PROGRAM NAME: AMAZED IN SPACE
Written By: AQUILA
Address:

Telephone #
Adapted From:
Revised by R.M. Houser
415-447-8493

PROGRAM OUTLINE:
Type: MAZE
Opponent: SKILL
Length: As Desired
Controls Used: Keyboard, Joystick
Graphics? Yes
Memory Left SZ: 48

PROGRAM DESCRIPTION: Maneuver spaceship thru maze without crashing into walls. Direction is controlled by Joystick 1. Path size, maze height, maze width and degree of difficulty are selected by keyboard input. Score is based on these inputs and time taken to complete maze. It takes quite awhile to complete maze interior, so start small.

COMMENTS ON PROGRAM:
See Flowchart on back.

Variables Used: J,R,L,H,A,X,Y,P,Q
A,C,T,D,E,M,N,G,S, @(1), @(2), Z

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 2 .
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 5 .AMAZED IN SPACE
 6 .BY AQUILA
 7 .REVISED BY
 8 .R M HOUSER

10 J=0
20 NT=0:CLEAR:BC=0:FC=126

C  INPUT STATEMENTS
100 INPUT "DEGREE OF DIFFICULTY? 0-EASY 1-MEDIUM 2-HARD "R:CLEAR
110 PRINT "PATH SIZE CAN BE FROM ",#3,5+R," TO 20"
120 INPUT "PATH SIZE?"L:CLEAR
130 PRINT "HEIGHT CAN BE FROM 2 TO ",36÷L
140 INPUT "HEIGHT?"H:@(2)=LXH:CLEAR
150 IF @(2)>36 GOTO 130
160 PRINT "WIDTH CAN BE FROM 2 TO ",74÷L
170 INPUT "WIDTH?"W:@(1)=LXW:CLEAR
180 IF @(2)>74 GOTO 160

C  STARS
200 CLEAR:FOR A=1 TO 100
210 X=0:Y=0
220 BOX RND(160)-80,RND(88)-44,1,1,1:NEXT A

C  MAZE OUTLINE
300 BOX 0,0,2X@(1)+8,2X@(2)+8,2
310 LINE -@(1),@(2),4
320 LINE @(1),@(2),1
330 LINE @(1),-@(2)+L,1
340 LINE @(1),-@(2),4
350 LINE -@(1),-@(2),1
360 LINE -@(1),@(2)-L,1
370 LINE -@(1),@(2),4
380 LINE X,Y,4

C  MAZE INTERIOR
400 P=(WXHX(100÷L))
410 FOR Q=1TO P
420 A=(RND(3)-2)XL
430 B=(RND(3)-2)XL:X=X+A
440 IF X<-@(1) X=@(1)        Rejects
450 IF X>@(1) X=-@(1)
460 IF PX(X,Y)=1 LINE X,Y,4
470 LINE X,Y,1:Y=Y+B
480 IF Y<-@(2) Y=@(2)
490 IF Y>@(2) Y=-@(2)
510 IF PX(X,Y)=1 LINE X,Y,4
520 LINE X,Y,4:P=P-1
530 CY=40:PRINT "COUNTDOWN=",#2,P
540 NEXT Q
550 CY=40:PRINT "                "

C  SPACESHIP
700 C=0:T=0
710 X=-@(1)-2
720 Y=@(2)-(L÷2):M=0:N=0
740 &(23)=255:BC=0
750 D=JX(1):E=JY(1)
760 M=M+D:N=N+E
770 G=3
780 IF M>G M=G
790 IF M<-G M=-G
800 IF N>G N=G
810 IF N<-G N=-G
820 X=X+M:Y=Y+N
830 IF D#0&(21)=255
840 IF E#0&(21)=255
850 IF D=0IF E=0&(21)=0
860 T=T+1:CY=4:PRINT #4,T
870 BOX X,Y,3,3,3
880 BOX X-D,Y-E,1,1,3
890 BOX X-D,Y-E,1,1,3
910 BOX X,Y,3,3,3

