

# digital group software systems inc.

## MAXI-BASIC Game Set 4

After having loaded the MAXI-BASIC Interpreter into your computer and selected the appropriate option (i.e. TV-only or HARDCOPY) start your audio cassette playing at the proper point and then type

LOADcr

Then wait until the

READY

message appears on the screen.

The programs on this tape are recorded in the following order:

#1 HURKLE	63-67
#2 ICBM	63-70
#3 CHANGE	63-67
#4 MOD ARITHMETIC	63-66
#5 LETTER	63-67
#6 NUMBER	63-66

Once the READY Message appears after the load; Type

RUNcr

to start the program running.

All the programs on this tape are self documenting in terms of execution instructions, or there are instructions provided in the documentation. In addition the directions, where applicable, can be read in the source listings as well as in the run examples.

Since BASIC is a character and line oriented language these programs should run equally well with either a 32 or 64 character video display. However, there is the possibility that minor changes in some of the PRINT statements might make the output more appealing to an individual user; such changes are left to the discretion of the user since complete source and run listings have been provided.

READY  
LIST

```
100#TAB(12);"HURKLE"  
101#":#"  
110 LET N=5  
120 LET G=10  
220#"A HURKLE IS HIDING ON A";G;" X";G;"# GRID. HOMEBASE ON THE GRID IS"  
230#"POINT 0,0 AND ANY GRIDPOINT IS":#"A PAIR OF DIGITS SEPARATED BY"  
240#"A COMMA. TRY TO GUESS WHERE THE":#"HURKLE'S GRIDPOINT IS. YOU GET"  
250#"5 TRIES. AFTER EACH TRY, I WILL":#"TELL YOU THE APPROXIMATE WAY TO"  
260#"GO TO LOOK FOR THE HURKLE."  
270#  
285 A=INT(G*RND(0))  
286 B=INT(G*RND(0))  
310 FOR K=1 TO N  
320 PRINT "GUESS #";K;  
330 INPUT X,Y  
340 IF ABS(X-A)+ABS(Y-B)=0 THEN 500  
350 REM PRINT DIRECTIONS  
360 GOSUB 610  
370#  
380 NEXT K  
410#  
420#"SORRY, THAT'S";N;" GUESSES."  
430#"THE HURKLE IS AT";A;" , ";B  
440#  
450#"LET'S PLAY AGAIN."  
451#"HURKLE IS HIDING."  
460#  
470 GOTO 285  
500 REM  
510#  
520#"YOU FOUND HIM IN";K;" GUESSES!"  
530#":#":#"  
540 GOTO 440  
610 PRINT "GO ";  
620 IF Y=B THEN 670  
630 IF Y<B THEN 660  
640 PRINT "SOUTH";  
650 GOTO 670  
660 PRINT "NORTH";  
670 IF X=A THEN 720  
680 IF X<A THEN 710  
690 PRINT "WEST";  
700 GOTO 720  
710 PRINT "EAST";  
720#  
730 RETURN  
9999 END  
READY  
PRINT "SIZE=";13*1024-FREE(2)  
SIZE= 894  
READY
```

READY  
RUN

HURKLE

A HURKLE IS HIDING ON A 10 X 10  
GRID. HOMEBASE ON THE GRID IS  
POINT 0,0 AND ANY GRIDPOINT IS  
A PAIR OF DIGITS SEPARATED BY  
A COMMA. TRY TO GUESS WHERE THE  
HURKLE'S GRIDPOINT IS. YOU GET  
5 TRIES. AFTER EACH TRY, I WILL  
TELL YOU THE APPROXIMATE WAY TO  
GO TO LOOK FOR THE HURKLE.

GUESS # 175,5  
GO EAST

GUESS # 277,5  
GO EAST

GUESS # 379,5

YOU FOUND HIM IN 3 GUESSES!

LET'S PLAY AGAIN.  
HURKLE IS HIDING.

GUESS # 175,5  
GO NORTHWEST

GUESS # 273,7  
GO WEST

GUESS # 371,7  
GO EAST

GUESS # 472,7

YOU FOUND HIM IN 4 GUESSES!

