.45	BRAND Z	12-12-M12
WATER SOFTENER	HOUSE 2	JUL 1945	432.56	BRAND Q	129876
RANGE	KITCHEN	DEC 1945	234.2	BRAND X	26543

BREAK IN 280

MAJOR SYMBOL TABLE - HOUSEHOLD INVENTORY

I	NAME	..	DESCRIPTION	I
I	M	..	MAXIMUM NUMBER OF DATA READS	I
I	I\$	..	ITEM	I
I	L\$	..	ROOM/LOCATION	I
I	D\$	..	PURCHASE DATE	I
I	C	..	COST	I
I	M\$	..	MANUFACTURER	I
I	S\$	..	SERIAL NUMBER	I
I	I	..	COUNTER	I
I	X\$..	ITEM BEING PRINTED	I

FUNCTIONS USED

I	NAME	..	DESCRIPTION	I
I	TAB	..	FORMATS PRINT LINES	I

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MATH PRACTICE — ADDITION

Description

This program provides the ideal device for introducing your children to the computer and building up their arithmetic abilities in addition. The level of difficulty of the problems is redefined during each run to meet changing skill levels.

Functions of the Program

This program produces a series of addition problems with randomly generated values. The complexity of the problems is determined by your choice of the number of digits in them. The individual running the program is given the problems and computes answers independently of the machine. The answers are then asked for by the computer and are compared to the correct answers. The results of the comparisons are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent score are printed. The program prints five problems per line. The results are printed after each group of five problems, and a summary is produced at the end.

Instructions for Use

Run the program and respond to the questions.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

```
20 REM      MATH PRACTICE ADDITION
30 REM ***** DATA INITIALIZATION *****
40 Y=0
50 S=1
60 M=50
70 C0=0
80 W0=0
90 DIM R$(5)
100 DIM A(5)
110 DIM N1(5)
120 DIM N2(5)
130 DIM C(5)
140 PRINT"ENTER THE NUMBER OF DIGITS FOR THE PRACTICE NUMBERS"
150 INPUT S
160 PRINT"HOW MANY ITEMS SHALL I PRINT (5,10,15,20,ETC.)"
170 INPUT M
180 PRINT
190 PRINT
```

```

200 REM **** PROCESSING AREA ****
210 FOR I= 1 TO M/5
220   FOR J=1 TO 5
230     N1(J)=INT(RND(Y)*10↑S)
240     N2(J)=INT(RND(Y)*10↑S)
250   NEXT J
260   FOR J= 1 TO 5
270     PRINT " ";
280     FOR K=1 TO 5
290       IF N1(J)>=10↑(S-K) THEN 330
300       IF (S-K)+N1(J)=0 THEN 330
310       PRINT " ";
320     NEXT K
330     PRINTN1(J);TAB(J*10);
340   NEXT J
350   PRINT
360   FOR J=1 TO 5
370     PRINT "+";
380     FOR K=1 TO 5
390       IF N2(J)>=10↑(S-K) THEN 430
400       IF (S-K)+N2(J)=0 THEN 430
410       PRINT " ";
420     NEXT K
430     PRINTN2(J);TAB(J*10)
440   NEXT J
450   PRINT
460   FOR J=1 TO 5
470     FOR K= 1 TO S+3
480       PRINT "--";
490     NEXT K
500     PRINTTAB(J*10)
510   NEXT J
520   FOR J=1 TO 5
530     PRINT
540   NEXT J
550   PRINT"ENTER THE ANSWERS, WITH A COMMA BETWEEN"
560   INPUT A(1),A(2),A(3),A(4),A(5)
570   REM *** PRINTS GROUP RESULTS ****
580   PRINT
590   PRINT"RESULTS OF THIS GROUP:"
600   PRINT
610   PRINT"ITEM";TAB(7);"MINE";TAB(14);"YOURS";TAB(22);"RESULT"
620   PRINT"-----"
630   FOR J=1 TO 5
640     C(J)=N1(J)+N2(J)
650     IF C(J)<>A(J) THEN 690
660     R$(J)="CORRECT"
670     C0=C0+1
680     GOTO 710
690     R$(J)="*WRONG*"
700     W0=W0+1
710     PRINTJ;" ";TAB(5)C(J);TAB(14)A(J);TAB(22)R$(J)
720   NEXT J
730   PRINT
740   PRINT
750 NEXT I
760 REM **** PROGRAM TERMINATION POINT ****
770 PRINT
780 PRINT"*****"
790 PRINT"   SCORE BOARD   "
800 PRINT"*****"
810 PRINT"QUESTIONS "TAB(15)C0+W0
820 PRINT
830 PRINT"NUMBER CORRECT"TAB(20)C0

```

```

840 PRINT"NUMBER *WRONG*"TAB(20)W0
850 PRINT
860 PRINT"YOUR SCORE IS ";(C0/(C0+W0))*100;"%"
870 PRINT"*****"
880 PRINT
890 STOP

```

```

RUN
ENTER THE NUMBER OF DIGITS FOR THE PRACTICE NUMBERS
? 2
HOW MANY ITEMS SHALL I PRINT (5, 10, 15, 20 ETC.)
? 5

```

```

      5          49          98          72          96
+ 78      + 36      + 90      + 0      + 0
-----

```

```

ENTER THE ANSWERS, (WITH A COMMA BETWEEN
? 83,85,187,72,96

```

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1 .	83	83	CORRECT
2 .	85	85	CORRECT
3 .	188	187	*WRONG*
4 .	72	72	CORRECT
5 .	96	96	CORRECT

```

*****
SCORE BOARD
*****
QUESTIONS      5

```

```

NUMBER CORRECT      4
NUMBER *WRONG*      1

```

```

YOUR SCORE IS 80 %
*****

```

BREAK IN 890

MAJOR SYMBOL TABLE - MATH PRACTICE - ADDITION

I	NAME	DESCRIPTION	I
I	Y	.. SEED FOR RANDOM NUMBER	I
I	S	.. NUMBER OF DIGITS IN PROBLEMS	I
I	M	.. NUMBER OF PROBLEMS	I
I	CO	.. NUMBER CORRECT	I
I	WO	.. NUMBER WRONG	I
I	R\$()	.. RESULTS CORRECT/WRONG	I
I	A()	.. ANSWERS INPUT	I
I	N1()	.. PROBLEM PART 1	I
I	N2()	.. PROBLEM PART 2	I
I	C()	.. CORRECT ANSWERS	I
I	J	.. QUESTION NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	RND	.. GENERATES RANDOM NUMBERS	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

MATH PRACTICE – SUBTRACTION

Description

This program provides an ideal device for introducing your children to the computer and building up their arithmetic abilities in subtraction. The level of difficulty of the problems is redefined during each run to meet changing skill levels.

Functions of the Program

This program produces a series of subtraction problems with randomly generated values. The complexity of the problems is determined by your choice of the number of digits in them. The individual running the program is given the problems and computes answers independently of the machine. The answers are then asked for by the computer and are compared to the correct answers. The results of the comparisons are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent score are printed. The program prints five problems per line. The results are printed after each group of five problems, and a summary is produced at the end.

Instructions for Use

Run the program and respond to the questions.

Data Entry

All data is entered through the keyboard.

Output Description

See examples provided.

```
20 REM    MATH PRACTICE - SUBTRACTION
30 REM  **** DATA INITIALIZATION ****
40 Y=0
50 S=1
60 M=50
70 C0=0
80 W0=0
90 DIM R$(5)
100 DIM A(5)
110 DIM N1(5)
120 DIM N2(5)
130 DIM C(5)
140 PRINT"ENTER THE NUMBER OF DIGITS FOR THE PRACTICE NUMBERS"
150 INPUT S
160 PRINT"HOW MANY ITEMS SHALL I PRINT (5,10,15,20,ETC.)"
170 INPUT M
180 PRINT
190 PRINT
```

```

200 REM **** PROCESSING AREA ****
210 FOR I= 1 TO M/5
220   FOR J=1 TO 5
230     N1(J)=INT(RND(Y)*10↑S)
240     N2(J)=INT(RND(Y)*10↑S)
250   NEXT J
260   FOR J= 1 TO 5
270     PRINT " ";
280     FOR K=1 TO S
290       IF N1(J)>=10↑(S-K) THEN 330
300       IF (S-K)+N1(J)=0 THEN 330
310       PRINT " ";
320     NEXT K
330     PRINTN1(J);TAB(J*10);
340   NEXT J
350   PRINT
360   FOR J=1 TO 5
370     PRINT "-";
380     FOR K=1 TO S
390       IF N2(J)>=10↑(S-K) THEN 430
400       IF (S-K)+N2(J)=0 THEN 430
410       PRINT " ";
420     NEXT K
430     PRINTN2(J);TAB(J*10)
440   NEXT J
450   PRINT
460   FOR J=1 TO 5
470     FOR K= 1 TO S+3
480       PRINT "-";
490     NEXT K
500     PRINTTAB(J*10)
510   NEXT J
520   FOR J=1 TO 5
530     PRINT
540   NEXT J
550   PRINT"ENTER THE ANSWERS, WITH A COMMA BETWEEN"
560   INPUT A(1),A(2),A(3),A(4),A(5)
570   REM *** PRINTS GROUP RESULTS ****
580   PRINT
590   PRINT"RESULTS OF THIS GROUP: "
600   PRINT
610   PRINT"ITEM";TAB(7);"MINE";TAB(14);"YOURS";TAB(22);"RESULT"
620   PRINT"-----"
630   FOR J=1 TO 5
640     C(J)=N1(J)-N2(J)
650     IF C(J)<> A(J) THEN 690
660     R$(J)="CORRECT"
670     C0=C0+1
680     GOTO 710
690     R$(J)="*WRONG*"
700     W0=W0+1
710     PRINTJ;" ";TAB(5)C(J);TAB(14)A(J);TAB(22)R$(J)
720   NEXT J
730   PRINT
740   PRINT
750 NEXT I
760 REM **** PROGRAM TERMINATION POINT ****
770 PRINT
780 PRINT"*****"
790 PRINT"   SCORE BOARD   "
800 PRINT"*****"
810 PRINT"QUESTIONS "TAB(15)C0+W0
820 PRINT
830 PRINT"NUMBER CORRECT"TAB(20)C0

```



```

840 PRINT"NUMBER *WRONG*"TAB(20)W0
850 PRINT
860 PRINT"YOUR SCORE IS ";(C0/(C0+W0))*100;"%"
870 PRINT"*****"
880 PRINT
890 STOP

```

```

RUN
ENTER THE NUMBER OF DIGITS FOR THE PRACTICE NUMBERS
? 3
HOW MANY ITEMS SHALL I PRINT (5, 10, 15, 20 ETC.)
? 5

```

```

  956      896      554      907      868
-  40      - 660      - 816      - 858      - 506
-----

```

```

ENTER THE ANSWERS, (WITH A COMMA BETWEEN
? 916,236,-264,19,99

```

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1 .	916	916	CORRECT
2 .	236	236	CORRECT
3 .	-264	-264	CORRECT
4 .	49	19	*WRONG*
5 .	362	99	*WRONG*

```

*****
SCORE BOARD
*****
QUESTIONS      5

```

```

NUMBER CORRECT      3
NUMBER *WRONG*      2

```

```

YOUR SCORE IS 60 %
*****

```

BREAK IN 890

MAJOR SYMBOL TABLE - MATH PRACTICE - SUBTRACTION

I	NAME	DESCRIPTION	I
I	Y	.. SEED FOR RANDOM NUMBER	I
I	S	.. NUMBER OF DIGITS IN PROBLEMS	I
I	M	.. NUMBER OF PROBLEMS	I
I	CO	.. NUMBER CORRECT	I
I	WO	.. NUMBER WRONG	I
I	R*()	.. RESULTS CORRECT/WRONG	I
I	A()	.. ANSWERS INPUT	I
I	N1()	.. PROBLEM PART 1	I
I	N2()	.. PROBLEM PART 2	I
I	C()	.. CORRECT ANSWERS	I
I	J	.. QUESTION NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	RND	.. GENERATES RANDOM NUMBERS	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

MATH PRACTICE – MULTIPLICATION

Description

This program provides the ideal device for introducing your children to the computer and building up their arithmetic abilities in multiplication. The level of difficulty of the problems is redefined during each run to meet changing skill levels.

Functions of the Program

This program produces a series of multiplication problems with randomly generated values. The complexity of the problems is determined by your choice of the number of digits in them. The individual running the program is given the problems and computes answers independently of the machine. The answers are then asked for by the computer and are compared to the correct answers. The results of the comparisons are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent score are printed. The program prints five problems per line. The results are printed after each group of five problems, and a summary is produced at the end.

Instructions for Use

Run the program and respond to the questions.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

```
20 REM      MATH PRACTICE - MULTIPLICATION
30 REM ***** DATA INITIALIZATION *****
40 Y=0
50 S=1
60 M=50
70 C0=0
80 W0=0
90 DIM R$(5)
100 DIM A(5)
110 DIM N1(5)
120 DIM N2(5)
130 DIM C(5)
140 PRINT"ENTER THE NUMBER OF DIGITS FOR THE PRACTICE NUMBERS"
150 INPUT S
160 PRINT"HOW MANY ITEMS SHALL I PRINT (5,10,15,20,ETC.)"
170 INPUT M
180 PRINT
190 PRINT
```

```

200 REM ***** PROCESSING AREA *****
210 FOR I= 1 TO M/5
220   FOR J=1 TO 5
230     N1(J)=INT(RND(Y)*10↑S)
240     N2(J)=INT(RND(Y)*10↑S)
250   NEXT J
260   FOR J= 1 TO 5
270     PRINT " ";
280     FOR K=1 TO S
290       IF N1(J)>=10↑(S-K) THEN 330
300       IF (S-K)+N1(J)=0 THEN 330
310       PRINT " ";
320     NEXT K
330     PRINTN1(J);TAB(J*10);
340   NEXT J
350   PRINT
360   FOR J=1 TO 5
370     PRINT"X";
380     FOR K=1 TO S
390       IF N2(J)>=10↑(S-K) THEN 430
400       IF (S-K)+N2(J)=0 THEN 430
410       PRINT " ";
420     NEXT K
430     PRINTN2(J);TAB(J*10)
440   NEXT J
450   PRINT
460   FOR J=1 TO 5
470     FOR K= 1 TO S+3
480       PRINT"-";
490     NEXT K
500     PRINTTAB(J*10)
510   NEXT J
520   FOR J=1 TO 5
530     PRINT
540   NEXT J
550   PRINT"ENTER THE ANSWERS, WITH A COMMA BETWEEN"
560   INPUT A(1),A(2),A(3),A(4),A(5)
570   REM *** PRINTS GROUP RESULTS ***
580   PRINT
590   PRINT"RESULTS OF THIS GROUP:"
600   PRINT
610   PRINT"ITEM";TAB(7);"MINE";TAB(14);"YOURS";TAB(22);"RESULT"
620   PRINT"-----"
630   FOR J=1 TO 5
640     C(J)=N1(J)*N2(J)
650     IF C(J) <> A(J) THEN 690
660     R$(J)="CORRECT"
670     C0=C0+1
680     GOTO 710
690     R$(J)="*WRONG*"
700     W0=W0+1
710     PRINTJ;" ";TAB(5)C(J);TAB(14)A(J);TAB(22)R$(J)
720   NEXT J
730   PRINT
740   PRINT
750 NEXT I
760 REM ***** PROGRAM TERMINATION POINT *****
770 PRINT
780 PRINT"*****"
790 PRINT"      SCORE BOARD      "
800 PRINT"*****"
810 PRINT"QUESTIONS "TAB(15)C0+W0
820 PRINT
830 PRINT"NUMBER CORRECT"TAB(20)C0

```

```

840 PRINT "NUMBER *WRONG*" TAB(20)W0
850 PRINT
860 PRINT "YOUR SCORE IS ";(C0/(C0+W0))*100;"%"
870 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
880 PRINT
890 STOP

```

```

RUN
ENTER THE NUMBER OF DIGITS FOR THE PRACTICE NUMBERS
? 2
HOW MANY ITEMS SHALL I PRINT (5, 10, 15, 20 ETC.)
? 5

```

```

      58          86          60          28          13
X 44      X 3      X 77      X 78      X 22
-----

```

```

ENTER THE ANSWERS, (WITH A COMMA BETWEEN
? 2552,258,4620,1111,186

```

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1 .	2552	2552	CORRECT
2 .	258	258	CORRECT
3 .	4620	4620	CORRECT
4 .	2184	1111	*WRONG*
5 .	286	186	*WRONG*

```

*****
SCORE BOARD
*****
QUESTIONS      5

```

```

NUMBER CORRECT      3
NUMBER *WRONG*      2

```

```

YOUR SCORE IS 60 %
*****

```

BREAK IN 890

MAJOR SYMBOL TABLE - MATH PRACTICE - MULTIPLICATION

I	NAME	DESCRIPTION	I
I	Y	.. SEED FOR RANDOM NUMBER	I
I	S	.. NUMBER OF DIGITS IN PROBLEMS	I
I	M	.. NUMBER OF PROBLEMS	I
I	CO	.. NUMBER CORRECT	I
I	WO	.. NUMBER WRONG	I
I	R\$()	.. RESULTS CORRECT/WRONG	I
I	A()	.. ANSWERS INPUT	I
I	N1()	.. PROBLEM PART 1	I
I	N2()	.. PROBLEM PART 2	I
I	C()	.. CORRECT ANSWERS	I
I	J	.. QUESTION NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	RND	.. GENERATES RANDOM NUMBERS	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

MATH PRACTICE – DIVISION

Description

This program provides the ideal device for building a child's arithmetic capability in division. The level of problem difficulty is easily modified to meet changing skill levels (without program modification).