C  Comparisons
920 IF PX(X,Y)=1GOTO 1100
930 IF PX(X+R,Y+R)=1GOTO 1100
940 IF PX(X+R,Y-R)=1GOTO 1100
950 IF PX(X-R,Y+R)=1GOTO 1100
960 IF PX(X-R,Y-R)=1GOTO 1100
970 IF X>@(1)IF Y<-@(2)+L &(21)=0:GOTO 1300
980 IF X<-@(1)IF Y<@(2)-L &(21)=0:GOTO 1200
990 IF X<-@(1) IF Y>@(2)&(21)=0
1000 GOTO 750
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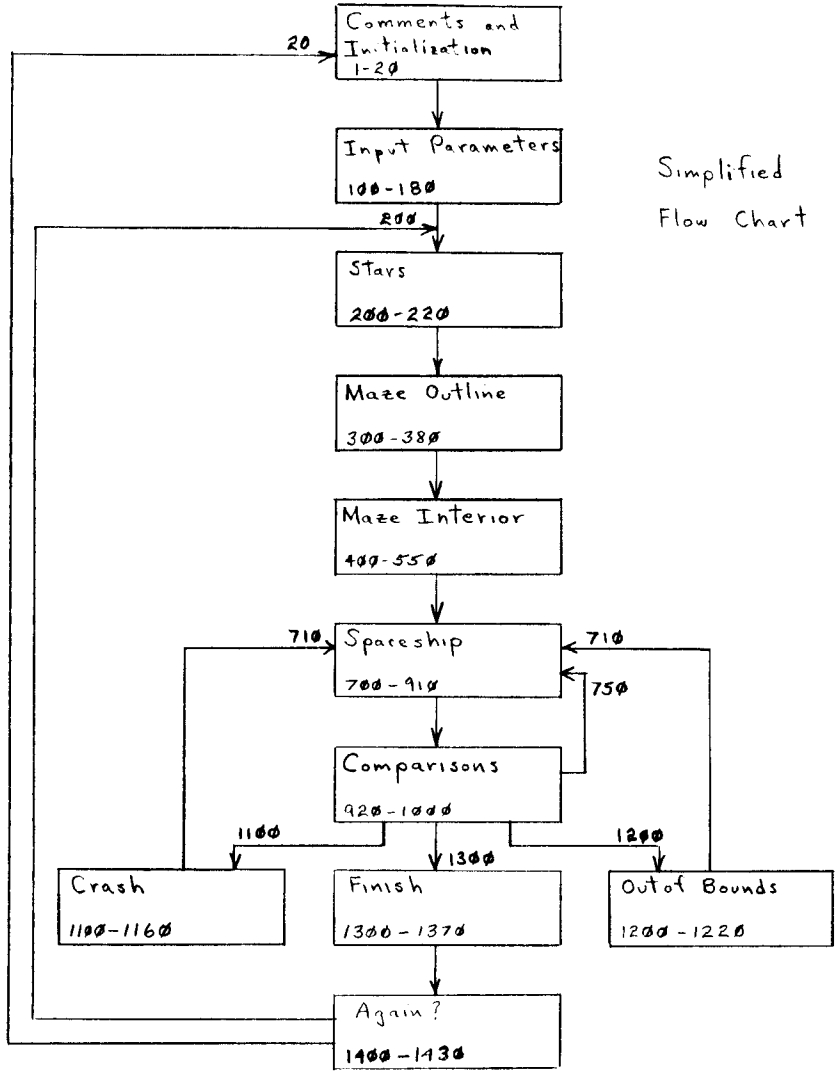
Line #	Statement(s)	Comments
	C CRASH	J- Last Score
1100	&(21)=0;C=C+1	R- Degree of Difficulty
1110	CX=-.75;CY=.44;PRINT C," CRASH!"	L- Path Size
1120	FOR A=1 TO 25;BC=80;NT=5	H- Maze Height x2
1140	MU="4";NEXT A	W- Maze Width x2
1160	NT=0;GOTO 710	X- Spaceship X Location
		Y- Spaceship Y Location
	C OUT OF BOUNDS	P- # of loops to complete maze interior, on large mazes can take 15-20 minutes to complete.
1200	NT=5;CY=.44;PRINT "OUTER LIMITS--OFF LIMITS";NT=0	C- Crashes
1210	CY=.44;PRINT " "	M- X velocity
1220	GOTO 710	N- Y velocity
		D- JX input
	C FINISH	E- Jy input
1300	NT=3;CLEAR	G- max movement per loop, if any larger spaceship will jump lines without crashing
1320	PRINT "FAR OUT!, YOU DID IT!;ONLY",#3,C," CRASH(ES)!"	S- Score
1330	PRINT "TIME=",#5,T	Z- Again Input
1340	S=((R+1)xHxW)x72÷((TxL)÷10)x10	A, Q loops
1350	PRINT "SCORE=",#5,S	
1360	IF S>J J=S	
1370	PRINT "TODAY'S HIGH SCORE=",#5,J	
	C TO PLAY AGAIN	
1400	PRINT "AGAIN?"	
1410	NT=0;INPUT "1-YES 2-SAME AS LAST GAME"Z	
1420	IF Z=1 GOTO 20	
1430	IF Z=2 GOTO 200	
	:RETURN	



Simplified Flow Chart

R.M.H.