LET'S PLAY AGAIN.  
HURKLE IS HIDING.

GUESS # 1?

READY  
LIST

```
100 REM ICBM GAME
110 X1=0
120 Y1=0
130 X=INT(RND(0)*800)+200
140 Y=INT(RND(0)*800)+200
150 S=INT(RND(0)*20+50)
160 S1=INT(RND(0)*20+50)
210 FOR N=1 TO 50
215 PRINT
220 PRINT "          NORTH          EAST"
222 PRINT "ICBM";%5I,Y;%5I,X
225 PRINT "SAM ";%5I,Y1;%5I,X1
230 IF X=0 THEN 550
240 INPUT "ENTER SAM HEADING ",T1
250 T1=T1/57.296
260 H=INT(RND(0)*200+1)
270 IF H>4 THEN 290
275 N=50:NEXT N
280 ON H GOTO 470,490,510,530
290 X1=INT(X1+S1*SIN(T1))
300 Y1=INT(Y1+S1*COS(T1))
310 IF SQR(X2+Y2)>S THEN 350
320 X=0
330 Y=0
340 GOTO 430
350 R=SQR(X2+Y2)/1000
355 Z=SQR(X2+Y2)
360 REM ATN FUNC REPLACED BY CLEVER TRIG
370 X=INT(X-S*X/Z+RND(0)*20*R)
380 Y=INT(Y-S*Y/Z+RND(0)*20*R)
390 D=SQR((X-X1)2+(Y-Y1)2)
400 IF D=<5 THEN 440
410 D=INT(D)
420 PRINT "ICBM & SAM NOW";D;" MILES APART"
430 NEXT N
440 N=50:NEXT N
442 PRINT "CONGRATULATIONS! YOUR SAM CAME WITHIN";D;" MILES OF THE"
444 PRINT "ICBM AND DESTROYED IT."
460 GOTO 560
470 PRINT "TOO BAD. YOUR SAM FELL TO THE GROUND.":GOTO 560
490 PRINT "YOUR SAM EXPLODED IN MID-AIR.":GOTO 560
510 PRINT "GOOD LUCK-THE ICBM EXPLODED HARMLESSLY IN MID-AIR.":GOTO 560
530 PRINT "GOOD LUCK-THE ICBM TURNED OUT TOBE A FRIENDLY AIRCRAFT.":GOTO 560
550 N=50:NEXT N
555 PRINT "TOO BAD! THE ICBM JUST HIT YOUR LOCATION."
560 PRINT "DO YOU WANT TO PLAY MORE? (Y OR N)";
570 INPUT A$
580 IF A$="Y" THEN 110
590 END
READY
```

READY  
RUN

	NORTH	EAST
ICBM	240	553
SAM	0	0

ENTER SAM HEADING 60  
ICBM & SAM NOW 503 MILES APART

	NORTH	EAST
ICBM	225	506
SAM	25	44

ENTER SAM HEADING 65  
ICBM & SAM NOW 404 MILES APART

	NORTH	EAST
ICBM	206	461
SAM	46	90

ENTER SAM HEADING 70  
ICBM & SAM NOW 302 MILES APART

	NORTH	EAST
ICBM	185	414
SAM	63	137

ENTER SAM HEADING 70  
ICBM & SAM NOW 202 MILES APART

	NORTH	EAST
ICBM	164	368
SAM	80	184

ENTER SAM HEADING 67.5  
ICBM & SAM NOW 101 MILES APART

	NORTH	EAST
ICBM	143	322
SAM	99	231

ENTER SAM HEADING 60

CONGRATULATIONS! YOUR SAM CAME WITHIN 3.6055513 MILES OF THE  
ICBM AND DESTROYED IT.