Functions of the Program

This program produces a series of division problems with randomly selected values. The complexity of the problems is determined by the choice of the number of digits in the problems and the number of decimal digits for rounding accuracy in the answer. The individual running the program computes answers independently of the machine and enters the answers when they are requested. These answers are compared to the correct answers, and the results of the comparison are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent correct are printed. The randomly selected problems are printed five per line. The answers are requested, compared, and the results printed after each line of five problems is complete.

Instructions for Use

Run the program and respond to the questions asked by the program.

Output Description

See example provided.

Comments

Because of number storage differences between machines, the answer analysis routine (lines 570-740) should be verified.

```
20 REM MATH PRACTICE DIVISION
30 REM
40 REM ** NOTE ** INDIVIDUAL MACHINE DIFFERENCES IN HANDLING
50 REM   NUMERIC ITEMS MAY CAUSE INCORRECT ANSWER ANALYSIS
60 REM   WHEN DEALING WITH LARGE ANSWERS WITH EXTENDED DECIMAL
70 REM   POSITIONS.
80 REM
90 REM ***** DATA INITIALIZATION *****
100 Y=0
110 S=1
120 M=50
130 C0=0
140 W0=0
150 DIM R$(5)
160 DIM A(5)
```

```

170 DIM N1(5)
180 DIM N2(5)
190 DIM C(5)
200 PRINT"ENTER THE NUMBER OF DIGITS FOR THE PRACTICE DIVISOR"
210 INPUT S
220 PRINT"ENTER THE NUMBER OF DIGITS FOR THE PRACTICE DIVIDEND"
230 INPUT S2
240 PRINT"ENTER THE NUMBER OF DECIMAL POSITIONS FOR THE RESULT"
250 INPUT S3
260 PRINT"HOW MANY ITEMS SHALL I PRINT (5,10,15,20, ETC.)"
270 INPUT M
280 PRINT
290 PRINT
300 REM **** PROCESSING AREA ****
310 FOR I=1 TO M/5
320   FOR J=1 TO 5
330     N1(J)=INT(RND(Y)*10^S)
340     IF N1(J)=0 THEN 330
350     N2(J)=INT(RND(Y)*10^S2)
360   NEXT J
380 B(41)"-----"TAB(54)"-----"
400   PRINT
410   FOR J=1 TO 5
420     PRINTTAB(J*13-(S+10)N1(J);"/"N2(J);
430   NEXT J
440   PRINT
450 PRINT
460 PRINT
470 PRINT
480 PRINT
490   PRINT"ENTER THE ANSWERS WITH A COMMA BETWEEN"
500   INPUT A(1),A(2),A(3),A(4),A(5)
510   REM *** PRINTS GROUP RESULTS ***
520   PRINT
530   PRINT"RESULTS OF THIS GROUP:"
540   PRINT
550   PRINT"ITEM";TAB(7);"MINE"TAB(14)"YOURS"TAB(22)"RESULT"
560   PRINT"-----"
570   FOR J=1 TO 5
580     IF N1(J)=0 THEN 650
590     C(J)=N2(J)/N1(J)
600     C1=INT(C(J)*10^(S3+1))
610     C2=INT(C(J)*10^S3)
620     IF (C1-(C2*10))<5 THEN 640
630     C2=C2+1
640     C2=(C2/(10^S3))
650     IF C2-A(J)>(1/10^(S3+1)) THEN 700
660     IF C2-A(J)<(-1/10^(S3+1)) THEN 700
670     R$(J)="CORRECT"
680     C0=C0+1
690     GOTO 720
700     R$(J)="*WRONG*"
710     W0=W0+1
720     PRINTJ;","TAB(5)C2TAB(14)A(J)TAB(22)R$(J)
730     C2=0
740   NEXT J
750   PRINT
760   PRINT
770 NEXT I
780 REM **** PROGRAM TERMINATION POINT ****
790 PRINT
800 PRINT"*****"

```



```

810 PRINT"          SCORE BOARD"
820 PRINT"XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
830 PRINT"QUESTIONS "TAB(15)C0+W0
840 PRINT
850 PRINT"NUMBER CORRECT "TAB(20)C0
860 PRINT"NUMBER *WRONG*"TAB(20)W0
870 PRINT
880 PRINT"YOUR SCORE IS ";(C0/(C0+W0))*100;"%"
890 PRINT"XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
900 PRINT
910 STOP

```

```

RUN
ENTER THE NUMBER OF DIGITS FOR THE PRACTICE DIVISOR
? 2
ENTER THE NUMBER OF DIGITS FOR THE PRACTICE DIVIDEND
? 3
ENTER THE NUMBER OF DECIMAL POSITIONS FOR THE RESULT
? 1
HOW MANY ITEMS SHALL I PRINT (5, 10, 15, 20 ETC.)
? 5

```

```

-----
21 / 876      85 / 567      36 / 33      87 / 763      20 / 608

```

```

ENTER THE ANSWERS, (WITH A COMMA BETWEEN
? 41.7,6.7,1.0,8.9,30.4

```

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1 .	41.7	41.7	CORRECT
2 .	6.7	6.7	CORRECT
3 .	.9	1	*WRONG*
4 .	8.8	8.9	*WRONG*
5 .	30.4	30.4	CORRECT

```

*****
          SCORE BOARD
*****
QUESTIONS          5

NUMBER CORRECT          3
NUMBER *WRONG*          2

YOUR SCORE IS 60 %
*****

```

BREAK IN 910

MAJOR SYMBOL TABLE -- MATH PRACTICE -- DIVISION

I	NAME	.. DESCRIPTION	I
I	Y	.. SEED FOR RANDOM NUMBER	I
I	S2	.. NUMBER OF DIGITS IN DIVISOR	I
I	S3	.. NUMBER OF DIGITS IN DIVIDEND	I
I	M	.. NUMBER OF PROBLEMS	I
I	CO	.. NUMBER CORRECT	I
I	WO	.. NUMBER WRONG	I
I	R*()	.. RESULTS CORRECT/WRONG	I
I	A()	.. ANSWERS INPUT	I
I	N1()	.. PROBLEM PART 1	I
I	N2()	.. PROBLEM PART 2	I
I	C()	.. CORRECT ANSWERS	I
I	J	.. QUESTION NUMBER	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	RND	.. GENERATES RANDOM NUMBERS	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

TEMPERATURE CONVERSION TUTOR

Description

This program produces a series of temperature conversion problems with randomly selected values. The type of conversion (Fahrenheit to Celsius, or the reverse) is determined by your response to the program question.

Functions of the Program

The individual running the program computes answers independently of the computer and provides the answers to the machine when requested. These answers are compared to the correct answers, and the results of the comparisons are printed immediately. The program randomly selects the values of the items and prints them five per line. At the end of the exercise, the number correct, the number wrong, and the percent correct are printed. After the completion of all problems, a summary of the results is printed.

Instructions for Use

Run the program and answer the questions asked.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

```
20 REM ***** TEMPERATURE CONVERSION TUTORIAL PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 DIM Z(5)
50 DIM A(5)
60 DIM R$(5)
70 DIM C(5)
80 T$="F"
90 C0=0
100 W0=0
110 N=1
120 Y=0
130 F2=-50
140 F1=300
150 C2=-25
160 C1=150
170 PRINT"WHICH EXERCISE WOULD YOU LIKE TO TRY?"
180 PRINT"          CELSIUS TO FAHRENHEIT (C) OR FAHRENHEIT TO CELSIUS (F)"
190 INPUT A$
200 PRINT"HOW MANY PRACTICE EXERCISES SHALL WE TRY 5, 10, 15, ETC"
210 INPUT N
220 REM ***** PROCESSING AREA *****
```

```

230 FOR I= 1 TO N/5
240   IF A#="C" THEN 290
250   T1#="FAHRENHEIT"
260   N1=F1
270   N2=F2
280   GOTO 320
290   T1#="CELSIUS"
300   N1=C1
310   N2=C2
320   PRINT"CONVERT THESE ";T1#;" TEMPERATURES"
330   FOR J= 1 TO 5
340     Z(J)=INT(RND(Y)*(N1-N2+1) + N2)
350     PRINT"      ";Z(J);
360   NEXT J
370   PRINT
380   PRINT
390   PRINT"ENTER THE EQUIVALENT TEMPERATURE (WITH COMMAS BETWEEN)"
400   INPUT A(1),A(2),A(3),A(4),A(5)
410   REM ***** PRINTS RESULTS OF GROUP *****
420   PRINT
430   PRINT"RESULTS OF THIS GROUP: "
440   PRINT
450   PRINT"ITEM      MINE      YOURS      RESULT"
460   PRINT"-----"
470   FOR J=1 TO 5
480     IF A#="C" THEN 510
490     C(J)=INT((Z(J)-32)*5/9+.5)
500     GOTO 520
510     C(J)=INT((Z(J)*9/5)+32.5)
520     IF C(J)<>A(J) THEN 560
530     R#(J)="CORRECT"
540     C0=C0+1
550     GOTO 580
560     R#(J)="*WRONG*"
570     W0=W0+1
580     PRINTJ;"", "TAB(5)C(J)TAB(14)A(J)TAB(22)R#(J)
590   NEXT J
600   PRINT
610   PRINT
620 NEXT I
630 REM ***** PROGRAM TERMINATION POINT *****
640 PRINT
650 PRINT"*****"
660 PRINT"      SCORE BOARD "
670 PRINT"*****"
680 PRINT"QUESTIONS "TAB(15) C0+W0
690 PRINT
700 PRINT"NUMBER CORRECT"TAB(20) C0
710 PRINT"NUMBER *WRONG"TAB(20) W0
720 PRINT
730 PRINT"YOUR SCORE IS ";(C0/(C0+W0))*100;"%"
740 PRINT"*****"
750 PRINT
760 STOP

```

RUN

WHICH EXERCISE WOULD YOU LIKE TO TRY:

CELSIUS TO FAHRENHEIT (C) OR FAHRENHEIT TO CELSIUS (F)

? F

HOW MANY PRACTICE EXERCISES SHALL WE TRY 5, 10, 15, ETC)

? 10

CONVERT THESE FAHRENHEIT TEMPERATURES

47

123

212

82

207

ENTER THE EQUIVALENT TEMPERATURE (WITH COMMAS BETWEEN)
? 8,51,100,28,95

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1 .	8	8	CORRECT
2 .	51	51	CORRECT
3 .	100	100	CORRECT
4 .	28	28	CORRECT
5 .	97	95	*WRONG*

CONVERT THESE FAHRENHEIT TEMPERATURES
-6 83 258 -43 20

ENTER THE EQUIVALENT TEMPERATURE (WITH COMMAS BETWEEN)
? -21,28,126,-42,-7

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1 .	-21	-21	CORRECT
2 .	28	28	CORRECT
3 .	126	126	CORRECT
4 .	-42	-42	CORRECT
5 .	-7	-7	CORRECT

 SCORE BOARD

QUESTIONS 10

NUMBER CORRECT 9
NUMBER *WRONG* 1

YOUR SCORE IS 90 %

BREAK IN 760

MAJOR SYMBOL TABLE - TEMPERATURE CONVERSIONS

I	NAME	DESCRIPTION	I
I	Z()	.. TEMPERATURES TO CONVERT	I
I	A()	.. ANSWERS INPUT	I
I	R\$	.. RESULTS CORRECT/WRONG	I
I	C()	.. CORRECT ANSWERS	I
I	CO	.. NUMBER CORRECT	I
I	WO	.. NUMBER WRONG	I
I	N	.. NUMBER OF PROBLEMS	I
I	Y	.. RANDOM NUMBER SEED	I
I	F2	.. MINIMUM F TEMP	I
I	F1	.. MAXIMUM F TEMP	I
I	C2	.. MINIMUM C TEMP	I
I	C1	.. MAXIMUM C TEMP	I
I	A\$	.. CONVERSION DIRECTION	I
I	N1	.. MAXIMUM RANDOM TEMPERATURE	I
I	N2	.. MINIMUM RANDOM NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	.. CONVERTS NUMBERS TO INTEGERS	I
I	RND	.. GENERATES A RANDOM NUMBER	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

Conversion Programs

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METRIC CONVERSIONS

Description

This program produces conversions between standard measurements and metric units.

Functions of the Program

The program allows conversions of length, area, mass (weight), or liquid volume. The conversion can be either to or from the metric units.

Instructions for Use

Run the program and answer the questions asked.

Output Description

See example provided.

Comments

If additional conversion accuracy is required, modify the DATA statements in lines 1110-1320 to include the more accurate multiplier.

```
20 REM METRIC CONVERSION PROGRAM
30 REM COMPUTATIONS ARE APPROXIMATE CONVERSIONS BASED UPON
40 REM TABLES PROVIDED IN THE SMALL BUSINESS ADMINISTRATION'S
50 REM MANAGEMENT AID NO 214 AND NBS PUBLICATION 304A
60 REM *****
70 REM***** DATA INITIALIZATION *****
80 M=8
90 M1=9
100 M2=6
110 M3=8
120 DIM L1$(8)
130 DIM L2$(8)
140 DIM L3$(8)
150 DIM A1$(9)
160 DIM A2$(9)
170 DIM A3$(9)
180 DIM W1$(6)
190 DIM W2$(6)
200 DIM W3$(6)
210 DIM V1$(8)
220 DIM V2$(8)
230 DIM V3$(8)
240 FOR I = 1 TO M
250 READ L1$(I),L2$(I),L3$(I)
260 NEXT I
270 FOR I = 1 TO M1
280 READ A1$(I),A2$(I),A3$(I)
290 NEXT I
300 FOR I = 1 TO M2
310 READ W1$(I),W2$(I),W3$(I)
320 NEXT I
```

```

330 FOR I = 1 TO M3
340   READ V1$(I),V2$(I),V3(I)
350 NEXT I
360 REM *****
370 REM ***** PROCESSING AREA *****
380 PRINT"DO YOU WISH TO CONVERT LENGTH (L), AREA (A),"
390 PRINT"                                     MASS (M), OR LIQUID VOLUME (V)?"
400 INPUT A1$
410 PRINT
420 PRINT"                                     CONVERSIONS AVAILABLE"
430 PRINT
440 PRINTTAB(9);"NER";TAB(14);" FROM";TAB(39);" TO"
450 PRINTTAB(9);"----";TAB(14);"-----";TAB(39);"-----"
460 IF A1$="L" THEN 520
470 IF A1$="A" THEN 650
480 IF A1$="M" THEN 780
490 IF A1$="V" THEN 910
500 PRINT"ENTRY MUST BE L, A, M, OR V"
510 GOTO 380
520 REM ***** PRINT FOR LENGTH *****
530 FOR I= 1 TO M
540   PRINTTAB(10);I;TAB(15);L1$(I);TAB(40);L2$(I)
550 NEXT I
560 PRINT
570 PRINT"ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)";
580 INPUT N
590 IF N=0 THEN 1040
600 PRINT"ENTER THE NUMBER OF ";L1$(N)
610 INPUT L0
620 L=L0*L3(N)
630 PRINTL0;L1$(N);"=";L;L2$(N)
640 GOTO 560
650 REM ***** PRINT OF AREA *****
660 FOR I = 1 TO M1
670   PRINTTAB(9);I;TAB(14);A1$(I);TAB(39);A2$(I)
680 NEXT I
690 PRINT
700 PRINT"ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)"
710 INPUT N
720 IF N=0 THEN 1050
730 PRINT"ENTER THE NUMBER OF ";A1$(N);
740 INPUT A0
750 A=A0*A3(N)
760 PRINTA0;A1$(N);"=";A;A2$(N)
770 GOTO 690
780 REM ***** PRINT OF MASS *****
790 FOR I = 1 TO M2
800   PRINTTAB(10);I;TAB(15);W1$(I);TAB(40);W2$(I)
810 NEXT I
820 PRINT
830 PRINT"ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)";
840 INPUT N
850 IF N=0 THEN 1050
860 PRINT"ENTER THE NUMBER OF ";W1$(N);
870 INPUT W0
880 W=W0*W3(N)
890 PRINTW0;W1$(N);"=";W;W2$(N)
900 GOTO 820
910 REM ***** PRINT OF LIQUID VOLUME *****
920 FOR I = 1 TO M3
930   PRINTTAB(10);I;TAB(15);V1$(I);TAB(40);V2$(I)
940 NEXT I
950 PRINT
960 PRINT"ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)";

