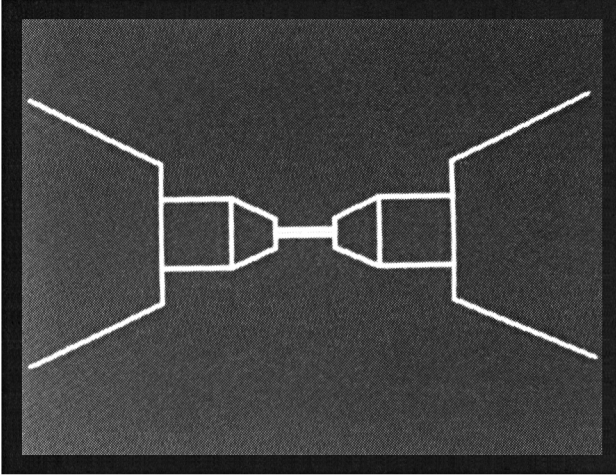


3D MAZE



CLASSIFICATION: Interactive Graphics

When the program is first initialised you must define a maze and follow the prompts. To move, east, west, north or south use the cursor keys. To move forward use the 'copy' key, also use the copy key to define the maze and the cursor keys to move around. To quit press 'Q'.

PROGRAM

Variables

MOVES	Number of moves
M(N,N)	Maze array containing walls
X,Y	Your coordinates in maze
ADIR, YDIR	X and Y direction in which you are looking can be either -1 , 0 , or $+1$
A,B	Position of cursor when defining maze
T,N,A\$	Dummy variables

Program Structure

Lines		Function/Activity
30	— 160	Main loop
507	— 610	Draw 3D view
1077	— 3050	Escaped from maze
5000	— 5200	Initialisation
5205	— 5407	Define maze
10000	— 10060	Draw 3D maze