DO YOU WANT TO PLAY MORE? (Y OR N)?N

READY

READY  
LIST

```
10 REM      CHANGE
20 FOR I=1 TO 10:PRINT "":NEXT I
30 PRINT "      CHANGE"
40 PRINT "":PRINT "":PRINT " "
50 PRINT "I, YOUR FREINDLY D.G. COMPUTER"
60 PRINT "WILL DETERMINE THE CORRECT"
70 PRINT "CHANGE FOR ITEMS COSTING UP TO"
80 PRINT "$100"
90 PRINT
100 INPUT "COST OF ITEM? ",A
110 INPUT "AMOUNT OF PAYMENT? ",P
120 C=P-A:M=C:IF C<>0 THEN 140:PRINT "CORRECT AMOUNT, THANK YOU."
130 GOTO 100
140 IF C>0 THEN 160:PRINT "SORRY, YOU HAVE SHORT CHANGED ME $";A-P
150 GOTO 100
160 PRINT "YOUR CHANGE $";C
170 D=INT(C/10):IF D=0 THEN 190
180 PRINT D;" TEN DOLLAR BILL(S)"
190 C=M-(D*10):E=INT(C/5):IF E=0 THEN 210
200 PRINT E;" FIVE DOLLAR BILL(S)"
210 C=M-(D*10+E*5):F=INT(C):IF F=0 THEN 230
220 PRINT F;" ONE DOLLAR BILL(S)"
230 C=M-(D*10+E*5+F):C=C*100:N=C:G=INT(C/50):IF G=0 THEN 250
240 PRINT G;" ONE HALF DOLLAR(S)"
250 C=N-(G*50):H=INT(C/25):IF H=0 THEN 270
260 PRINT H;" QUARTER(S)"
270 C=N-(G*50+H*25):I=INT(C/10):IF I=0 THEN 290
280 PRINT I;" DIME(S)"
290 C=N-(G*50+H*25+I*10):J=INT(C/5):IF J=0 THEN 310
300 PRINT J;" NICKLE(S)"
310 C=N-(G*50+H*25+I*10+J*5):K=INT(C+.5):IF K=0 THEN 330
320 PRINT K;" PENNY(S)"
330 PRINT "THANK YOU.  COME AGAIN."
340 PRINT "":PRINT "":GOTO 100
350 END
READY
```

READY  
RUN

CHANGE

I, YOUR FREINDLY D.G. COMPUTER  
WILL DETERMINE THE CORRECT  
CHANGE FOR ITEMS COSTING UP TO  
\$100

COST OF ITEM? 4.69  
AMOUNT OF PAYMENT? 10.00  
YOUR CHANGE \$ 5.31  
1 FIVE DOLLAR BILL(S)  
1 QUARTER(S)  
1 NICKLE(S)  
1 PENNY(S)  
THANK YOU. COME AGAIN.

COST OF ITEM? 3672  
AMOUNT OF PAYMENT? 3700  
YOUR CHANGE \$ 28  
2 TEN DOLLAR BILL(S)  
1 FIVE DOLLAR BILL(S)  
3 ONE DOLLAR BILL(S)  
THANK YOU. COME AGAIN.

COST OF ITEM? 19.41  
AMOUNT OF PAYMENT? 50.00  
YOUR CHANGE \$ 30.59  
3 TEN DOLLAR BILL(S)  
1 ONE HALF DOLLAR(S)  
1 NICKLE(S)  
4 PENNY(S)  
THANK YOU. COME AGAIN.

COST OF ITEM?