```

```

970 INPUT N
980 IF N=0 THEN 1050
990 PRINT"ENTER THE NUMBER OF ";V1$(N);
1000 INPUT V0
1010 V=V0*V3(N)
1020 PRINTV0;V1$(N);"=";V;V2$(N)
1030 GOTO 950
1040 REM *****
1050 REM ***** PROGRAM TERMINATION POINT *****
1060 PRINT
1070 PRINT
1080 STOP
1090 REM *****
1100 REM ***** DATA FOR INITIALIZATION *****
1110 REM ***** LENGTH *****
1120 DATA INCHES,MILLIMETERS,25.4,FEET,METERS,.3048
1130 DATA YARDS,METERS,.9144,MILES,KILOMETERS,1.6093
1140 DATA MILLIMETERS,INCHES,.0394,METERS,FEET,3.2808
1150 DATA METERS,YARDS,1.0936,KILOMETERS,MILES,.6214
1160 REM ***** AREA
1170 DATA SQ INCHES, SQ CENTIMETERS,6.4516,SQ FEET,SQ METERS,.0929
1180 DATA SQ YARDS,SQ METERS,.8361,SQ MILES,SQ KILOMETERS,2.59
1190 DATA ACRES,SQ HECTOMETERS(HECTARES),.4047
1200 DATA SQ CENTIMETERS,SQ INCHES,.155,SQ METERS,SQ YARDS,1.196
1210 DATA SQ KILOMETERS,SQ MILES,.3861
1220 DATA SQ HECTOMETERS(HECTARES),ACRES,2.471
1230 REM ***** MASS
1240 DATA OUNCES,GRAMS,28.3495,POUNDS,KILOGRAMS,.4536
1250 DATA SHORT TONS,MEGAGRAMS,.9,GRAMS,OUNCES,.0353
1260 DATA KILOGRAMS,POUNDS,2.2046,MEGAGRAMS,SHORT TONS,1.1
1270 REM ***** LIQUID VOLUME
1280 DATA OUNCE,MILLILITERS,30,PINTS,LITERS,.4732
1290 DATA QUARTS,LITERS,.9464,GALLONS,LITERS,3.7856
1300 DATA MILLILITERS,OUNCES,.03,LITERS,PINTS,2.1134
1310 DATA LITERS,QUARTS,1.0567,LITERS,GALLONS,.2642
1320 REM *****

```

RUN

DO YOU WISH TO CONVERT LENGTH (L), AREA (A),
 MASS (M), OR LIQUID VOLUME (V)?

? L

CONVERSIONS AVAILABLE

NBR	FROM	TO
1	INCHES	MILLIMETERS
2	FEET	METERS
3	YARDS	METERS
4	MILES	KILOMETERS
5	MILLIMETERS	INCHES
6	METERS	FEET
7	METERS	YARDS
8	KILOMETERS	MILES

ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)? 3

ENTER THE NUMBER OF YARDS? 10

10 YARDS= 9.144 METERS

ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)? 0

BREAK IN 1080

RUN
 DO YOU WISH TO CONVERT LENGTH (L), AREA (A),
 MASS (M), OR LIQUID VOLUME (V)?
 ? A

CONVERSIONS AVAILABLE

NBR	FROM	TO
1	SQ INCHES	SQ CENTIMETERS
2	SQ FEET	SQ METERS
3	SQ YARDS	SQ METERS
4	SQ MILES	SQ KILOMETERS
5	ACRES	SQ HECTOMETERS(HECTARES)
6	SQ CENTIMETERS	SQ INCHES
7	SQ METERS	SQ YARDS
8	SQ KILOMETERS	SQ MILES
9	SQ HECTOMETERS(HECTARES)	ACRES

ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)? 4
 ENTER THE NUMBER OF SQ MILES? 10
 10 SQ MILES= 25.9 SQ KILOMETERS

ENTER THE NUMBER OF THE CONVERSION TO BE USED (0 WHEN DONE)? 0

BREAK IN 1080

MAJOR SYMBOL TABLE - METRIC CONVERSIONS

I	NAME	DESCRIPTION	I
I	M	.. MAXIMUM ARRAY SIZE - LENGTH	I
I	M1	.. MAXIMUM ARRAY SIZE - AREA	I
I	M2	.. MAXIMUM ARRAY SIZE - WEIGHT	I
I	M3	.. MAXIMUM ARRAY SIZE - VOLUME	I
I	L1\$()	.. STANDARD LENGTH UNIT	I
I	L2\$()	.. METRIC LENGTH UNIT	I
I	L3()	.. CONVERSION FACTOR	I
I	A1\$()	.. STANDARD AREA UNIT	I
I	A2\$()	.. METRIC AREA UNIT	I
I	A3()	.. CONVERSION FACTOR	I
I	W1\$()	.. STANDARD WEIGHT UNIT	I
I	W2\$()	.. METRIC WEIGHT UNIT	I
I	W3()	.. CONVERSION FACTOR	I
I	V1\$()	.. STANDARD VOLUME UNIT	I
I	V2\$()	.. METRIC VOLUME UNIT	I
I	V3()	.. CONVERSION FACTOR	I
I	N	.. CONVERSION OPTION NUMBER	I
I	L0	.. INPUT LENGTH	I
I	L	.. CONVERTED LENGTH	I
I	A0	.. INPUT AREA	I
I	A	.. CONVERTED AREA	I
I	W0	.. INPUT WEIGHT	I
I	W	.. CONVERTED WEIGHT	I
I	V0	.. INPUT VOLUME	I
I	V	.. CONVERTED VOLUME	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

TEMPERATURE CONVERSIONS

Description

This program provides an easy and fast capability to convert between the Celsius and Fahrenheit temperature systems.

Functions of the Program

The direction of the conversion is specified followed by the temperature that is to be converted. The converted temperature (in the other scale) is then printed.

Instructions for Use

Run the program and answer the questions asked.

Output Description

See example provided.

```
20 REM    TEMPERATURE CONVERSION PROGRAM
30 REM **** DATA INITIALIZATION ****
40 F=32
50 C=0
60 REM **** PROCESSING AREA ****
70 PRINT"CELSIUS TO FAHRENHEIT (C) OR FAHRENHEIT TO CELSIUS (F)?"
80 INPUT T$
90 IF T$="C" THEN 150
100 PRINT"ENTER THE FAHRENHEIT TEMPERATURE"
110 INPUT F
120 C=(F-32)*5/9
130 PRINT"THE CELSIUS TEMPERATURE IS: ";C;" DEGREES"
140 GOTO 210
150 PRINT"ENTER THE CELSIUS TEMPERATURE"
160 INPUT C
170 F=(C*9/5)+32
180 PRINT"THE FAHRENHEIT TEMPERATURE IS: ";F;" DEGREES"
190 GOTO 210
200 REM **** PROGRAM TERMINATION POINT ****
210 PRINT
220 PRINT
230 STOP
```

```
RUN
CELSIUS TO FAHRENHEIT (C) OR FAHRENHEIT TO CELSIUS (F)?
? F
ENTER THE FAHRENHEIT TEMPERATURE
? 212
THE CELSIUS TEMPERATURE IS: 100 DEGREES
```

```
BREAK IN 230
```

```
RUN
CELSIUS TO FAHRENHEIT (C) OR FAHRENHEIT TO CELSIUS (F)?
? F
ENTER THE FAHRENHEIT TEMPERATURE
? 0
THE CELSIUS TEMPERATURE IS: -17.7778 DEGREES
```

BREAK IN 230

```
RUN
CELSIUS TO FAHRENHEIT (C) OR FAHRENHEIT TO CELSIUS (F)?
? C
ENTER THE CELSIUS TEMPERATURE
? 0
THE FAHRENHEIT TEMPERATURE IS: 32 DEGREES
```

BREAK IN 230

```
RUN
CELSIUS TO FAHRENHEIT (C) OR FAHRENHEIT TO CELSIUS (F)?
? C
ENTER THE CELSIUS TEMPERATURE
? 100
THE FAHRENHEIT TEMPERATURE IS: 212 DEGREES
```

BREAK IN 230

```
MAJOR SYMBOL TABLE - TEMPERATURE CONVERSIONS
I-----I
I NAME .. DESCRIPTION I
I-----I
I T$ .. CONVERSION TYPE (DIRECTION) I
I F .. FAHRENHEIT TEMPERATURE I
I C .. CELSIUS TEMPERATUE I
I-----I
```

CURRENCY CONVERSIONS

Description

This program converts from dollars to any other of the world's currencies.

Functions of the Program

The exchange rate and currency name is entered along with the starting and ending range of dollars to be converted. The computations are then performed, and the results are printed for the range specified.

Instructions for Use

Run the program and answer the questions asked.

Output Description

See example provided.

```
20 REM CURRENCY CONVERSION PROGRAM
30 REM ***** PROCESSING AREA *****
40 PRINT "ENTER THE EXCHANGE RATE,CURRENCY TYPE (I.E. 2.65,MARKS)"
50 INPUT R,T$
60 PRINT "ENTER THE RANGE OF VALUES (IN $) TO PRINT (I.E. 5,10)"
70 PRINT
80 INPUT S,F
90 PRINT
100 PRINT
110 PRINT
120 PRINT "DOLLARS          "$T$
130 PRINT "-----"
140 FOR I = S TO F
150 PRINT I;TAB(5);".....";I;R
160 NEXT I
170 REM ***** PROGRAM TERMINATION POINT *****
180 PRINT
190 PRINT
200 PRINT
210 STOP
```

```
RUN
ENTER THE EXCHANGE RATE,CURRENCY TYPE (I.E. 2.65,MARKS)
? 2.65,MARKS
ENTER THE RANGE OF VALUES (IN $) TO PRINT (I.E., 5,10)
? 5,10
```

DOLLARS	MARKS
5	13.25
6	15.9
7	18.55
8	21.2
9	23.85
10	26.5

BREAK IN 210

MAJOR SYMBOL TABLE - CURRENCY CONVERSIONS

I	NAME	DESCRIPTION	I
I	R	EXCHANGE RATE	I
I	T\$	CURRENCY NAME	I
I	S	MINIMUM DOLLAR VALUE TO PRINT	I
I	F	MAXIMUM DOLLAR VALUE TO PRINT	I
I	I	DOLLAR VALUE - OUT	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

Recreational Programs

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DICE ROLLER

Description

This program rolls dice and prints the results in dice image format.

Functions of the Program

The program randomly selects the values for the number of dice to be rolled and then prints images of the dice showing their results. Dice images are separate subroutines.

Instructions for Use

Run the program.

Output Description

See examples provided. Dice images are produced for the number of dice requested.

```
10 REM          DICE PROGRAM
20 REM ***** DATA INITIALIZATION *****
30 DIM D(5)
40 Y=0
50 REM ***** LOOP TO ROLL DICE
60 PRINT"ENTER THE NUMBER OF DICE TO ROLL"
70 INPUT D1
80 FOR R1= 1 TO D1
90   GOSUB 140
100 NEXT R1
110 REM ***** PROGRAM TERMINATION POINT *****
120 STOP
130 REM ***** RANDOM ROLL GENERATOR *****
140 LET Z=(RND(Y)*6+1)
150 LET D(R1)=INT(Z)
160 REM ***** DICE PRINT OUT ROUTINE *****
170 IF D(R1)=1 THEN GOSUB 250
180 IF D(R1)=2 THEN GOSUB 310
190 IF D(R1)=3 THEN GOSUB 370
200 IF D(R1)=4 THEN GOSUB 430
210 IF D(R1)=5 THEN GOSUB 490
220 IF D(R1)=6 THEN GOSUB 550
230 RETURN
240 REM ***** DICE IMAGE PRINT *****
250 PRINT"-----"
260 PRINT"I      I"
270 PRINT"I *  I"
280 PRINT"I      I"
290 PRINT"-----"
300 RETURN
310 PRINT"-----"
320 PRINT"I      I"
330 PRINT"I      I"
340 PRINT"I *  I"
350 PRINT"-----"
360 RETURN
```

```

370 PRINT"-----"
380 PRINT"I * I"
390 PRINT"I * I"
400 PRINT"I * I"
410 PRINT"-----"
420 RETURN
430 PRINT"-----"
440 PRINT"I * * I"
450 PRINT"I * I"
460 PRINT"I * * I"
470 PRINT"-----"
480 RETURN
490 PRINT"-----"
500 PRINT"I * * I"
510 PRINT"I * I"
520 PRINT"I * * I"
530 PRINT"-----"
540 RETURN
550 PRINT"-----"
560 PRINT"I * * I"
570 PRINT"I * * I"
580 PRINT"I * * I"
590 PRINT"-----"
600 RETURN

```

```

RUN
ENTER THE NUMBER OF DICE TO ROLL
? 1

```

```

-----
I * * I
I * I
I * * I
-----

```

```

BREAK IN 120

```

```

RUN
ENTER THE NUMBER OF DICE TO ROLL
? 2

```

```

-----
I * I
I * I
I * I
-----

```

```

-----
I * * I
I * I
I * * I
-----

```

```

BREAK IN 120

```

```

RUN
ENTER THE NUMBER OF DICE TO ROLL
? 3

```

```

-----
I * * I
I * * I
I * * I
-----

```

```
-----  
I  * I  
I   I  
I * I  
-----
```

```
I * * I  
I  * I  
I * * I  
-----
```

BREAK IN 120

MAJOR SYMBOL TABLE - DICE ROLLER

```
I-----I  
I NAME  .. DESCRIPTION I  
I-----I  
I D( )  .. RESULTS OF ROLL I  
I Y     .. SEED TO RANDOM NUMBER GENERATOR I  
I D1    .. NUMBER OF DICE TO ROLL I  
I R1    .. ROLL NUMBER I  
I-----I
```

FUNCTIONS USED

```
I-----I  
I NAME  .. DESCRIPTION I  
I-----I  
I INT   .. CONVERTS NUMBER TO INTEGER I  
I RND   .. GENERATES A NUMBER RANDOMLY I  
I GOSUB .. BRANCHES TO AND RETURNS I  
I DIM   .. SINGLE DIMENSION ARRAYS I  
I-----I
```

WORDGAME

Description

The popular word search puzzle is automated by this useful home recreational program. You choose the level of complexity and the words to search for. The words that you enter during the program's execution will be randomly placed in the puzzle for you to find and circle. Don't be surprised if you find them (if you find them!) written in any direction, including backwards. No two puzzles are the same so family members will never tire of this educational and entertaining recreational program.

Functions of the Program

The program determines the size and complexity of the puzzle by your answers to the program's initial questions. It produces a puzzle with random selection of word location and direction. The filling in of blank spaces is also accomplished by the random selection of letters.

Instructions for Use

Run the program and answer the questions asked.

Data Entry

Words to be placed in the puzzle are entered through the keyboard.

