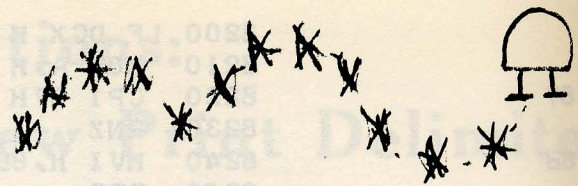


THE BOUNCING BEASTIE
 A RANDOM WALKER FOR PROCESSOR TECH'S
 VDM

by Marvin R. Winzenread

If you have a Processor Technology VDM or any display that reads directly from memory, and at least 256 bytes of other memory, here is a random walk program you might like.



The program was assembled using P.T.'s software No. 1 on a system of only 8K, so the comments were added later. I hope you enjoy my turtle.

000	31	A1	00	0900	LXI 6,AR+6	Set Stack Pointer
003	3E	00		1000	MVI A,0	
005	D3	8C		1010	OUT 8CH *	
007	21	00	88	1020	AG LXI H,8800H *	Initialize VDM
00A	36	20		1030	ST MVI M,20H	
00C	23			1040	INX H	
00D	7C			1050	MOV A,H	
00E	FE	8C		1060	CPI 8CH *	
010	C2	0A	00	1070	JNZ ST	
013	21	20	8A	2000	N1 LXI H,8A20H *	Start in Center of Screen
016	36	07		2010	N2 MVI M,7	Looks like a turtle to me
018	78			2020	N4 MOV A,B	
019	E6	03		2023	ANI 3	
01B	CA	24	00	2025	JZ N5	
01E	01	FF	1F	2027	LXI B,1FFFH	
021	C3	27	00	2030	JMP N3	A wait routine to slow the action to human speeds
024	01	FF	0F	2033	N5 LXI B,0FFFH	
027	0B			2040	N3 DCX B	
028	78			2050	MOV A,B	
029	FE	07		2055	CPI A,0	
02B	C2	27	00	2060	JNZ N3	
02E	36	2A		2900	MVI M,2AH ←	Experiment with different fonts
030	CD	72	00	3000	CALL RND ←	Could be IN0FFH If you want to control the action
033	47			3010	MOV B,A	
034	E6	01		3020	ANI 1	
036	C4	5E	00	3025	CNZ UP	
039	78			3030	MOV A,B	
03A	E6	02		3035	ANI 2	
03C	C4	69	00	3036	CNZ DN	
03F	78			3040	MOV A,B	MOVE
040	E6	40		3050	ANI 40H	
042	C4	4E	00	3055	CNZ RT	
045	78			3060	MOV A,B	
046	E6	80		3065	ANI 80H	
048	C4	56	00	3070	CNZ LF	
04B	C3	16	00	5000	JMP N2	
04E	23			8100	RT INX H	
04F	7C			8110	MOV A,H	
050	FE	8C		8120	CPI 8CH *	Move right
052	C0			8130	RNZ	
053	26	88		8140	MVI H,88H *	
055	C9			8190	RET	

0056 2B
 0057 7C
 0058 FE 87
 005A C0
 005B 26 8B
 005D C9
 005E 11 C0 FF
 0061 19
 0062 7C
 0063 E6 FB
 0065 F6 08
 0067 67
 0068 C9
 0069 11 40 00
 006C 19
 006D 7C
 006E E6 FB
 0070 67
 0071 C9
 0072 E5
 0073 21 9A 00
 0076 06 08
 0078 7E
 0079 07
 007A 07
 007B 07
 007C AE
 007D 17
 007E 17
 007F 2D
 0080 2D
 0081 2D
 0082 7E
 0083 17
 0084 77
 0085 2C
 0086 7E
 0087 17
 0088 77
 0089 2C
 008A 7E
 008B 17
 008C 77
 008D 2C
 008E 7E
 008F 17
 0090 77
 0091 05
 0092 C2 79 00
 0095 E1
 0096 C9
 0097
 009B

8200 LF DCX H
 8210 MOV A,H
 8220 CPI 87H *
 8230 RNZ
 8240 MVI H,8BH *
 8290 RET
 8300 UP LXI D,OFFCOH
 8310 DAD D
 8320 MOV A,H
 8330 ANI OFBH *
 8340 ORI 08H
 8350 MOV H,A
 8390 RET
 8400 DN LXI D,40H
 8410 DAD D
 8420 MOV A,H
 8430 ANI OFBH *
 8440 MOV H,A
 8490 RET
 8600 RND PUSH H
 8610 LXI H,SH+3
 8620 MVI B,8
 8630 MOV A,M
 8640 RTOP RLC
 8641 RLC
 8642 RLC
 8650 XRA M
 8660 RAL
 8661 RAL
 8670 DCR L
 8671 DCR L
 8672 DCR L
 8680 MOV A,M
 8690 RAL
 8695 MOV M,A
 8700 INR L
 8710 MOV A,M
 8720 RAL
 8730 MOV M,A
 8740 INR L
 8750 MOV A,M
 8760 RAL
 8770 MOV M,A
 8780 INR L
 8790 MOV A,M
 8800 RAL
 8810 MOV M,A
 8820 DCR B
 8830 JNZ RTOP
 8840 POP H
 8850 RET
 9000 SH DS 4
 9010 AR DS 6

Move left

Up

Down

A random number generator from P.C.C.

*My VDM is addressed as: 8C = Port address
 8800 - 8BFF = Memory
 If yours is addressed differently you need to
 make changes in these statements.