Initialise

20 GOSUB 5000

Main program loop

```

30 :
100 IF INKEY(1) > -1 THEN XDIR = 1 : YDIR = 0 : INK 1, 0 :
    GOSUB 500 : INK 1, 24
110 IF INKEY(8) > -1 THEN XDIR = -1 : YDIR = 0 : INK 1, 0
: GOSUB 500 : INK 1, 24
120 IF INKEY(0) > -1 THEN XDIR = 0 : YDIR = -1 : INK 1, 0 :
    GOSUB 500 : INK 1, 24
130 IF INKEY(2) > -1 THEN XDIR = 0 : YDIR = 1 : INK 1, 0 :
    GOSUB 500 : INK 1, 24
140 IF INKEY(47) > -1 AND X + XDIR < 32 AND X + XDIR > 1 AND
    Y + YDIR < 24 AND Y + YDIR > 1 AND M(X + XDIR, Y + YD
    IR) = 32 THEN X = X + XDIR : Y = Y + YDIR : INK 1, 0 : GO
    SUB 500 : INK 1, 24 : MOVES = MOVES + 1 : IF X = 16 AND
    Y = 2 THEN GOSUB 1000
150 IF INKEY(67) > -1 THEN GOTO 3000
160 GOTO 100

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Draw 3D view

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500 :
510 CLS
520 IF M(X + XDIR, Y + YDIR) <> 32 THEN MOVE 1, 368 : DRAW
    639, 368 : DRAW 639, 80 : DRAW 1, 80 : DRAW 1, 368 : RE
    TURN
530 IF XDIR <> 0 THEN GOTO 540
533 IF M(X + YDIR, Y + YDIR) <> 32 THEN MOVE 1, 368 : DRAW
    160, 298 : DRAW 160, 149 : DRAW 1, 80 ELSE MOVE 1, 298
: DRAW 160, 298 : DRAW 160, 149 : DRAW 1, 149
534 IF M(X + (YDIR * -1), Y + YDIR) <> 32 THEN MOVE 640, 3
    68 : DRAW 480, 298 : DRAW 480, 149 : DRAW 640, 80 ELSE M
    OVE 640, 298 : DRAW 480, 298 : DRAW 480, 149 : DRAW 640,
    149
540 IF YDIR <> 0 THEN GOTO 550
543 IF M(X + XDIR, Y + (XDIR * -1)) <> 32 THEN MOVE 1, 368
: DRAW 160, 298 : DRAW 160, 149 : DRAW 1, 80 ELSE MOVE
    1, 298 : DRAW 160, 298 : DRAW 160, 149 : DRAW 1, 149
544 IF M(X + XDIR, Y + XDIR) <> 32 THEN MOVE 640, 368 : DR
    AW 480, 298 : DRAW 480, 149 : DRAW 640, 80 ELSE MOVE 640
    , 298 : DRAW 480, 298 : DRAW 480, 149 : DRAW 640, 149
550 IF M(X + XDIR + XDIR, Y + YDIR + YDIR) <> 32 THEN MOVE
    160, 298 : DRAW 480, 298 : MOVE 160, 149 : DRAW 480, 14
    9 : RETURN
552 IF XDIR <> 0 THEN GOTO 560
553 IF M(X + YDIR, Y + YDIR + YDIR) <> 32 THEN MOVE 160, 2
    98 : DRAW 240, 260 : DRAW 240, 186 : DRAW 160, 149 ELSE
    MOVE 160, 260 : DRAW 80, 0 : DRAW 0, -74 : DRAW -80,
    0
554 IF M(X + (YDIR * -1), Y + YDIR + YDIR) <> 32 THEN MOVE

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480, 298 : DRAW 400, 260 : DRAW 400, 186 : DRAW 480, 14
9 ELSE MOVE 480, 260 : DRAW -80, 0 : DRAW 0, -74 : DRA
WR 80, 0
560 IF YDIR <> 0 THEN GOTO 570
563 IF M(X + XDIR + XDIR, Y + (XDIR * -1)) <> 32 THEN MOVE
160, 298 : DRAW 240, 260 : DRAW 240, 186 : DRAW 160, 14
9 ELSE MOVE 160, 260 : DRAW 80, 0 : DRAW 0, -74 : DRAW
R -80, 0
564 IF M(X + XDIR + XDIR, Y + XDIR) <> 32 THEN MOVE 480, 2
98 : DRAW 400, 260 : DRAW 400, 186 : DRAW 480, 149 ELSE
MOVE 480, 260 : DRAW -80, 0 : DRAW 0, -74 : DRAW 80,
0