Output Description

See example provided. Puzzle size is limited only by the available memory and size of the printing device.

```
10 REM      WORDGAME  PROGRAM
20 PRINT "ENTER THE NUMBER OF COLUMNS IN THE WORD GAME"
30 INPUT C
40 PRINT "ENTER THE NUMBER OF ROWS IN THE GAME"
50 INPUT R
60 PRINT "ENTER THE NUMBER OF WORDS TO FIND"
70 INPUT N
80 REM ***** DATA INITIALIZATION *****
90 DIM L$(C,R)
100 DIM W$(N)
110 DIM A$(26)
120 LET A$(1)="A"
130 A$(2)="B"
140 A$(3)="C"
150 A$(4)="D"
160 A$(5)="E"
170 A$(6)="F"
180 A$(7)="G"
190 A$(8)="H"
200 A$(9)="I"
```

```

210 A$(10)="J"
220 A$(11)="K"
230 A$(12)="L"
240 A$(13)="M"
250 A$(14)="N"
260 A$(15)="O"
270 A$(16)="P"
280 A$(17)="Q"
290 A$(18)="R"
300 A$(19)="S"
310 A$(20)="T"
320 A$(21)="U"
330 A$(22)="V"
340 A$(23)="W"
350 A$(24)="X"
360 A$(25)="Y"
370 A$(26)="Z"
380 Y=0
390 FOR I=1 TO C
400   FOR J=1 TO R
410     L$(I,J)=","
420   NEXT J
430 NEXT I
440 FOR K= 1 TO N
450   PRINT"ENTER WORD"
460   INPUT W$(K)
470   GOSUB 670
480 NEXT K
490 PRINT"I'LL SHOW YOU WHERE I'VE HIDDEN THE WORDS IF YOU SAY PLEASE"
500 INPUT G$
510 IF G$<>"PLEASE" THEN 530
520 GOSUB 600
530 GOSUB 1450
540 PRINT
550 PRINT
560 GOSUB 600
570 REM ***** TERMINATION POINT *****
580 STOP
590 REM *** PUZZLE PRINT ROUTINE ***
600 FOR J=1 TO R
610   FOR I=1 TO C
620     PRINTL$(I,J) " ";
630   NEXT I
640   PRINT
650 NEXT J
660 RETURN
670 REM ***** WORD BREAKDOWN ROUTINE *****
680 REM   SOME LANGUAGE DEPENDENCE IN THIS ROUTINE *****
690 REM
700 L0=LEN(W$(K))
710 REM ***** RANDOM SELECTION OF DIRECTION *****
720 LET T=1
730 IF T<100 THEN 760
740 PRINT"I COULDN'T FIT THE WORDS IN - SORRY TRY AGAIN "
750 GOTO 580
760 F=1
770 F0=1
780 Q=-1
790 IF RND(Y)<=.5 THEN 810
800 LET Q=1
810 Q0=-1
820 IF RND(Y)<=.5 THEN 840
830 Q0=1
840 D=2

```

```

850 IF Q<>1 THEN 870
860 F=0
870 IF Q0<>1 THEN 890
880 F0=0
890 IF RND(Y)<.75 THEN 910
900 D=1
910 IF RND(Y)>.25 THEN 930
920 D=0
930 REM *** RANDOM SELECTION OF START POINT ***
940 C0=C
950 R0=R
960 IF D<>1 THEN 980
970 R0=R-L0
980 IF D<0 THEN 1000
990 C0=C-L0
1000 IF D<=1 THEN 1030
1010 R0=R-L0
1020 C0=C-L0
1030 IF C0<>C THEN 1050
1040 F0=0
1050 IF R0<>R THEN 1070
1060 F=0
1070 Z1=(RND(Y)*R0/100+.01)*100+F*L0
1080 Z2=(RND(Y)*C0/100+.01)*100+F0*L0
1090 X1=INT(Z1)
1100 X2=INT(Z2)
1110 REM **** ENTRY OF WORD IN THE PUZZLE
1120 IF D=1 THEN 1340
1130 IF D=0 THEN 1240
1140 FOR I=1 TO L0
1150 IF L$(X2+(I-1)*R0,X1+(I-1)*Q)="," THEN 1170
1160 IF L$(X2+(I-1)*R0,X1+(I-1)*Q)<>MID$(W$(K),I,1) THEN 710
1170 NEXT I
1180 T=0
1190 FOR I = 1 TO L0-1
1200 LET L$(X2+I*R0,X1+I*Q)=MID$(W$(K),I+1,1)
1210 NEXT I
1220 L$(X2,X1)=MID$(W$(K),1,1)
1230 GOTO 1430
1240 FOR I=1 TO L0
1250 IF L$(X2+(I-1)*R0,X1)="," THEN 1270
1260 IF L$(X2+(I-1)*R0,X1)<>MID$(W$(K),I,1) THEN 710
1270 NEXT I
1280 T=0
1290 FOR I=1 TO L0-1
1300 L$(X2+I*R0,X1)=MID$(W$(K),I+1,1)
1310 NEXT I
1320 L$(X2,X1)=MID$(W$(K),1,1)
1330 GOTO 1430
1340 FOR I=1 TO L0
1350 IF L$(X2,X1+(I-1)*Q)="," THEN 1370
1360 IF L$(X2,X1+(I-1)*Q)<>MID$(W$(K),I,1) THEN 710
1370 NEXT I
1380 T=0
1390 FOR I=1 TO L0-1
1400 L$(X2,X1+I*Q)=MID$(W$(K),I+1,1)
1410 NEXT I
1420 L$(X2,X1)=MID$(W$(K),1,1)
1430 RETURN
1440 REM *** FILL OF REMAINING POSITIONS ***
1450 FOR I = 1 TO C
1460 FOR J=1 TO R
1470 IF L$(I,J)<>"," THEN 1500
1480 Z1=(RND(Y)*.26+.01)*100

```



```

1490     L$(I,J)=A$(INT(Z1))
1500     NEXT J
1510 NEXT I
1520 REM *** PRINT OF THE WORDS TO FIND
1530 PRINT
1540 PRINT"      WORD LIST"
1550 FOR K=1 TO N
1560   PRINTW$(K)
1570 NEXT K
1580 RETURN

```

```

RUN
ENTER THE NUMBER OF COLUMNS IN THE WORD GAME
? 10
ENTER THE NUMBER OF ROWS IN THE GAME
? 10
ENTER THE NUMBER OF WORDS TO FIND
? 3
ENTER WORD
? ADAMS
ENTER WORD
? WILSON
ENTER WORD
? CARTER
I'LL SHOW YOU WHERE I'VE HIDDEN THE WORDS IF YOU SAY PLEASE
? PLEASE

```

```

. . . . .
. . . . .
. . . . .
. C A R T E R . . .
. A . . . . N . . .
. . D . . . O . . .
. . . A . . S . . .
. . . . M . L . . .
. . . . . S I . . .
. . . . . W . . .

```

```

      WORD LIST
ADAMS
WILSON
CARTER

```

```

Y L Y J G O M C Z F
N H P D K V Q T Z W
U P D M B E V B Z X
C C A R T E R N V Z
U A C B Y R N Q G Q
U H D J V J O E D V
D G U A V P S Z Z Y
L Z A H M L L Z N U
W Z L S A S I B B L
J K W W I K W B F X
BREAK IN 580

```

MAJOR SYMBOL TABLE - WORDGAME PRINT

I	NAME	DESCRIPTION	I
I	C	.. NUMBER OF COLUMNS	I
I	R	.. NUMBER OF ROWS	I
I	R	.. NUMBER OF WORDS IN PUZZLE	I
I	L\$()	.. LETTER ARRAY FOR OUTPUT	I
I	W\$()	.. WORDS TO PLACE IN PUZZLE	I
I	A\$()	.. LETTER ARRAY FOR SELECTION	I
I	Y	.. SEED TO RANDOM NUMBER GENERATOR	I
I	LO	.. LENGTH OF WORD	I
I	Q0	.. SETS WORD PLACEMENT DIRECTION	I
I	F	.. SETS WORD PLACEMENT DIRECTION	I
I	Q	.. SETS WORD PLACEMENT DIRECTION	I
I	F0	.. SETS WORD PLACEMENT DIRECTION	I
I	Z1	.. RANDOMLY SELECTED ROW	I
I	Z2	.. RANDOMLY SELECTED COLUMN	I
I	X1	.. INTEGER OF ROW NUMBER	I
I	X2	.. INTEGER OF COLUMN NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	RND	.. GENERATES A NUMBER RANDOMLY	I
I	GOSUB	.. BRANCHES AND RETURNS	I
I	DIM	.. 2 DIMENSION ARRAYS	I
I	NOTE	.. *****	I
I		.. SOME MACHINE DEPENDENCY FOLLOWS	I
I	LEN	.. CALCULATES LENGTH OF WORD	I
I	MID\$	.. SELECTS A LETTER FROM THE MIDDLE OF WORD	I

BINGO

Description

You'll never be without a BINGO game once you've entered this program.

Functions of the Program

BINGO cards are printed for the number of players requested, with randomly selected number placement for recording the numbers called. The program then proceeds to select random numbers to be called and prints these numbers each time the return for the next call is pressed until a "BINGO" is achieved.

Instructions for Use

Run the program, and continue to press the return for the next call until someone BINGOs. Enter the word "BINGO" to terminate the program.

Output Description

See example provided. The number of cards printed is determined by your input to the question. For checking purposes, a list of all numbers called is produced after the BINGO is achieved.

```
20 REM      BINGO PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 Y=0
50 DIM C(10,75)
60 DIM A$(5)
70 READ A$(1),A$(2),A$(3),A$(4),A$(5)
80 DATA "B","I","N","G","O"
90 PRINT"DO YOU WISH TO HAVE CARDS PRINTED?"
100 INPUT G$
110 IF G$="N" THEN 160
120 GOSUB 590
130 PRINT
140 PRINT
150 PRINT
160 PRINT"PRESS THE RETURN FOR THE NEXT CALL - OR - ENTER BINGO"
170 FOR I0=1 TO 75
180   INPUT B$
190   IF B$="BINGO" THEN 220
200   GOSUB 1020
210 NEXT I0
220 PRINT"NUMBERS CALLED"
230 PRINT
240 FOR I=1 TO 75
250   IF C(1,I)=0 THEN 270
260   PRINTA$(I/15+1)" -"I
270 NEXT I
```

```

280 PRINT
290 REM *** TERMINATION POINT ***
300 STOP
310 REM *** LINE PRINTING ROUTINE ***
320 FOR J=1 TO 2
330 PRINT "-----";
340 NEXT J
350 PRINT
360 RETURN
370 REM *** RANDOM DRAW OF CARDS ***
380 Z=(RND(Y)*((H-L)/100)+.01)*100+L
390 X=INT(Z)
400 IF C(K,X) <> 0 THEN 370
410 C(K,X)=C(K,X)+1
420 RETURN
430 REM *** ARRAY CLEARS AND FILLS ***
440 FOR L=1 TO 2
450 FOR K=1 TO 75
460 C(L,K)=0
470 NEXT K
480 NEXT L
490 FOR L=0 TO 60 STEP 15
500 H=L+15
510 FOR T = 1 TO 5
520 FOR K = 1 TO 2
530 GOSUB 370
540 NEXT K
550 NEXT T
560 NEXT L
570 RETURN
580 REM *** CARD PRINT ROUTINE ***
590 PRINT "HOW MANY CARDS SHOULD I PRINT?"
600 INPUT N
610 IF N=0 THEN 1010
620 PRINT "POSITION PAPER NOW"
630 INPUT G$
640 FOR I=1 TO N/2+.5
650 GOSUB 430
660 GOSUB 310
670 FOR J= 1 TO 2
680 PRINT "! "A$(1)" ! ";
690 PRINT A$(2)" ! "A$(3)" ! "A$(4)" ! "A$(5)" ! ";
700 NEXT J
710 PRINT
720 GOSUB 310
730 FOR K=1 TO 5
740 FOR J=1 TO 2
750 S=1
760 FOR L=1 TO 5
770 FOR M=S TO S+14
780 IF C(J,M)=0 THEN 890
790 IF M<10 THEN 860
800 IF K<>3 THEN 840
810 IF L<>3 THEN 840
820 PRINT "!FREE";
830 GOTO 870
840 PRINT "! "M";
850 GOTO 870
860 PRINT "! "M";
870 C(J,M)=0
880 GOTO 900
890 NEXT M
900 S=S+15
910 NEXT L

```

```

920     PRINT " !      " ;
930     NEXT J
940     PRINT
950     GOSUB 310
960     NEXT K
980     PRINT
990     PRINT
1000    NEXT I
1010    RETURN
1020    REM ***** RANDOM DRAWS FOR CALLS *****
1030    Z=(RND(Y)*.75+.01)*100
1040    X=INT(Z)
1050    IF C(1,X)<>0 THEN 1030
1060    C(1,X)=C(1,X)+1
1070    J=INT(X/15)+1
1080    PRINTA$(J)"--"X
1090    PRINT
1100    RETURN

```

```

RUN
DO YOU WISH TO HAVE CARDS PRINTED
? Y
HOW MANY CARDS SHOULD I PRINT
? 2
POSITION PAPER NOW
?

```

```

-----
! B ! I ! N ! G ! O !
-----
! 1 ! 16 ! 31 ! 49 ! 61 !
-----
! 4 ! 25 ! 33 ! 51 ! 64 !
-----
! 5 ! 26 ! FRE ! 55 ! 65 !
-----
! 8 ! 28 ! 42 ! 58 ! 72 !
-----
! 15 ! 30 ! 44 ! 59 ! 74 !
-----

```

```

-----
! B ! I ! N ! G ! O !
-----
! 5 ! 16 ! 34 ! 46 ! 66 !
-----
! 6 ! 24 ! 35 ! 51 ! 67 !
-----
! 8 ! 28 ! FRE ! 54 ! 68 !
-----
! 12 ! 29 ! 38 ! 57 ! 72 !
-----
! 14 ! 30 ! 40 ! 59 ! 74 !
-----

```

```

PRESS THE RETURN FOR THE NEXT CALL - OR - ENTER BINGO
?
G- 55

?
B- 10

?
I- 29

?
O- 66

?
B- 2

?
I- 16

```

?
G- 53

? BINGO
NUMBERS CALLED

B - 2
B - 10
I - 16
I - 29
G - 53
G - 55
O - 66

BREAK IN 300

MAJOR SYMBOL TABLE - BINGO

I	NAME	DESCRIPTION	I
I	C()	NUMBERS CALLED/ON CARDS ARRAY	I
I	A\$()	LETTER CALLED	I
I	IO	COUNTER OF NUMBER OF CALLS	I
I	B\$	BINGO INDICATOR	I
I	Y	SEED TO RANDOM NUMBER GENERATOR	I
I	Z	RANDOM NUMBER GENERATED	I
I	X	INTEGER OF RANDOM NUMBER	I
I	N	NUMBER OF CARDS TO PRINT	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	CONVERTS NUMBER TO INTEGER	I
I	RND	GENERATES A RANDOM NUMBER	I
I	GOSUB	BRANCHES TO AND RETURNS	I
I	DIM	2 DIMENSION ARRAYS	I

DART SCORING

Description

This program acts as scorekeeper for a darts match between individuals or teams.

Functions of the Program

The program allows for variable starting points and player numbers. Total scores are printed and the scores of each player are requested and subtracted from the totals prior to printing.

Instructions for Use

Run the program, and respond to the program's messages.

Data Entry

All data is entered through the keyboard.