READY  
LIST

```
10 REM %%% MOD ARITHMETIC %%%
20 REM !!!!! BY JIM BULL JR. !!!!!
30 REM ##### WRITTEN 2 / 1 / 77 #####
40 REM **** FILL MATRIX ****
50 INPUT "MULTIPLICATION OR ADDITION ? ", A$
60 INPUT "MOD = ", I
70 INPUT "WHAT IS THE HIGHEST NUMBER THAT YOU WANT ON THE CHART ? ", R
80 DIM M(R+1,R+1)
90 FOR A=0 TO R
100 FOR B=0 TO R
110 IF A$="M" THEN M(A,B)=A*B ELSE M(A,B)=A+B
120 NEXT B
130 NEXT A
140 REM ##### PRINT MATRIX #####
150# " MOD "; I;
160 IF A$(1,1)="M" THEN# " MULTIPLICATION TABLE" ELSE# " ADDITION TABLE"
170 IF A$="M" THEN# " X "; ELSE# " + ";
180 FOR A=0 TO R:#A;:NEXT A:#
190 G=A
200 FOR Z=1 TO (2*(A+2)):#"-";:NEXT Z:#""
210 FOR A=0 TO R
220#%2I;A; " ";
230 FOR B=0 TO R
240 IF M(A,B)<I THEN 250 ELSE M(A,B)=M(A,B)-I:GOTO 240
250#M(A,B);
260 NEXT B
270# " ":FOR Z=1 TO 2*(G+2):#"-";:NEXT Z:# " ":NEXT A
275 IF INP(0)=127 THEN 275
280# " " :# " " :# " " :# " "
290 END
READY
```



READY  
RUN

MULTIPLICATION OR ADDITION ? ADDITION

MOD = 12

WHAT IS THE HIGHEST NUMBER THAT YOU WANT ON THE CHART ? 22

MOD 12 ADDITION TABLE

+ 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

0 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10

1 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11

2 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0

3 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1

4 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2

5 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3

6 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4

7 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5

8 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6

9 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7

10 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8

11 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9

12 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10

13 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11

14 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0

15 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1

16 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2

17 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3

18 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4

19 7 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5

20 8 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6

21 9 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7

22 10 11 0 1 2 3 4 5 6 7 8 9 10 11 0 1 2 3 4 5 6 7 8

READY

READY  
LIST

```
10 REM LETTER - A GUESSING GAME
20 REM T.H. 12/76
30 FOR I=1 TO 10:PRINT"":NEXT
40 PRINT TAB(10);"- LETTER -"
50 PRINT"":PRINT
60 DIM A$(26),G$(26),L$(1)
70 A$="ABCDEFGHIJKLMNOPQRSTUVWXYZ"
80 REM PRINT INST. ON HOW TO PLAY
90 PRINT"I'LL THINK OF A LETTER FROM"
100 PRINT"A TO Z. TRY TO GUESS MY LETTER."
110 PRINT"AFTER EACH GUESS I'LL TELL YOU"
120 PRINT"IF YOU GUESSED MY LETTER, OR"
130 PRINT"IF YOUR GUESS IS TOO HIGH"
140 PRINT"OR TOO LOW."
150 REM COMPUTER THINKS OF A LETTER
160 X=INT(26*RND(1))+1
170 L$=A$(X,X)
180 PRINT
190 PRINT"OK, I HAVE A LETTER."
200 PRINT"START GUESSING."
210 REM ASK FOR A GUESS
220 PRINT
230 INPUT"WHAT IS YOUR GUESS? ",G$
240 REM IF GUESS IS NOT A LETTER TRY AGAIN
250 FOR K=1 TO 26
260 IF G$=A$(K,K) THEN 320
270 NEXT
280 PRINT"HEY! THAT'S NOT A SINGLE LETTER."
290 PRINT"PLAY FAIR NOW!"
300 GOTO 220
310 REM COMPARE GUESS WITH COMPUTERS LETTER
320 IF G$=L$ THEN 390
330 IF G$>L$ THEN 360
340 PRINT"TOO LOW. TRY A HIGHER LETTER."
350 GOTO 220
360 PRINT"TOO HIGH. TRY A LOWER LETTER."
370 GOTO 220
380 REM HUMAN HAS GUESSED THE COMPUTERS LETTER
390 PRINT
400 PRINT"YOU GOT IT!!! LET'S PLAY AGAIN."
410 PRINT
420 GOTO 160
430 END
READY
```

READY  
RUN

- LETTER -

I'LL THINK OF A LETTER FROM  
A TO Z. TRY TO GUESS MY LETTER.  
AFTER EACH GUESS I'LL TELL YOU  
IF YOU GUESSED MY LETTER, OR  
IF YOUR GUESS IS TOO HIGH  
OR TOO LOW.