570 IF M(X + XDIR + XDIR + XDIR, Y + YDIR + YDIR + YDIR) <
> 32 THEN MOVE 240, 260 : DRAW 400, 260 : MOVE 240, 186
: DRAW 400, 186 : RETURN
572 IF XDIR <> 0 THEN GOTO 580
573 IF M(X + YDIR, Y + YDIR + YDIR + YDIR) <> 32 THEN MOVE
240, 260 : DRAW 288, 238 : DRAW 288, 207 : DRAW 240, 18
6 ELSE MOVE 240, 238 : DRAW 48, 0 : DRAW 0, -31 : DRAW
R -48, 0
574 IF M(X + (YDIR * -1), Y + YDIR + YDIR + YDIR) <> 32 TH
EN MOVE 400, 260 : DRAW 352, 238 : DRAW 352, 207 : DRAW
400, 186 ELSE MOVE 400, 238 : DRAW -48, 0 : DRAW 0, -3
1 : DRAW 48, 0
580 IF YDIR <> 0 THEN GOTO 590
583 IF M(X + XDIR + XDIR + XDIR, Y + (XDIR * -1)) <> 32 TH
EN MOVE 240, 260 : DRAW 288, 238 : DRAW 288, 207 : DRAW
240, 186 ELSE MOVE 240, 238 : DRAW 48, 0 : DRAW 0, -31
: DRAW -48, 0
584 IF M(X + XDIR + XDIR + XDIR, Y + XDIR) <> 32 THEN MOVE
400, 260 : DRAW 352, 238 : DRAW 352, 207 : DRAW 400, 18
6 ELSE MOVE 400, 238 : DRAW -48, 0 : DRAW 0, -31 : DRA
WR 48, 0
590 IF M(X + XDIR + XDIR + XDIR + XDIR, Y + YDIR + YDIR + Y
DIR + YDIR) <> 32 THEN MOVE 288, 238 : DRAW 352, 238 : M
OVE 288, 207 : DRAW 352, 207 : RETURN
592 IF XDIR <> 0 THEN GOTO 600
593 IF M(X + YDIR, Y + YDIR + YDIR + YDIR + YDIR) <> 32 TH
EN MOVE 288, 237 : DRAW 320, 227 : DRAW 320, 221 : DRAW
288, 208 ELSE MOVE 288, 227 : DRAW 32, 0 : DRAW 0, -6
: DRAW -32, 0
594 IF M(X + (YDIR * -1), Y + YDIR + YDIR + YDIR + YDIR) <
> 32 THEN MOVE 352, 237 : DRAW 320, 227 : DRAW 320, 221
: DRAW 352, 208 ELSE MOVE 352, 227 : DRAW -32, 0 : DRAW
R 0, -6 : DRAW 32, 0
600 IF YDIR <> 0 THEN GOTO 610
603 IF M(X + XDIR + XDIR + XDIR + XDIR, Y + (XDIR * -1)) <
> 32 THEN MOVE 288, 237 : DRAW 320, 227 : DRAW 320, 221
: DRAW 288, 208 ELSE MOVE 288, 227 : DRAW 32, 0 : DRAW
0, -6 : DRAW -32, 0
604 IF M(X + XDIR + XDIR + XDIR + XDIR, Y + XDIR) <> 32 TH
EN MOVE 352, 237 : DRAW 320, 227 : DRAW 320, 221 : DRAW
352, 208 ELSE MOVE 352, 227 : DRAW -32, 0 : DRAW 0, -6
: DRAW 32, 0
610 RETURN
1000 FOR T = 1 TO 24
1010 LOCATE 1, 1
1020 PRINT CHR$(11)
1030 INK 1, T
1040 NEXT T
1050 FOR T = 1 TO 10
1060 FOR N = 500 TO 700 STEP 10
1070 SOUND 129, T, 10, 15
1080 NEXT N : NEXT T

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1090 MODE 0
1100 LOCATE 4, 10 : PEN 7 : PRINT "IT TOOK YOU"
1110 LOCATE 4, 12 : PEN 4 : PRINT MOVES; " MOVES."
1120 PEN 1
1130 FOR T = 1 TO 3000 : NEXT T : GOTO 5010
3000 CLS : PRINT "[C].....CONTINUE"
3010 PRINT "[R].....RESTART"
3020 A$ = INKEY$ : IF A$ = "" THEN GOTO 3020
3030 IF A$ = "C" OR A$ = "c" THEN GOSUB 5000 : GOTO 1000
3040 IF A$ = "R" OR A$ = "r" THEN RUN
3050 GOTO 3020

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Player escaped from maze

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5000 :
5005 DIM M (32, 24)
5010 MOVES = 0
5020 X = 16