Output Description

See the example provided.

```
20 REM    DART SCORING PROGRAM
30 REM *** DATA INITIALIZATION ***
40 M=1000
50 DIM S(10)
60 PRINT"ARE YOU PLAYING AS INDIVIDUALS (I), OR TEAMS (T)?"
70 INPUT A$
80 T$="PLAYER"
90 IF A$="I" THEN 110
100 T$="TEAM"
110 PRINT"HOW MANY ";T$;"S ARE PLAYING?"
120 INPUT N
130 PRINT"WHAT WILL YOU START WITH 301, OR 501?"
140 INPUT S1
150 FOR I=1 TO N
160   S(I)=S1
170 NEXT I
180 PRINT
190 PRINT
200 PRINT
210 REM *****
220 REM *** PROCESSING STARTS ***
230 FOR K=1 TO M
240   PRINT
250   FOR I=1 TO N
260     PRINTTAB(10*(I-1));T$;I;
270   NEXT I
280   PRINT
290   FOR I=1 TO N
300     PRINTTAB(10*(I-1)+1);S(I);
310   NEXT I
320 PRINT
```

```

330 PRINT
340 FOR I=1 TO N
350 PRINT"ENTER THE SCORE FOR PLAYER #";I;
360 INPUT S1
370 IF S1<0 THEN 390
380 IF S(I)-S1 >=0 THEN 410
390 PRINT"ILLEGAL SCORE - TRY AGAIN"
400 GOTO 350
410 S(I)=S(I)-S1
420 IF S(I)=0 THEN 450
430 NEXT I
440 NEXT K
450 PRINT"PLAYER";I;" WINS"
460 PRINT" ARE YOU PLAYING AGAIN?"
470 INPUT A$
480 IF A$="Y" THEN 130
490 REM *****
500 REM ***** PROGRAM TERMINATION POINT *****
510 PRINT
520 PRINT
530 STOP

```

```

RUN
ARE YOU PLAYING AS INDIVIDUALS (I), OR TEAMS (T)?
? T
HOW MANY TEAMS ARE PLAYING?
? 2
WHAT WILL YOU START WITH 301, OR 501?
? 301

```

```

TEAM 1    TEAM 2
  301      301

```

```

ENTER THE SCORE FOR PLAYER # 1 ? 100
ENTER THE SCORE FOR PLAYER # 2 ? 50

```

```

TEAM 1    TEAM 2
  201      251

```

```

ENTER THE SCORE FOR PLAYER # 1 ? 100
ENTER THE SCORE FOR PLAYER # 2 ? 50

```

```

TEAM 1    TEAM 2
  101      201

```

```

ENTER THE SCORE FOR PLAYER # 1 ? 99
ENTER THE SCORE FOR PLAYER # 2 ? 50

```

```

TEAM 1    TEAM 2
    2      151

```

```

ENTER THE SCORE FOR PLAYER # 1 ? 3
ILLEGAL SCORE - TRY AGAIN
ENTER THE SCORE FOR PLAYER # 1 ? 2
PLAYER 1 WINS
ARE YOU PLAYING AGAIN?
? N

```

```

BREAK IN 530

```


MAJOR SYMBOL TABLE - DART SCORING

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF SCORING ITERATIONS	I
I	T\$	.. PLAYER/TEAM HEADING	I
I	N	.. NUMBER PLAYING	I
I	S1	.. STARTING SCORE/SCORE PER PLAY	I
I	S()	.. SCORE ARRAY	I
I	I	.. PLAYER INDICATOR	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

TAROT CARD DEALER

Description

This program shuffles and deals—for the user—the requested number of cards from a Tarot deck.

Functions of the Program

The program initializes data through line number 700. The cards are then shuffled until the user “feels” that they are right. The program then prints the number of cards requested.

Instructions for Use

Run the program and respond to the program’s messages.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided. Cards are printed one at a time or continuously, with the “REVERSED” indicator shown when appropriate.

```
10 REM      TAROT PROGRAM
20 REM *** DATA INITIALIZATION ***
30 DIM C(78)
40 DIM S$(78)
50 DIM N$(78)
60 FOR K0 = 1 TO 5
70     FOR K=1 TO 14
80         K1=(K0-1)*14
90         N$(K1+1)="I"
100        N$(K1+2)="II"
110        N$(K1+3)="III"
120        N$(K1+4)="IV"
130        N$(K1+5)="V"
140        N$(K1+6)="VI"
150        N$(K1+7)="VII"
160        N$(K1+8)="VIII"
170        N$(K1+9)="IX"
180        N$(K1+10)="X"
190        N$(K1+11)="PAGE"
200        N$(K1+12)="KNIGHT"
210        N$(K1+13)="QUEEN"
220        N$(K1+14)="KING"
230     NEXT K
240 NEXT K0
250 N$(67)="XI"
260 N$(68)="XII"
270 N$(69)="XIII"
280 N$(70)="XIV"
290 N$(71)="XV"
300 N$(72)="XVI"
```

```

310 N$(73)="XVII"
320 N$(74)="XVIII"
330 N$(75)="XIX"
340 N$(76)="XX"
350 N$(77)="XXI"
360 N$(78)="0"
370 FOR I = 1 TO 14
380   S$(I)="OF PENTACLES"
390 NEXT I
400 FOR I=15 TO 28
410   S$(I)="OF SWORDS"
420 NEXT I
430 FOR I = 29 TO 42
440   S$(I)="OF CUPS"
450 NEXT I
460 FOR I= 43 TO 56
470   S$(I)="OF WANDS"
480 NEXT I
490 S$(57)="THE MAGICIAN"
500 S$(58)="THE HIGH PRIESTESS"
510 S$(59)="THE EMPRESS"
520 S$(60)="THE EMPEROR"
530 S$(61)="THE HIEROPHANT"
540 S$(62)="THE LOVERS"
550 S$(63)="THE CHARIOT"
560 S$(64)="JUSTICE"
570 S$(65)="THE HERMIT"
580 S$(66)="WHEEL OF FORTUNE"
590 S$(67)="STRENGTH"
600 S$(68)="HANGED MAN"
610 S$(69)="DEATH"
620 S$(70)="TEMPERANCE"
630 S$(71)="THE DEVIL"
640 S$(72)="THE TOWER"
650 S$(73)="THE STAR"
660 S$(74)="THE MOON"
670 S$(75)="THE SUN"
680 S$(76)="JUDGEMENT"
690 S$(77)="THE WORLD"
700 S$(78)="THE FOOL"
710 Y=0
720 PRINT"ENTER THE NUMBER OF CARDS TO BE DEALT"
730 INPUT N
740 REM ***** LOOP TO SELECT CARDS *****
750 FOR J1=1 TO N
760   GOSUB 1070
770 NEXT J1
780 PRINT"THE CARDS HAVE BEEN SHUFFLED. DO YOU WISH A RE-SHUFFLE (Y OR N)"
790 INPUT G$
800 IF G$="N" THEN 860
810 PRINT"THE CARDS ARE BEING RESHUFFLED NOW"
820 FOR I=1 TO 78
830   C(I)=0
840 NEXT I
850 GOTO 750
860 PRINT"DO YOU WISH TO SEE ALL OF THE CARDS AT ONCE (Y OR N)"
870 INPUT G$
880 IF G$="Y" THEN 900

```

```

890 PRINT "PRESS THE RETURN TO TURN OVER THE CARDS"
900 REM *** ROUTINE TO FIND AND PRINT THE CARDS ***
910 FOR J=1 TO N
920   IF G$="N" THEN 940
930   INPUT H$
940   FOR U=1 TO 78
950     IF C(U) <> J THEN 1020
960     M$=" "
970     IF RND(Y) <.5 THEN 990
980     M$="(REVERSED)"
990     PRINT "CARD # "J" IS..... "N$(U) " "S$(U) " "M$
1000    PRINT
1010    GOTO 1030
1020  NEXT U
1030 NEXT J
1040 REM ***** PROGRAM TERMINATION POINT *****
1050 STOP
1060 REM ***** RANDOM CARD SELECTION ROUTINE *****
1070 Z=(RND(Y)*78+1)
1080 X=INT(Z)
1090 IF C(X) <> 0 THEN 1070
1100 C(X)=C(X)+J1
1110 RETURN

```

```

RUN
ENTER THE NUMBER OF CARDS TO BE DEALT
? 10
THE CARDS HAVE BEEN SHUFFLED. DO YOU WISH A RE-SHUFFLE (Y OR N)
? Y
THE CARDS ARE BEING RE-SHUFFLED NOW
THE CARDS HAVE BEEN SHUFFLED. DO YOU WISH A RE-SHUFFLE (Y OR N)
? N
DO YOU WISH TO SEE ALL OF THE CARDS AT ONCE (Y OR N)
? Y
CARD # 1 IS..... XX JUDGEMENT

CARD # 2 IS..... I OF CUPS      (REVERSED)

CARD # 3 IS..... IV THE EMPEROR (REVERSED)

CARD # 4 IS..... VII OF SWORDS  (REVERSED)

CARD # 5 IS..... V OF CUPS

CARD # 6 IS..... II OF CUPS     (REVERSED)

CARD # 7 IS..... IV OF CUPS     (REVERSED)

CARD # 8 IS..... KNIGHT OF SWORDS

CARD # 9 IS..... VII OF PENTACLES (REVERSED)

CARD # 10 IS..... IV OF WANDS

BREAK IN 1050
OK

```

MAJOR SYMBOL TABLE - TAROT CARD DEALER

I	NAME	DESCRIPTION	I
I	C ()	CARD SELECTED INDICATOR ARRAY	I
I	N#()	CARD VALUE ARRAY	I
I	S#()	SUIT ARRAY	I
I	N	NUMBER OF CARDS TO DEAL	I
I	H#	DUMMY TIMING VARIABLE	I
I	M#	INDICATOR IF REVERSED	I
I	Z	GENERATED RANDOM NUMBER	I
I	X	INTEGER OF RANDOM NUMBER	I
I	Y	SEED TO RANDOM NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	CONVERTS NUMBER TO INTEGER	I
I	RND	GENERATES A NUMBER RANDOMLY	I
I	GOSUB	BRANCHES TO AND RETURNS	I
I	DIM	SINGLE DIMENSION ARRAY	I

JOGGER RECORD

Description

The jogger or jogging family will find this a useful addition to the program library. The program produces a graphic display of their jogging activities.

Functions of the Program

The program reads the data items and produces a graphic output representing the distance traveled and either speed or time indicators. The program prints daily results and consequently considers days not recorded in the output.

Instructions for Use

Enter your jogging activity at the time it occurs as DATA statements to the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the data is:

Month-Day-Year (numeric), Miles, Whole hours run,
Additional minutes run

Note the 0 indicator for the end of data.

Output Description

See examples provided. Separate outputs are produced based upon the speed or time option selected. The asterisks, *** (as shown), are used to indicate performance and are scaled to indicate time run or miles/hour. To change the scaling factor, change the values of variables S1 and S2 in the program.

```
10 REM      JOGGER  PROGRAM
20 S1=3
30 N=32000
40 DIM M$(12)
50 DIM D(12)
60 FOR I = 1 TO 12
70   READ M$(I),D(I)
80 NEXT I
90 PRINT"ARE YOU INTERESTED IN SPEED OR TIME"
100 INPUT G$
110 PRINT
120 PRINT"ALIGN FOR PRINTING "
```

```

130 INPUT X$
140 PRINT
150 PRINT"          D I S T A N C E";
160 IF G$="SPEED" THEN 210
170 S2=10
180 PRINTTAB(45)"T I M E"
190 PRINT" DATE          "S1"*/MILE"TAB(42)S2"*/MINUTE"
200 GOTO 250
210 S2=2
220 PRINTTAB(45)"S P E E D"
230 PRINT" DATE          "S1"*/MILE"TAB(43)1/S2"*/MINUTE"
240 PRINT"          MILES"TAB(55)"MIN:SEC"
250 REM *** PROCESSING AREA ***
260 PRINT
270 FOR I= 1 TO N
280   READ C0
290   IF C0=0 THEN 870
300   READ M0
310   READ T0,T1
320   T1=T1+T0*60
330   E1=T1/(60/S2)
340   E2=T1
350   IF G$<>"SPEED" THEN 420
360   E1=T1/S2
370   T2=T1*60
380   M2=(T1*60)/M0
390   M3=INT(M2/60)
400   M4=INT(INT(M2/60-M3)*100)*.6)
410   E1=M3/S2
420   M1=INT(C0/10000)
430   C0=C0-M1*10000
440   D1=INT(C0/100)
450   C0=C0-D1*100
460   Y1=INT(C0)
470   IF Y1/4 =INT(Y1/4) THEN 490
480   D(2)=D(2)+1
490   GOSUB 650
500   PRINTM$(M1)D1 TAB(7)"I";
510   FOR J=1 TO M0*S1
520     PRINT"*";
530   NEXT J
540   PRINTTAB(29)M0;
550   PRINTTAB(35)"I";
560   FOR J=1 TO E1
570     PRINT"*";
580   NEXT J
590   IF G$="SPEED" THEN 620
600   PRINTTAB(55)"("E2")"
610   GOTO 630
620   PRINTTAB(54)M3;";"M4
630   NEXT I
640 REM *** CATCH UP ROUTINE FOR DAYS MISSED ***

```

```

650 IF S9=0 THEN 820
660 IF D1=S9+1 THEN 840
670 IF D1>S9+1 THEN 700
680 D5=D(S8)
690 GOTO 710
700 D5=D1-1
710 IF S9+1 > D5 THEN 750
720 FOR L=S9+1 TO D5
730 PRINTM$(S8)LTAB(7)"I"TAB(35)"I"
740 NEXT L
750 IF M1=S8 THEN 840
760 S9=0
770 S8=S8+1
780 IF S8<13 THEN 660
790 S8=1
800 S7=S7+1
810 GOTO 660
820 S7=Y1
830 S8=M1
840 S9=D1
850 RETURN
860 REM ***** TERMINATION POINT *****
870 STOP
880 REM *****
890 REM DATA FOR INITIALIZATION ***
900 REM *****
910 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30,JUL,31,AUG,31
920 DATA SEP,30,OCT,31,NOV,30,DEC,31
930 REM *** DATA ENTRIES FOLLOW *****
940 DATA 112878,3,1,0
950 DATA 120178,3,1,0
960 DATA 120278,4,1,0
970 DATA 120378,4,0,55
980 DATA 120578,4,1,05
990 DATA 121278,4,1,15
1000 DATA 121378,5,1,30
1010 DATA 121478,6,1,40
1020 DATA 121678,4,0,59
1030 DATA 121778,4,1,0
1040 DATA 121878,3,1,0
1050 DATA 121978,3,1,5
1060 DATA 122078,3,1,5
1070 DATA 122178,3,,59
1080 DATA 122278,3,0,57
1090 DATA 122378,3,0,55
1100 DATA 122578,4,1,10
1110 DATA 122678,3,1,0
1120 DATA 122878,4,0,50
1130 DATA 122978,5,1,10
1140 DATA 123178,1.75,0,30
1150 DATA 010379,1,0,15
1160 DATA 0

```


RUN
 ARE YOU INTERESTED IN SPEED OR TIME
 ? SPEED

ALIGN FOR PRINTING
 ?

DATE	D I S T A N C E		S P E E D	
	4 */MILE	MILES	1 */MINUTE	MIN:SEC
NOV 28	I*****	3	I*****	20 : 0
NOV 29	I		I	
NOV 30	I		I	
DEC 1	I*****	3	I*****	20 : 0
DEC 2	I*****	4	I*****	15 : 0
DEC 3	I*****	4	I*****	13 : 45
DEC 4	I		I	
DEC 5	I*****	4	I*****	16 : 15
DEC 6	I		I	
DEC 7	I		I	
DEC 8	I		I	
DEC 9	I		I	
DEC 10	I		I	
DEC 11	I		I	
DEC 12	I*****	4	I*****	18 : 45
DEC 13	I*****	5	I*****	18 : 0
DEC 14	I*****	6	I*****	16 : 39
DEC 15	I		I	
DEC 16	I*****	4	I*****	14 : 45
DEC 17	I*****	4	I*****	15 : 0
DEC 18	I*****	3	I*****	20 : 0
DEC 19	I*****	3	I*****	21 : 39
DEC 20	I*****	3	I*****	21 : 39
DEC 21	I*****	3	I*****	19 : 39
DEC 22	I*****	3	I*****	19 : 0
DEC 23	I*****	3	I*****	18 : 19
DEC 24	I		I	
DEC 25	I*****	4	I*****	17 : 30
DEC 26	I*****	3	I*****	20 : 0
DEC 27	I		I	
DEC 28	I*****	4	I*****	12 : 30
DEC 29	I*****	5	I*****	14 : 0
DEC 30	I		I	
DEC 31	I*****	1.75	I*****	17 : 8
JAN 1	I		I	
JAN 2	I		I	
JAN 3	I****	1	I*****	15 : 0

BREAK IN 870

RUN
 ARE YOU INTERESTED IN SPEED OR TIME
 ? TIME

ALIGN FOR PRINTING
 ?

