

```

1 0001 0000 ; Program: SHOWMEM
2 0002 0000 ; Author: Johan Kotze
3 0003 0000 ; Date: 2017/07/16
4 0004 0000 ;
5 0005 0000 ; Print the contents of memory four bytes at a time
6 0006 0000 ; in the following fashion:
7 0007 0000 ;
8 0008 0000 ; +-----+
9 0009 0000 ; |ADDR:00 01 02 03|
10 0010 0000 ; |1800 CD 64 0B 21|
11 0011 0000 ; +-----+
12 0012 0000 ;
13 0013 0000 ; The following keys are used:
14 0014 0000 ; +-+
15 0015 0000 ; |+| Pressing + displays the next 4 bytes
16 0016 0000 ; +-+
17 0017 0000 ; |-| Pressing - displays the previous 4 bytes
18 0018 0000 ; +-+
19 0019 0000 ; Cases not tested for are when the top or bottom
20 0020 0000 ;-----
21 0021 0000 ;
22 0022 0000 ; Monitor calls used:
23 0023 0000
24 0024 0000 initlcd .equ 0b64h ;Clears and resets the LCD
25 0025 0000 printtext .equ 0cc8h ;Prints text string pointed
26 0026 0000 ;Last character = 00h
27 0027 0000 gotoxy .equ 0cc2h ;Position LCD cursor accordingly
28 0028 0000 ; H = Row and L = Col
29 0029 0000 printhex .equ 0cd4h ;Print contents of A-reg in
30 0030 0000 printchar .equ 0cceh ;Print ASCII character in L-
31 0031 0000 scan .equ 05feh ;Scan keyboard until a key is
32 0032 0000 ;Key Value is left in (IX)
33 0033 0000
34 0034 1800 .org 1800h
35 0035 1800 main
36 0036 1800 CD 64 0B call initlcd
37 0037 1803 21 00 18 ld hl,1800h
38 0038 1806 22 58 18 ld (addr),hl
39 0039 1809 21 5A 18 ld hl,heading ;Print the heading
40 0040 180C CD C8 0C call printtext
41 0041 180F lstart
42 0042 180F 26 01 ld h,1 ;Place cursor on start
43 0043 1811 2E 00 ld l,0
44 0044 1813 CD C2 0C call gotoxy
45 0045 1816 2A 58 18 ld hl,(addr) ;Print line label
46 0046 1819 7C ld a,h ;First the MSB
47 0047 181A E5 push hl
48 0048 181B CD D4 0C call printhex
49 0049 181E D1 pop de
50 0050 181F 7B ld a,e ;Then the LSB
51 0051 1820 CD D4 0C call printhex
52 0052 1823 06 04 ld b,4 ;Now print the contents
53 0053 1825 linloop ;starting at (addr)
54 0054 1825 2E 20 ld l,' '
55 0055 1827 CD CE 0C call printchar
56 0056 182A 2A 58 18 ld hl,(addr)
57 0057 182D 7E ld a,(hl)
58 0058 182E CD D4 0C call printhex
59 0059 1831 2A 58 18 ld hl,(addr)
60 0060 1834 23 inc hl

```

```
61 0061 1835 22 58 18          ld (addr),hl
62 0062 1838 10 EB          djnz linloop
63 0063 183A          getkey
64 0064 183A DD 21 6B 18    ld ix,buffer          ;ix points at key buffer
65 0065 183E CD FE 05      call scan
66 0066 1841          ;ld hl,buffer
67 0067 1841          ;ld a,(buffer)
68 0068 1841          keyplus
69 0069 1841 FE 10        cp 10h                ;was + pressed
70 0070 1843 CA 0F 18      jp z,lstart          ;display had already
71 0071 1846 FE 11        cp 11h                ;was - pressed
72 0072 1848 20 F0        jr nz,getkey
73 0073 184A 2A 58 18      ld hl,(addr)         ;subtract 8 from (ac
74 0074 184D 06 08        ld b,8
75 0075 184F          subloop
76 0076 184F 2B          dec hl
77 0077 1850 10 FD        djnz subloop
78 0078 1852 22 58 18      ld (addr),hl
79 0079 1855 C3 0F 18      jp lstart            ;display new line
80 0080 1858
81 0081 1858 00 18        addr      .dw main
82 0082 185A 414444523A30heading .byte "ADDR:00 01 02 03",00h
83 0082 1860 3020303120303220303300
84 0083 186B 00          buffer .byte 0
85 0084 186C 00          .byte 0
86 0085 186D 00          .byte 0
87 0086 186E 00          .byte 0
88 0087 186F 00          .byte 0
89 0088 1870 00          .byte 0
90 0089 1871          .end
91 tasm: Number of errors = 0
92
```