5030 Y = 23
5035 XDIR = 0
5037 YDIR = -1
5040 MODE 1
5050 INK 0, 0
5060 INK 1, 24
5070 BORDER 0
5080 PRINT "DEFINE MAZE?(Y/N)"
5090 A$ = INKEY$ : IF A$ <> "N" AND A$ <> "Y" AND A$ <> "y"
AND A$ <> "n" THEN GOTO 5090
5110 IF A$ = "N" OR A$ = "n" THEN GOTO 1000
5120 CLS
5130 FOR T = 1 TO 24
5140 FOR N = 1 TO 32
5165 M(N, T) = 233
5170 NEXT N
5180 NEXT T
5185 M(16,23) = 32
5187 M(16, 2) = 32
5190 A = 16
5192 FOR T = 2 TO 31 : M(T, 1) = 154 : M(T, 24) = 154 : NEXT
T
5193 FOR T = 2 TO 23 : M(1, T) = 149 : M(32, T) = 149 : NEXT
T
5194 M(1, 1) = 194 : M(32, 1) = 195 : M(1, 24) = 193 : M(32,
24) = 192
5200 B = 23
5205 GOSUB 10000
5210 LOCATE A, B
5220 PRINT "*"
5230 LOCATE A, B
5240 PRINT CHR$(M(A, B))
5250 A = A + (INKEY(8) > -1) - (INKEY(1) > -1)
5260 IF A > 31 THEN A = 31
5270 IF A < 2 THEN A = 2
5280 B = B + (INKEY(0) > -1) - (INKEY(2) > -1)
5290 IF B > 23 THEN B = 23
5300 IF B < 2 THEN B = 2
5310 IF INKEY(9) > -1 THEN IF M(A, B) = 233 THEN M(A, B) = 3
2 ELSE M(A, B) = 233
5320 IF INKEY(67) > -1 THEN FOR T = 0 TO 24 : INK 1, T : SOU
ND 2, T * 2, 10, 15 : NEXT T : RETURN
5330 SOUND 1, 1, 1, 15
5400 GOTO 5210

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Initialisation

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9999  :
10000 FOR T = 1 TO 24
10010 FOR N = 1 TO 32
10020 LOCATE N, T
10030 PRINT CHR$( M(N, T) )
10040 NEXT N
10050 NEXT T
10060 RETURN

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ChexSum Tables

20 = 376	604 = 9508	5140 = 1020
30 = 0	610 = 201	5165 = 1284
100 = 3802	1000 = 1018	5170 = 427
110 = 4054	1010 = 275	5180 = 433
120 = 4046	1020 = 598	5185 = 728
130 = 3803	1030 = 478	5187 = 696
140 = 17857	1040 = 433	5190 = 486
150 = 1845	1050 = 1004	5192 = 3498
160 = 322	1060 = 1732	5193 = 3488
500 = 0	1070 = 822	5194 = 3477
510 = 138	1080 = 861	5200 = 494
520 = 5320	1090 = 219	5205 = 276
530 = 1452	1100 = 1622	5210 = 658
533 = 6762	1110 = 1928	5220 = 333
534 = 8177	1120 = 234	5230 = 658
540 = 1463	1130 = 2012	5240 = 1318
543 = 7347	3000 = 2430	5250 = 3027
544 = 7588	3010 = 2242	5260 = 1493
550 = 6858	3020 = 2190	5270 = 1416
552 = 1472	3030 = 2769	5280 = 3022
553 = 8099	3040 = 2212	5290 = 1479
554 = 8696	3050 = 437	5300 = 1418
560 = 1483	5000 = 0	5310 = 5593
563 = 8683	5005 = 660	5320 = 4539
564 = 8106	5010 = 788	5330 = 453
570 = 8249	5020 = 509	5400 = 332
572 = 1524	5030 = 517	9999 = 0
573 = 8937	5035 = 705	10000 = 1018
574 = 9434	5037 = 952	10010 = 1020
580 = 1503	5040 = 220	10020 = 689
583 = 9520	5050 = 266	10030 = 1349
584 = 8843	5060 = 302	10040 = 427
590 = 9576	5070 = 176	10050 = 433
592 = 1512	5080 = 1441	10060 = 201
593 = 9225	5090 = 5081	
594 = 10100	5110 = 2324	
600 = 1523	5120 = 138	
603 = 9807	5130 = 1018	
		TOTAL = 305007