DATE	D I S T A N C E 4 */MILE	T I M E 12 */HOUR
NOV 28 I*****	3	I***** (60)
NOV 29 I		I
NOV 30 I		I
DEC 1 I*****	3	I***** (60)
DEC 2 I*****	4	I***** (60)
DEC 3 I*****	4	I***** (55)
DEC 4 I		I
DEC 5 I*****	4	I***** (65)
DEC 6 I		I
DEC 7 I		I
DEC 8 I		I
DEC 9 I		I
DEC 10 I		I
DEC 11 I		I
DEC 12 I*****	4	I***** (75)
DEC 13 I*****	5	I***** (90)
DEC 14 I*****	6	I***** (100)
DEC 15 I		I
DEC 16 I*****	4	I***** (59)
DEC 17 I*****	4	I***** (60)
DEC 18 I*****	3	I***** (60)
DEC 19 I*****	3	I***** (65)
DEC 20 I*****	3	I***** (65)
DEC 21 I*****	3	I***** (59)
DEC 22 I*****	3	I***** (57)
DEC 23 I*****	3	I***** (55)
DEC 24 I		I
DEC 25 I*****	4	I***** (70)
DEC 26 I*****	3	I***** (60)
DEC 27 I		I
DEC 28 I*****	4	I***** (50)
DEC 29 I*****	5	I***** (70)
DEC 30 I		I
DEC 31 I*****	1.75	I***** (30)
JAN 1 I		I
JAN 2 I		I
JAN 3 I****	1	I*** (15)

BREAK IN 870

MAJOR SYMBOL TABLE - JOGGER RECORD

I	NAME	DESCRIPTION	I
I	S1	.. SPEED SCALING FACTOR	I
I	S2	.. TIME SCALING FACTOR	I
I	N	.. MAXIMUM NUMBER OF DATA READS	I
I	M\$()	.. MONTH NAME ARRAY	I
I	D()	.. DAYS IN MONTH ARRAY	I
I	CO	.. DATE	I
I	MO	.. MILES RUN	I
I	TO	.. HOURS RUN	I
I	T1	.. MINUTES RUN	I
I	E1	.. NUMBER OF * TO PRINT	I
I	E2	.. DISTANCE OUT	I
I	M3	.. HOURS OUT	I
I	M4	.. MINUTES OUT	I
I	M1	.. MONTH	I
I	D1	.. DAY	I
I	Y1	.. YEAR	I
I	D5	.. CATCHUP DAYS FOR THOSE MISSED	I
I	S7	.. YEAR NUMBER	I
I	S8	.. MONTH	I
I	S9	.. DAY	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINE	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	GOSUB	.. BRANCHES AND RETURNS	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

Hobbyist's Diaries

<i>Golf</i>	302
<i>Fishing</i>	306
<i>Photography</i>	310
<i>Greenhouse</i>	314
<i>CB Radio</i>	318
<i>Bowling</i>	322
<i>General Purpose Diary</i>	326

GOLF

Description

This program produces a diary for the golf enthusiast. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted print of all, or selected, items from the data records. Supplemental items can be defined by indicating the number of items and their names in the first data record. Supplemental items can then be read and printed in the same way as the standard items.

Instructions for Use

Prior to running the program, define the supplemental data items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered using DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles:

Number of items, Title 1, Title 2, etc.

Diary entries are then recorded in the following form:

Date, Course name, Score, Supplemental value 1, value 2, etc.

Output Description

See example provided. Print options allow all or selected items to be printed.

```
20 REM      GOLFER'S DIARY PROGRAM
30 REM *** DATA INITIALIZATION ***
40 K1=0
50 M=1000
60 DIM S$(10)
70 DIM H$(10)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110   READ H$(K)
120 NEXT K
130 PRINT"SHALL I PRINT ALL OF THE ITEMS (Y OR N)?"
140 INPUT A$
150 IF A$="Y" THEN 330
160 PRINT"SHALL WE SELECT BASED UPON COURSE (C), OR OTHER (O)?"
```

```

170 INPUT X2$
180 IF X2$="C" THEN 290
190 PRINT"ENTER THE ITEM HEADING TO SEARCH FOR"
200 INPUT X1$
210 IF N=0 THEN 270
220 FOR K = 1 TO N
230   IF X1$<>H$(K) THEN 250
240   K1=K
250 NEXT K
260 IF K1<>0 THEN 300
270 PRINT"ITEM HEADING NOT FOUND - TRY AGAIN "
280 GOTO 130
290 X1$="COURSE"
300 PRINT"ENTER THE VALUE OF ";X1$;" TO PRINT"
310 INPUT X$
320 REM *** HEADINGS ***
330 PRINT
340 PRINT
350 PRINT
360 PRINT"DATE";TAB(12);"COURSE";TAB(30)"SCORE";
370 IF N=0 THEN 410
380 FOR K = 1 TO N
390   PRINTTAB((K-1)*10+36);H$(K);
400 NEXT K
410 PRINT
420 PRINT"-----";TAB(10);"-----";TAB(30);"-----";
430 IF N=0 THEN 470
440 FOR K=1 TO N
450   PRINTTAB((K-1)*10+36);"-----";
460 NEXT K
470 PRINT
480 IF A$="N" THEN 720
490 REM *****
500 REM *** PRINT OF ALL ITEMS ***
510 FOR I = 1 TO M
520   READ D$
530   IF D$="END" THEN 670
540   READ C$,S
550   IF N=0 THEN 590
560   FOR K = 1 TO N
570     READ S$(K)
580   NEXT K
590   PRINTD$;TAB(10);C$;TAB(30);S;
600 IF N=0 THEN 640
610   FOR K=1 TO N
620     PRINTTAB((K-1)*10+36);S$(K);
630   NEXT K
640   PRINT
650 NEXT I
660 REM ****
670 REM *** PROGRAM TERMINATION POINT ***
680 PRINT
690 PRINT
700 STOP
710 REM *****
720 REM *** PRINT SELECTED ITEMS ****
730 FOR I=1 TO M
740   READ D$
750   IF D$="END" THEN 830
760   READ C$,S
770   FOR K = 1 TO N
780     IF N=0 THEN 800
790     READ S$(K)
800     IF K1<>0 THEN 830

```

```

810      X3#=C#
820      GOTO 850
830      IF K<>K1 THEN 850
840      X3#=S$(K)
850      NEXT K
860      IF X#<>X3# THEN 930
870      PRINTD$;TAB(10);C$;TAB(30);S#
880      IF N=0 THEN 920
890      FOR J= 1 TO N
900          PRINTTAB((J-1)*10+36);S$(J);
910      NEXT J
920      PRINT
930      NEXT I
940      GOTO 670
950      REM ****
960      REM **** DATA FOR INITIALIZATION ****
970      REM **** ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS
980      DATA 2,WIND,TEMP
990      REM ****
1000     DATA JUL 1,COURSE 2,77,HI,HI
1010     DATA JUL 3,COURSE 1,79,LO,LO
1020     DATA JUL 6,COURSE 3,78,MED,MED
1030     DATA JUL 8,COURSE 1,66,LO,LO
1040     DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? Y

```

DATE	COURSE	SCORE	WIND	TEMP
JUL 1	COURSE 2	77	HI	HI
JUL 3	COURSE 1	79	LO	LO
JUL 6	COURSE 3	78	MED	MED
JUL 8	COURSE 1	66	LO	LO

```

BREAK IN 700

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
SHALL WE SELECT BASED UPON COURSE (C), OR OTHER (O)
? O
ENTER THE ITEM HEADING TO SEARCH FOR
? WIND
ENTER THE VALUE OF WIND TO PRINT
? LO

```

DATE	COURSE	SCORE	WIND	TEMP
JUL 3	COURSE 1	79	LO	LO
JUL 8	COURSE 1	66	LO	LO

BREAK IN 700

MAJOR SYMBOL TABLE - GOLF

I	NAME	DESCRIPTION	I
I	K1	.. COUNT INDICATOR	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	S\$()	.. SUPPLEMENTAL ITEM TRANSACTION VALUE	I
I	H\$()	.. SUPPLEMENTAL ITEM HEADING NAME	I
I	N	.. NUMBER OF SUPPLEMENTAL ITEMS	I
I	D\$	.. TRANSACTION DATE	I
I	C\$	.. TRANSACTION COURSE	I
I	S	.. TRANSACTION SCORE	I
I	X2\$	.. STANDARD ITEM TO SELECT	I
I	X1\$	.. SUPPLEMENTAL HEADING TO SELECT	I
I	X\$	.. VALUE OF ITEM TO SELECT	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

FISHING

Description

This program produces a diary for the fisherman. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, items from the data records. Supplemental items can be defined by indicating the number of items and their names in the first data record. Supplemental items can then be read and printed in the same way as the standard items.

Instructions for Use

Prior to running the program, define the supplemental data items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then recorded in the following form:

Month, Day, Species, Weight, Length, Lure, Place,
Supplemental value 1, value 2, etc.

Output Description

See example provided. Print options allow all or selected items to be printed.

```
20 REM    FISHERMAN'S DIARY PROGRAM
30 REM **** DATA INITIALIZATION ****
40 K1=0
50 M=1000
60 DIM D$(5)
80 READ N
90 IF N=0 THEN 130
100  FOR K =1 TO N
110    READ H$(K)
120  NEXT K
130 PRINT "SHALL I PRINT ALL OF THE ITEMS (Y OR N)?"
140 INPUT A$
150 IF A$="Y" THEN 430
```

```

160 PRINT"SHALL WE SELECT BASED UPON:"
170 PRINT"    SPECIES (S)"
180 PRINT"    MONTH CAUGHT (M)"
190 PRINT"    LOCATION (L)"
200 PRINT"    OR OTHER (O)?"
210 INPUT X2$
220 IF X2$="M" THEN 350
230 IF X2$="L" THEN 370
240 IF X2$="S" THEN 390
250 PRINT"ENTER THE ITEM HEADING TO SEARCH FOR"
260 INPUT X1$
270 IF N=0 THEN 330
280 FOR K=1 TO N
290   IF X1$<>H$(K) THEN 310
300   K1=K
310 NEXT K
320 IF K1<> 0 THEN 400
330 PRINT"ITEM HEADING NOT FOUND - TRY AGAIN"
340 GOTO 130
350 X1$="MONTH CAUGHT"
360 GOTO 400
370 X1$="LOCATION"
380 GOTO 400
390 X1$="SPECIES"
400 PRINT"ENTER THE VALUE OF "X1$;" TO PRINT"
410 INPUT X$
420 REM ***** HEADINGS *****
430 PRINT
440 PRINT
450 PRINT
460 PRINT"DATE";TAB(8);"SPECIES";TAB(18);"WT";TAB(24);"LEN";
470 PRINTTAB(30);"LURE";TAB(38);"LOCATION";
480 IF N=0 THEN 520
490 FOR K=1 TO N
500   PRINTTAB((K-1)*8+48);H$(K);
510 NEXT K
520 PRINT
530 PRINT"-----";TAB(8);"-----";TAB(18);"--";
540 PRINTTAB(24);"-----";TAB(30);"-----";TAB(38);"-----";
550 IF N=0 THEN 590
560 FOR K=1 TO N
570   PRINTTAB((K-1)*8+48);"-----";
580 NEXT K
590 PRINT
600 IF A$="N" THEN 840
610 REM *****
620 REM ***** PRINT OF ALL ITEMS *****
630 FOR I = 1TO M
640   READ M$
650   IF M$="END" THEN 790
660   READ D,F$,W$,L,E$,P$
670   IF N=0 THEN 710
680   FOR K=1 TO N
690     READ Q$(K)
700   NEXT K
710   PRINTM$;D;TAB(8);F$;TAB(18);W$;TAB(24);L;TAB(30);E$;TAB(38);P$;
720   IF N=0 THEN 760
730   FOR K = 1TO N
740     PRINTTAB((K-1)*8+48);Q$(K);
750   NEXT K
760   PRINT
770 NEXT I
780 REM ***
790 REM *** PROGRAM TERMINATION POINT ****

```

```

800 PRINT
810 PRINT
820 STOP
830 REM *****
840 REM ***** PRINT SELECTED ITEMS *****
850 FOR I=1 TO M
860   READ M$
870   IF M$="END" THEN 790
880   READ D,F$,W$,L,B$,P$
890   FOR K=1 TO N
900     IF N=0 THEN 920
910     READ Q$(K)
920     IF K1<>0 THEN 1010
930     IF X2$<>"M" THEN 960
940     X3$=M$
950     GOTO 1030
960     IF X2$<>"L" THEN 990
970     X3$=P$
980     GOTO 1030
990     X3$=F$
1000    GOTO 1030
1010    IF K<>K1 THEN 1030
1020    X3$=Q$(K)
1030    NEXT K
1040    IF X$<>X3$ THEN 1110
1050    PRINTM$;D;TAB(8);F$;TAB(18);W$;TAB(24);L;TAB(30);B$;TAB(38);P$;
1060    IF N=0 THEN 1100
1070    FOR J=1 TO N
1080      PRINTTAB((J-1)*8+48);Q$(J);
1090    NEXT J
1100    PRINT
1110  NEXT I
1120  GOTO 790
1130  REM *****
1140  REM *** DATA FOR INITIALIZATION FOLLOWS ***
1150  REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS
1160  DATA 2,WEATHER,TIME
1170  REM *****
1180  DATA JUN,1,SM BASS,3-2,19.5,WORM,LAKE XYZ,WINDY,MORNING
1190  DATA JUN,6,LM BASS,6-3,23,WORM,LAKE W,RAIN,EVENING
1200  DATA JUN,9,SM BASS,4-6,21,LURE X,LAKE QQQ,SUNNY,MORNING
1210  DATA JUN,23,SM BASS,2-0,18,WORM,LAKE XYZ,WINDY,EVENING
1220  DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? Y

```

DATE	SPECIES	WT	LEN	LURE	LOCATION	WEATHER	TIME
JUN 1	SM BASS	3-2	19.5	WORM	LAKE XYZ	WINDY	MORNING
JUN 6	LM BASS	6-3	23	WORM	LAKE W	RAIN	EVENING
JUN 9	SM BASS	4-6	21	LURE X	LAKE QQQ	SUNNY	MORNING
JUN 23	SM BASS	2-0	18	WORM	LAKE XYZ	WINDY	EVENING

BREAK IN 820

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
SHALL WE SELECT BASED UPON:
    SPECIES (S)
    MONTH CAUGHT (M)
    LOCATION (L)
    OR OTHER (O)?
? S
ENTER THE VALUE OF SPECIES TO PRINT
? SM BASS

```

DATE	SPECIES	WT	LEN	LURE	LOCATION	WEATHER	TIME
JUN 1	SM BASS	3-2	19.5	WORM	LAKE XYZ	WINDY	MORNING
JUN 9	SM BASS	4-6	21	LURE X	LAKE QQQ	SUNNY	MORNING
JUN 23	SM BASS	2-0	18	WORM	LAKE XYZ	WINDY	EVENING

BREAK IN 820

MAJOR SYMBOL TABLE - FISHING

```

I-----I
I NAME    .. DESCRIPTION                               I
I-----I
I K1      .. COUNT INDICATOR                           I
I M       .. MAXIMUM NUMBER OF DATA READS            I
I Q$( )   .. SUPPLEMENTAL ITEMS TRANSACTION           I
I H$( )   .. SUPPLEMENTAL ITEMS HEADING VALUE         I
I N       .. NUMBER OF SUPPLEMENTAL ITEMS             I
I M$      .. MONTH                                     I
I D       .. DAY IN                                    I
I F$      .. SPECIES                                   I
I W$      .. WEIGHT                                    I
I L       .. LENGTH                                    I
I B$      .. LURE USED                                 I
I P$      .. LOCATION                                  I
I X2$     .. STANDARD ITEM TO SELECT                   I
I X1$     .. SUPPLEMENTAL HEADING TO SEARCH           I
I X$      .. VALUE OF ITEM TO SELECT                   I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME    .. DESCRIPTION                               I
I-----I
I TAB     .. FORMATS PRINT LINES                       I
I DIM     .. SINGLE DIMENSION ARRAYS                   I
I-----I

```

PHOTOGRAPHY

Description

This program produces a diary for the photographer. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, items from the data records. Supplemental items can be defined by indicating the number of items and their names in the first data record. Supplemental items can then be read and printed in the same way as the standard items.

Instructions for Use

Prior to running the program, define the supplemental data items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then recorded in the following form:

Picture number, Subject, Date, Supplemental value 1, value 2, etc.

Output Description

See example provided. Print options allow all, or selected, items to be printed.