OK, I HAVE A LETTER.  
START GUESSING.

WHAT IS YOUR GUESS? L  
TOO LOW. TRY A HIGHER LETTER.

WHAT IS YOUR GUESS? T  
TOO LOW. TRY A HIGHER LETTER.

WHAT IS YOUR GUESS? W  
TOO LOW. TRY A HIGHER LETTER.

WHAT IS YOUR GUESS? Y

YOU GOT IT!!! LET'S PLAY AGAIN.

OK, I HAVE A LETTER.  
START GUESSING.

WHAT IS YOUR GUESS?

READY  
LIST

```
10 REM          NUMBER      T.H. 12/76
20 REM
30 FOR I=1 TO 10:PRINT "":NEXT I
40 PRINT "      . NUMBER"
50 PRINT "":PRINT "":PRINT " "
60 PRINT "THIS IS A NUMBER GUESSING GAME. I'LL THINK OF A NUMBER BETWEEN"
70 PRINT "1 AND ANY LIMIT YOU WANT."
80 PRINT "THEN YOU HAVE TO GUESS WHAT IT IS."
90 PRINT "WHAT LIMIT DO YOU WANT ";
100 INPUT L
110 IF L=2 THEN END
120 L1=INT (LOG(L)/LOG(2))+1 #L = ((LOG(L))/(LOG(2)))+1
130 PRINT "I'M THINKING OF A NUMBER BETWEEN 1 AND";L
140 LET G=1
150 PRINT "NOW YOU TRY TO GUESS WHAT IT IS."
160 M=INT(L*RND(1))+1
170 INPUT N
180 IF N>0 THEN 220
190 GOTO 60
220 IF N=M THEN 270
210 G=G+1
220 IF N>M THEN 250
230 PRINT "TOO LOW. GUESS AGAIN."
240 GOTO 170
250 PRINT "TOO HIGH. GUESS AGAIN."
260 GOTO 170
270 PRINT "THAT'S IT! YOU GOT IT IN";G;" TRIES"
280 IF G<L1 THEN 320
290 IF G=L1 THEN 330
320 PRINT "YOU SHOULD HAVE BEEN ABLE TO GET IT IN ONLY";L1;" TRIES."
310 GOTO 340
320 PRINT "
330 PRINT "GCCL"
340 PRINT
350 GOTO 130
370 END
READY
```

VERY "4";

READY  
RUN

NUMBER

THIS IS A NUMBER GUESSING GAME. I'LL THINK OF A NUMBER BETWEEN  
1 AND ANY LIMIT YOU WANT.

THEN YOU HAVE TO GUESS WHAT IT IS.

WHAT LIMIT DO YOU WANT ?16

I'M THINKING OF A NUMBER BETWEEN 1 AND 16

NOW YOU TRY TO GUESS WHAT IT IS.

?8

TOO HIGH. GUESS AGAIN.

?4

TOO LOW. GUESS AGAIN.

?6

THAT'S IT! YOU GOT IT IN 3 TRIES

VERYGOOD

I'M THINKING OF A NUMBER BETWEEN 1 AND 16  
NOW YOU TRY TO GUESS WHAT IT IS.

?8

TOO HIGH. GUESS AGAIN.

?4

TOO LOW. GUESS AGAIN.

?6

TOO HIGH. GUESS AGAIN.

?5

THAT'S IT! YOU GOT IT IN 4 TRIES

VERYGOOD

I'M THINKING OF A NUMBER BETWEEN 1 AND 16  
NOW YOU TRY TO GUESS WHAT IT IS.

?10

TOO LOW. GUESS AGAIN.

?11

TOO LOW. GUESS AGAIN.

?12

TOO LOW. GUESS AGAIN.

?13

TOO LOW. GUESS AGAIN.

?14

THAT'S IT! YOU GOT IT IN 5 TRIES

GOOD

I'M THINKING OF A NUMBER BETWEEN 1 AND 16  
NOW YOU TRY TO GUESS WHAT IT IS.

?1

TOO LOW. GUESS AGAIN.