```
20 REM PHOTOGRAPHERS DIARY PROGRAM
30 REM ***DATA INITIALIZATION ***
40 K1=0
50 M=1000
60 DIM Q$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110 READ H$(K)
120 NEXT K
130 PRINT"SHALL I PRINT ALL OF THE ITEMS (Y OR N)?"
140 INPUT A$
150 IF A$="Y" THEN 370
160 PRINT"SHALL WE SELECT BASED UPON PICTURE (P), SUBJECT (S),";
170 PRINT"OR OTHER (O)"
```

```

180 INPUT X2$
190 IF X2$="P" THEN 310
200 IF X2$="S" THEN 330
210 PRINT"ENTER THE ITEM HEADING TO SEARCH FOR"
220 INPUT X1$
230 IF N=0 THEN 290
240 FOR K=1 TO N
250   IF X1$<>H$(K) THEN 270
260   K1=K
270 NEXT K
280 IF K1<>0 THEN 340
290 PRINT"ITEM HEADING NOT FOUND - TRY AGAIN"
300 GOTO 130
310 X1$="PICTURE #"
320 GOTO 340
330 X1$="SUBJECT"
340 PRINT"ENTER THE VALUE OF ";X1$;" TO PRINT"
350 INPUT X$
360 REM ***** HEADINGS *****
370 PRINT
380 PRINT
390 PRINT
400 PRINT"PICTURE #";TAB(11);"SUBJECT";TAB(22);"DATE";
410 IF N=0 THEN 450
420 FOR K=1 TO N
430 PRINTTAB((K-1)*8+32);H$(K);
440 NEXT K
450 PRINT
460 PRINT"-----";TAB(11);"-----";TAB(22);"-----";
470 IF N=0 THEN 510
480 FOR K=1 TO N
490   PRINTTAB((K-1)*8+32);"-----";
500 NEXT K
510 PRINT
520 IF A$="N" THEN 760
530 REM *****
540 REM ***** PRINT OF ALL ITEMS *****
550 FOR I = 1 TO M
560   READ P$
570   IF P$="END" THEN 710
580   READ S$,D$
590   IF N=0 THEN 630
600   FOR K =1 TO N
610     READ Q$(K)
620   NEXT K
630 PRINTP$;TAB(11);S$;TAB(22);D$;
640   IF N=0 THEN 680
650   FOR K = 1 TO N
660     PRINTTAB((K-1)*8+32);Q$(K);
670   NEXT K
680   PRINT
690 NEXT I
700 REM *****
710 REM ***** PROGRAM TERMINATION POINT *****
720 PRINT
730 PRINT
740 STOP
750 REM *****
760 REM ***** PRINT SELECTION ITEMS *****
770 FOR I= 1 TO M
780   READ P$
790 IF P$="END" THEN 710
800   READ S$,D$
810   FOR K=1 TO N

```

```

820 IF N=0 THEN 840
830 READ Q$(K)
840 IF K1<>0 THEN 900
850 IF X2$<>"P" THEN 880
860 X3#=P$
870 GOTO 920
880 X3#=S$
890 GOTO 920
900 IF K<>K1 THEN 920
910 X3#=Q$(K)
920 NEXT K
930 IF X$<>X3$ THEN 1000
940 PRINTP$;TAB(11);S$;TAB(22);D$;
950 IF N=0 THEN 990
960 FOR J=1TO N
970 PRINTTAB((J-1)*8+32);Q$(J);
980 NEXT J
990 PRINT
1000 NEXT I
1010 GOTO 710
1020 REM *****
1030 REM *** DATA FOR INITIALIZATION FLOWS ***
1040 REM ENTER NUMBER OF DIARY ITEM FOLLOWED BY THEIR HEADING
1050 DATA 4,EXP,TIME,FILM,PAPER
1060 REM *****
1070 DATA 100,HORSES,JUL 1,FB,1/32,TRI-X,MATT
1080 DATA 101,DOGS,JUL 2,F11,1/500,TRI-X,S-MATT
1090 DATA 102,CHICKENS,JUL 3,F22,1/125,TYPE S,TYPE 1
1100 DATA 103,HORSES,JUL 10,F22,1/125,TYPE S,MATT
1110 DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? Y

```

PICTURE #	SUBJECT	DATE	EXP	TIME	FILM	PAPER
100	HORSES	JUL 1	FB	1/32	TRI-X	MATT
101	DOGS	JUL 2	F11	1/500	TRI-X	S-MATT
102	CHICKENS	JUL 3	F22	1/125	TYPE S	TYPE 1
103	HORSES	JUL 10	F22	1/125	TYPE S	MATT

BREAK IN 740

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
SHALL WE SELECT BASED UPON PICTURE # (P), SUBJECT (S),OR OTHER (O)
? O
ENTER THE ITEM HEADING TO SEARCH FOR
? FILM
ENTER THE VALUE OF FILM TO PRINT
? TRI-X

```

PICTURE #	SUBJECT	DATE	EXP	TIME	FILM	PAPER
100	HORSES	JUL 1	F8	1/32	TRI-X	MATT
101	DOGS	JUL 2	F11	1/500	TRI-X	S-MATT

BREAK IN 740

MAJOR SYMBOL TABLE - PHOTOGRAPHY

I	NAME	DESCRIPTION	I
I	K1	.. COUNT INDICATOR	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	Q\$()	.. SUPPLEMENTAL ITEMS - VALUE IN	I
I	H\$()	.. SUPPLEMENTAL ITEMS - HEADING VALUES	I
I	P\$	.. PICTURE NAME/NUMBER	I
I	S\$	.. SUBJECT	I
I	D\$	.. DATE	I
I	X2\$	.. STANDARD ITEM TO SEARCH	I
I	X1\$	.. SUPPLEMENTAL ITEM TO SEARCH	I
I	X\$	.. VALUE OF ITEM TO SELECT	I
I	N	.. NUMBER OF SUPPLEMENTAL ITEMS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

GREENHOUSE

Description

This program produces a diary for the horticulturist's greenhouse. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, data records. Supplemental items can be defined by indicating the number of items, and their names, in the first data record. Supplemental items can then be read and printed in the same way as standard items.

Instructions for Use

Prior to running the program, define the supplemental items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then recorded in the following form:

Plant name, Container number, Date, Supplemental value 1, etc.

Output Description

See example provided. Print options allow all, or selected, records to be printed.

```
20 REM      HORTICULTURIST'S DIARY PROGRAM
30 REM ***DATA INITIALIZATION ***
40 K1=0
50 M=1000
60 DIM Q$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110   READ H$(K)
120 NEXT K
130 PRINT"SHALL I PRINT ALL OF THE ITEMS (Y OR N)?"
140 INPUT A$
150 IF A$="Y" THEN 370
160 PRINT"SHALL WE SELECT BASED UPON PLANT NAME (P), NUMBER (N),";
```

```

170 PRINT"OR OTHER (0)"
180 INPUT X2$
190 IF X2$="F" THEN 310
200 IF X2$="N" THEN 330
210 PRINT"ENTER THE ITEM HEADING TO SEARCH FOR"
220 INPUT X1$
230 IF N=0 THEN 290
240 FOR K=1 TO N
250   IF X1$<>H$(K) THEN 270
260   K1=K
270 NEXT K
280 IF K1<>0 THEN 340
290 PRINT"ITEM HEADING NOT FOUND - TRY AGAIN"
300 GOTO 130
310 X1$="PLANT NAME"
320 GOTO 340
330 X1$="NUMBER"
340 PRINT"ENTER THE VALUE OF ";X1$;" TO PRINT"
350 INPUT X$
360 REM ***** HEADINGS *****
370 PRINT
380 PRINT
390 PRINT
400 PRINT"PLANT";TAB(11);"NBR";TAB(16);"DATE";
410 IF N=0 THEN 450
420 FOR K=1 TO N
430 PRINTTAB((K-1)*10+32);H$(K);
440 NEXT K
450 PRINT
460 PRINT"-----";TAB(11);"----";TAB(16);"-----";
470 IF N=0 THEN 510
480 FOR K=1 TO N
490   PRINTTAB((K-1)*10+32);"-----";
500 NEXT K
510 PRINT
520 IF A$="N" THEN 760
530 REM *****
540 REM ***** PRINT OF ALL ITEMS *****
550 FOR I = 1 TO M
560   READ P$
570   IF P$="END" THEN 710
580   READ N$,D$
590   IF N=0 THEN 630
600   FOR K = 1 TO N
610     READ Q$(K)
620   NEXT K
630 PRINTP$;TAB(11);N$;TAB(16);D$;
640   IF N=0 THEN 680
650   FOR K = 1 TO N
660     PRINTTAB((K-1)*10+32);Q$(K);
670   NEXT K
680   PRINT
690 NEXT I
700 REM *****
710 REM ***** PROGRAM TERMINATION POINT ***
720 PRINT
730 PRINT
740 STOP
750 REM *****
760 REM ***** PRINT SELECTION ITEMS *****
770 FOR I= 1 TO M
780   READ P$
790   IF P$="END" THEN 710
800   READ N$,D$

```

```

810   FOR K=1 TO N
820   IF N=0 THEN 840
830   READ Q$(K)
840   IF K1<>0 THEN 900
850   IF X2$<>"P" THEN 880
860   X3$=F$
870   GOTO 920
880   X3$=N$
890   GOTO 920
900   IF K<>K1 THEN 920
910   X3$=Q$(K)
920   NEXT K
930   IF X$<>X3$ THEN 1000
940   PRINTF$;TAB(11);N$;TAB(16);D$;
950   IF N=0 THEN 990
960   FOR J=1TO N
970     PRINTTAB((J-1)*10+32);Q$(J);
980   NEXT J
990   PRINT
1000  NEXT I
1010  GOTO 710
1020  REM *****
1030  REM *** DATA FOR INITIALIZATION FLLWS ***
1040  REM ENTER NUMBER OF DIARY ITEM FOLLOWED BY THEIR HEADING
1050  DATA 3,LIGHT,WATER,SOIL
1060  REM *****
1070  DATA LETTUCE,1,APR 15,BRIGHT,DAILY,SANDY
1080  DATA LETTUCE,2,APR 15,BRIGHT,DAILY,LOAM
1090  DATA CABBAGE,3,APR 16,SHADY,WEEKLY,LOAM
1100  DATA LETTUCE,4,APR 17,SHADY,WEEKLY,SANDY
1110  DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? Y

```

PLANT	NBR	DATE	LIGHT	WATER	SOIL
LETTUCE	1	APR 15	BRIGHT	DAILY	SANDY
LETTUCE	2	APR 15	BRIGHT	DAILY	LOAM
CABBAGE	3	APR 16	SHADY	WEEKLY	LOAM
LETTUCE	4	APR 17	SHADY	WEEKLY	SANDY

```

BREAK IN 740

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
SHALL WE SELECT BASED UPON PLANT NAME (P), NUMBER (N),OR OTHER (O)
? O
ENTER THE ITEM HEADING TO SEARCH FOR
? SOIL
ENTER THE VALUE OF SOIL TO PRINT
? LOAM

```

PLANT	NBR	DATE	LIGHT	WATER	SOIL
LETTUCE	2	APR 15	BRIGHT	DAILY	LOAM
CABBAGE	3	APR 16	SHADY	WEEKLY	LOAM

BREAK IN 740

MAJOR SYMBOL TABLE - GREENHOUSE

I	I	I
I	NAME .. DESCRIPTION	I
I	K1 .. COUNT INDICATOR	I
I	M .. MAXIMUM NUMBER OF DATA READS	I
I	Q\$() .. SUPPLEMENTAL ITEMS - VALUE IN	I
I	H\$() .. SUPPLEMENTAL ITEMS - HEADING VALUES	I
I	P\$.. PLANT NAME	I
I	N\$.. PLANT/CONTAINER NUMBER	I
I	D\$.. DATE PLANTED	I
I	X2\$.. STANDARD ITEM TO SEARCH	I
I	X1\$.. SUPPLEMENTAL ITEM TO SEARCH	I
I	X\$.. VALUE OF ITEM TO SELECT	I
I	N .. NUMBER OF SUPPLEMENTAL ITEMS	I

FUNCTIONS USED

I	I	I
I	NAME .. DESCRIPTION	I
I	TAB .. FORMATS PRINT LINES	I
I	DIM .. SINGLE DIMENSION ARRAYS	I

CB RADIO

Description

This program produces a diary (log) for the CB operator. It can interpret and print all items that the user wants to record in the log.

Functions of the Program

The program provides a formatted output of all, or selected, data records. Supplemental items can be defined by indicating the number of items, and their names, in the first data record. Supplemental items can then be read and printed in the same way as standard items.

Instructions for Use

Prior to running the program, define the supplemental items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See example data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary (log) items are then entered in the following form:

Handle, Call letters, Channel monitored, Supplemental value 1, etc.

Output Description

See example output. Print options allow all, or selected, records to be printed.

```
20 REM    CB RADIO OPERATOR'S DIARY PROGRAM
30 REM ***DATA INITIALIZATION ***
40 K1=0
50 M=1000
60 DIM Q$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110   READ H$(K)
120 NEXT K
130 PRINT"SHALL I PRINT ALL OF THE ITEMS (Y OR N)?"
140 INPUT A$
150 IF A$="Y" THEN 430
160 PRINT"SHALL WE SELECT BASED UPON:"
170 PRINT"      HANDLE (H) "
```

```

180 PRINT"      CALL LETTERS (L)"
190 PRINT"      CHANNEL (C)"
200 PRINT"      OR OTHER (O)"
210 INPUT X2$
220 IF X2$="H" THEN 350
230 IF X2$="L" THEN 370
240 IF X2$="C" THEN 390
250 PRINT"ENTER THE ITEM HEADING TO SEARCH FOR"
260 INPUT Z1$
270 IF N=0 THEN 330
280 FOR K=1 TO N
290   IF X1$<>H$(K) THEN 310
300   K1=K
310 NEXT K
320 IF K1<>0 THEN 400
330 PRINT"ITEM HEADING NOT FOUND - TRY AGAIN"
340 GOTO 130
350 X1$="HANDLE"
360 GOTO 400
370 X1$="CALL LETTERS"
380 GOTO 400
390 X1$="CHANNEL"
400 PRINT"ENTER THE ";X1$;" TO PRINT"
410 INPUT X$
420 REM ***** HEADINGS *****
430 PRINT
440 PRINT
450 PRINT
460 PRINT"HANDLE";TAB(21);"LETTERS";TAB(31);"CH";
470 IF N=0 THEN 510
480 FOR K=1 TO N
490   PRINTTAB((K-1)*10+34);H$(K);
500 NEXT K
510 PRINT
520 PRINT"-----";TAB(21);"-----";TAB(31);"----";
530 IF N=0 THEN 570
540 FOR K=1 TO N
550   PRINTTAB((K-1)*10+34);"-----";
560 NEXT K
570 PRINT
580 IF A$="N" THEN 820
590 REM *****
600 REM ***** PRINT OF ALL ITEMS *****
610 FOR I=1 TO M
620   READ H1$
630   IF H1$="END" THEN 770
640   READ L$,C$
650   IF N=0 THEN 690
660   FOR K=1 TO N
670     READ Q$(K)
680   NEXT K
690 PRINTH1$;TAB(21);L$;TAB(31);C$;
700 IF N=0 THEN 740
710 FOR K=1 TO N
720   PRINTTAB((K-1)*10+34);Q$(K);
730 NEXT K
740 PRINT
750 NEXT I
760 REM *****
770 REM *** PROGRAM TERMINATION POINT ***
780 PRINT
790 PRINT
800 STOP
810 REM *****

```

```

820 REM ***PRINT SELECTED ITEMS ***
830 FOR I=1 TO M
840   READ H1$
850   IF H1$="END" THEN 770
860   READ L$,C$
870   FOR K=1 TO N
880     IF N=0 THEN 990
890     READ Q$(K)
900     IF K1<>0 THEN 990
910     IF X2$<"L" THEN 940
920     X3$=L$
930     GOTO 1010
940     IF X2$<"H" THEN 970
950     X3$=H$
960     GOTO 1010
970     X3$=C$
980     GOTO 1010
990     IF K<>K1 THEN 1010
1000    X3$=Q$(K)
1010   NEXT K
1020   IF X$<>X3$ THEN 1090
1030   PRINTH1$;TAB(21);L$;TAB(31);C$;
1040   IFN=0 THEN 1080
1050   FOR J=1 TO N
1060     PRINTTAB((J-1)*10+34);Q$(J);
1070   NEXT J
1080   PRINT
1090 NEXT I
1100 GOTO 770
1110 REM *****
1120 REM *** DATA FOR INITIALIZATION FOLLOWS ***
1130 REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS
1140 DATA 2,DATE,TELE
1150 REM *****
1160 DATA GRANNY GOOSE,KTX9999,5,JUN 15,633-7777
1170 DATA GALLOPING HORSEMAN,KTX11111,7,JUL 17,633-6666
1180 DATA FISHBAIT,KAAZ1111,40,AUG 17,123-4567
1190 DATA MONKEY WRENCH,KABC1234,13,AUG 15,633-1098
1200 DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? Y

```

HANDLE	LETTERS	CH	DATE	TELE
GRANNY GOOSE	KTX9999	5	JUN 15	633-7777
GALLOPING HORSEMAN	KTX11111	7	JUL 17	633-6666
FISHBAIT	KAAZ1111	40	AUG 17	123-4567
MONKEY WRENCH	KABC1234	13	AUG 15	633-1098

BREAK IN 800

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
SHALL WE SELECT BASED UPON:
    HANDLE (H)
    CALL LETTERS (L)
    CHANNEL (C)
    OR OTHER (O)?
? C
ENTER THE CHANNEL TO PRINT
? 40

```

HANDLE	LETTERS	CH	DATE	TELE
FISHBAIT	KAZ1111	40	AUG 17	123-4567

BREAK IN 800

MAJOR SYMBOL TABLE - CB RADIO

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I K1    .. COUNT INDICATOR                           I
I M     .. MAXIMUM NUMBER OF DATA READS             I
I G$( ) .. SUPPLEMENTAL ITEMS - VALUE IN            I
I H$( ) .. SUPPLEMENTAL ITEMS - HEADING VALUES     I
I H1$   .. HANDLE                                    I
I L$    .. CALL LETTERS                              I
I C$    .. CHANNEL                                    I
I X2$   .. STANDARD ITEM TO SEARCH                   I
I X1$   .. SUPPLEMENTAL ITEM TO SEARCH               I
I X$    .. VALUE OF ITEM TO SELECT                   I
I N     .. NUMBER OF SUPPLEMENTAL ITEMS              I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINES                       I
I DIM   .. SINGLE DIMENSION ARRAYS                   I
I-----I

```


BOWLING

Description

This program produces a diary for the bowling enthusiast. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, data records. Supplemental items can be defined by indicating the number of items, and their names, in the first data record. Supplemental items can then be read and printed in the same way as standard items.

Instructions for Use

Prior to running the program, define the supplemental items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The first record defines supplemental items and their titles. See the sample data. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then entered in the following form:

Date, Location, Number of games, Score 1, Score 2, . . . ,
Supplemental items

Output Description

See example provided. Print options allow all, or selected, records to be printed.

```
20 REM BOWLER'S DIARY PROGRAM
30 REM ***DATA INITIALIZATION ***
40 K1=0
50 M=1000
60 DIM S$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110   READ H$(K)
120 NEXT K
130 PRINT"SHALL I PRINT ALL OF THE ITEMS (Y OR N)?"
140 INPUT A$
150 IF A$="Y" THEN 330
160 PRINT"SHALL I SELECT BASED UPON LANES (L), OR OTHER (O)?"
```

```

170 INPUT X2$
180 IF X2$="L" THEN 290
190 PRINT"ENTER THE ITEM HEADING TO SEARCH FOR"
200 INPUT X1$
210 IF N=0 THEN 270
220 FOR K=1 TO N
230   IF X1$<>H$(K) THEN 250
240   K1=K
250 NEXT K
260 IF K1<>0 THEN 300
270 PRINT"ITEM HEADING NOT FOUND - TRY AGAIN"
280 GOTO 130
290 X1$="LANES"
300 PRINT"ENTER THE VALUE OF ";X1$;" TO PRINT"
310 INPUT X$
320 REM ***** HEADINGS *****
330 PRINT
340 PRINT
350 PRINT
360 PRINT"DATE";TAB(9);"LANES";TAB(26);"GAMES";TAB(32);"RESULTS";
370 PRINT"/AVG";
380 IF N=0 THEN 420
390 FOR K=1 TO N
400   PRINTTAB((K-1)*10+34);"/";H$(K)
410 NEXT K
420 PRINT
430 PRINT"-----";TAB(9);"-----";TAB(26);"-----";TAB(32);"-----";
440 PRINTTAB(39);"-----";
450 IF N=0 THEN 490
460 FOR K=1 TO N
470   PRINTTAB((K-1)*10+34);"-----";
480 NEXT K
490 PRINT
500 IF A$="N" THEN 840
510 REM *****
520 REM ***** PRINT FOR ALL ITEMS *****
530 FOR I=1 TO M
540 READ D$
550   IF D$="END" THEN 790
560   READ L$,G
570   FOR K=1 TO G
580     READ R(K)
590     R(G+1)=R(G+1)+R(K)
600   NEXT K
610   R(G+1)=INT((R(G+1)/G)+.5)
620   IF N=0 THEN 660
630   FOR K=1 TO N
640     READ S$(K)
650   NEXT K
660   PRINTD$;TAB(9);L$;TAB(26);G;
670   FOR K=1 TO G
680     PRINTTAB((K-1)*5+31);R(K);
690   NEXT K
700   PRINTTAB((K-1)*5+31);"/";R(G+1);
710   R(G+1)=0
720   IF N=0 THEN 760
730   FOR K=1 TO N
740     PRINTTAB((K-1)*10+38+(G*5));"/"S$(K);
750   NEXT K
760   PRINT
770 NEXT I
780 REM *****
790 REM ***** PROGRAM TERMINATION POINT *****
800 PRINT

```

```

810 PRINT
820 STOP
830 REM *****
840 REM ***** PRINT SELECTED ITEMS *****
850 FOR I=1 TO M
860   R(G+1)=0
870   READ D$
880   IF D$="END" THEN 790
890   READ L$,G
900   FOR J=1 TO G
910     READ R(J)
920     R(G+1)=R(G+1)+R(J)
930   NEXT J
940   R(G+1)=INT((R(G+1)/G)+.5)
950   FOR K=1 TO N
960     IF N=0 THEN 980
970     READ S$(K)
980     IF K1<>0 THEN 1010
990     X3$=L$
1000    GOTO 1030
1010    NEXT K
1020    X3$=S$(K)
1030    NEXT K
1040    IF X$<>X3$ THEN 1150
1050    PRINTD$;TAB(9);L$;TAB(26);G;
1060    FOR J= 1 TO G
1070      PRINTTAB((J-1)*5+31);R(J);
1080    NEXT J
1090    PRINTTAB((G-1)*5+31);"/";R(G+1);
1100    IF N=0 THEN 1140
1110    FOR J=1 TO N
1120      PRINTTAB((J-1)*10+38+(G*5));"/";S$(J);
1130    NEXT J
1140 PRINT
1150 NEXT I
1160 GOTO 790
1170 REM *****
1180 REM *** DATA FOR INITIALIZATION ***
1190 REM * ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS
1200 DATA 1,BALLNBR
1210 REM *****
1220 DATA JUN 1,HIGHWAY BOWL#1,3,100,101,134,1
1230 DATA JUN 8,UPTOWN ALLEYS,3,105,150,123,3
1240 DATA JUN 15,HIGHWAY BOWL#1,2,120,131,3
1250 DATA JUN 22,UPTOWN ALLEYS,3,121,131,142,1
1260 DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N ) ?
? Y

```

DATE	LANES	GAMES	RESULTS	AVG	BALL	NBR
JUN 1	HIGHWAY BOWL#1	3	100 101 134	/	112	/1
JUN 8	UPTOWN ALLEYS	3	105 150 123	/	126	/3
JUN 15	HIGHWAY BOWL#1	2	120 131	/	187	/3
JUN 22	UPTOWN ALLEYS	3	121 131 142	/	131	/1

BREAK IN 820

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
SHALL I SELECT BASED UPON LANES (L), OR OTHER (O)?
? L
ENTER THE VALUE OF LANES TO PRINT
? HIGHWAY BOWL#1

```

DATE	LANES	GAMES	RESULTS	AVG	BALL	NBR
JUN 1	HIGHWAY BOWL#1	3	100 101 134	/	112	/1
JUN 15	HIGHWAY BOWL#1	2	120 131	/	187	/3

BREAK IN 820

MAJOR SYMBOL TABLE - BOWLING

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I K1    .. COUNT INDICATOR                           I
I M     .. MAXIMUM NUMBER OF DATA READS             I
I R( )  .. RESULTS (SCORE) ARRAY                     I
I S$( ) .. SUPPLEMENTAL ITEMS -VALUES                I
I H$( ) .. SUPPLEMENTAL ITEMS - HEADING NAMES        I
I X2$   .. STANDARD ITEM TO SEARCH                   I
I X1$   .. SUPPLEMENTAL ITEM TO SEARCH               I
I X$    .. VALUE OF ITEM TO SELECT                   I
I D$    .. DATE                                       I
I L$    .. LANES                                      I
I G     .. NUMBER OF GAMES                            I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINES                       I
I INT   .. CONVERTS NUMBER TO INTEGER                 I
I DIM   .. SINGLE DIMENSION ARRAY                     I
I-----I

```

GENERAL PURPOSE DIARY

Description

This program provides a general purpose diary that can be used for recording many different activities. It can interpret and print all items that the user wants to record.

Functions of the Program

The program provides a formatted output of all, or selected, data records. All items contained in the data records are defined by indicating the number of items and their names in the first data record. These items can then be read and printed as if they had originally been programmed for.

Instructions for Use

Determine the items to be recorded in the records. Enter the diary items as they occur.

Data Entry

All DATA is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines the number of items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then entered using the following form:

Value 1, Value 2, etc.

Output Description

See example provided. Print options allow all, or selected, records to be printed.

```
20 REM GENERAL PURPOSE DIARY
30 REM *** DATA INITIALIZATION
40 M=1000
50 DIM S$(10)
60 DIM H$(10)
70 READ N
80 IF N=0 THEN 510
90 FOR K=1 TO N
100   READ H$(K)
110 NEXT K
120 PRINT "SHALL I PRINT ALL THE ITEMS (Y OR N)?"
130   INPUT A$
140 IF A$="Y" THEN 260
```

```

150 PRINT"ENTER THE ITEM TO SEARCH"
160 INPUT X1$
170 FOR K=1 TO N
180   IF X1$<>H$(K) THEN 200
190   K1=K
200 NEXT K
210 IF K1<>0 THEN 240
220 PRINT"ITEM HEADING NOT FOUND - TRY AGAIN"
230 GOTO 120
240 PRINT"ENTER THE VALUE OF ";X1$;" TO PRINT"
250 INPUT X$
260 PRINT
270 PRINT
280 PRINT
290 FOR K=1 TO N
300   PRINTTAB((K-1)*10+1);H$(K);
310 NEXT K
320 PRINT
330 FOR K =1 TO N
340   PRINTTAB((K-1)*10+1);"-----";
350 NEXT K
360 PRINT
370 IF A$="N" THEN 560
380 REM *****
390 REM ***** PRINT FOR ALL ITEMS *****
400 FOR I = 1 TO M
410   FOR K=1 TO N
420     READ S$(K)
430     IF S$(1)="END" THEN 510
440     NEXT K
450     FOR K=1 TO N
460       PRINTTAB((K-1)*10+1);S$(K);
470     NEXT K
480     PRINT
490 NEXT I
500 REM *****
510 REM ***** PROGRAM TERMINATION POINT *****
520 PRINT
530 PRINT
540 STOP
550 REM ***
560 REM ***** PRINT SELECTED ITEMS *****
570 FOR I=1 TO M
580   FOR K=1 TO N
590     READ S$(K)
600     IF S$(1)="END" THEN 510
610     IF K<>K1 THEN 670
620     IF X$<>S$(K) THEN 670
630     FOR J=1 TO N
640       PRINTTAB((J-1)*10+1);S$(J);
650     NEXT J
660     PRINT
670   NEXT K
680 NEXT I
690 GOTO 510
700 REM *****
710 REM ***** DATA FOR INITIALIZATION *****
720 REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS
730 DATA 4,DATE,COURSE,SCORE,WIND
740 DATA JUL 1,COURSE 2,77,NONE
750 DATA JUL 3,COURSE 1,80,MED
760 DATA JUL 6,COURSE 2,85,MED
770 DATA JUL 8,COURSE 1,82,LDW
780 DATA END

```

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? Y

```

DATE	COURSE	SCORE	WIND
JUL 1	COURSE 2	77	NONE
JUL 3	COURSE 1	80	MED
JUL 6	COURSE 2	85	HIGH
JUL 8	COURSE 1	82	LOW

BREAK IN 540

```

RUN
SHALL I PRINT ALL OF THE ITEMS ( Y OR N )?
? N
ENTER THE ITEM TO SEARCH
? COURSE
ENTER THE VALUE OF COURSE TO PRINT
? COURSE 1

```

DATE	COURSE	SCORE	WIND
JUL 3	COURSE 1	77	NONE
JUL 8	COURSE 1	85	HIGH

BREAK IN 540

MAJOR SYMBOL TABLE - GENERAL PURPOSE DIARY

I	NAME	.. DESCRIPTION	I
I	K	.. COUNT INDICATOR	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	S\$()	.. VALUE OF ITEMS	I
I	H\$()	.. HEADINGS OF ITEMS	I
I	N	.. NUMBER OF ITEMS RECORDED FOR EACH TRANSACTIONS	I
I	X1\$	.. ITEM TO SEARCH	I
I	X\$	.. VALUE OF ITEM TO SELECT	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

Appendix: Language Features Used

All programs in this book were developed, tested, and run on an Altair 8800b Microcomputer System operating under Altair's Revision 4.1 of their Disk Extended BASIC. The extended features of this language were not used, however, in the creation of these programs. With the exception of the MID\$ function used in the WORDGAME program (explained below), there should be little, if any, difficulty in running these programs on your present or projected microcomputer system.

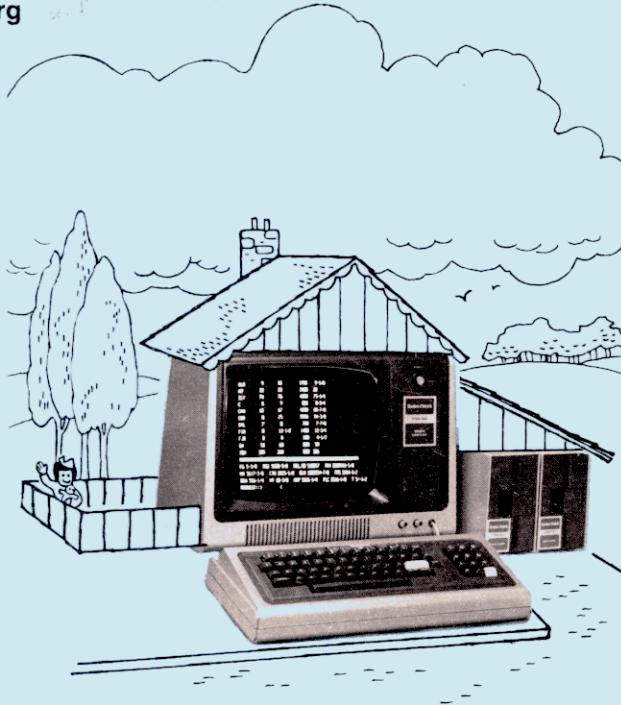
To further your understanding of the features used, however, and to provide information that will help you overcome any unknown compatibility problems, the following language features are explained:

1. *Variable names* All variable names have been defined as either numeric or alphanumeric. Alphanumeric data names are terminated with a dollar sign, \$, that is, A0 is numeric whereas A0\$ is alphanumeric.
2. *Arrays* Arrays have been defined with DIM statements. Altair BASIC (by default) will treat any variable as a twelve-position array. Care has been taken to insure that all arrays have been explicitly dimensioned. Variable dimensioning is also allowed to use variable names previously defined. If this usage causes problems, replace the variable name in the statement with the number that the variable was assigned during data initialization.
3. *TAB* Most programs utilize the TAB function for print formatting. The function TAB(x) causes the printer to move to the position specified by x.
4. *Integer conversions* The integer function (INT) causes the truncation of all decimal positions, leaving a whole number. Consequently, where $x = 12.34$, $\text{INT}(x)$ truncates the value of the result to 12.
5. *Random number generator (RND)* In Altair BASIC, this function returns a random number between 0 and 1. Because of this trait, a conversion was used to provide the required range of numbers. If your system functions differently, convert the equation used or provide the appropriate seed to the function that provides the values of 0 to 1. For example, TRS-80 BASIC users should provide 0 as the seed to RND to insure compatibility. In this case, check the symbol table for the seed that is used (normally Y).

6. *GOSUB* This instruction causes branching to a subroutine. *GOSUB xxx*, for instance, would take the next instruction to be executed from line number *xxx* and would continue from that point until a *RETURN* statement was encountered. The *RETURN* statement would cause control to return to the instruction immediately following the *GOSUB*.
7. *LEN* This function returns the length of the information stored at the location. *LEN(x)* returns the number of characters at *x*.
8. *MID\$* This function is used only in the *WORDGAME* program. Its form is *MID\$(X, I, J)*, where *J* is the number of characters to be extracted from the variable *X*, beginning with the *I*th character. It was used in the *WORDGAME* program to extract one character at a time from the words to be placed in the puzzle.

Using the TRS-80™ in Your Home

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