

Question 1

Direct method - 8 bits

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
E:\>debugx
-e 200
0859:0200 00.ab 00.
-e 210
0859:0210 00.cd 00.
-a 100
0859:0100 mov ax,[0200]
0859:0103 mov bx,[0210]
0859:0107 mov [0200],bx
0859:010B mov [0210],ax
0859:010E
-g 010E
AX=00AB BX=00CD CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=0859 ES=0859 SS=0859 CS=0859 IP=010E NU UP EI NG NZ NA PE NC
0859:010E 20696E AND [BX+DI+6E],CH DS:013B=00
-d 200
0859:0200 CD 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0210 AB 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0220 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0230 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0240 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0250 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0260 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0270 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
-S_
```

Direct method - 16 bits part 1

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
E:\>debugx
-e 200
0859:0200 CD.ab 00.cd 00.
-e 210
0859:0210 AB.12 00.34 00.
-a 100
0859:0100 mov ax,[0200]
0859:0103 mov bx,[0210]
0859:0107 mov [0200],bx
0859:010B mov [0210],ax
0859:010E
-g 010E
AX=CDAB BX=3412 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=0859 ES=0859 SS=0859 CS=0859 IP=010E NU UP EI NG NZ NA PE NC
0859:010E 20696E AND [BX+DI+6E],CH DS:3480=00
-d 100
0859:0100 A1 00 02 BB 1E 10 02 89-1E 00 02 A3 10 02 20 69 ..... i
0859:0110 6E 20 74 68 69 73 20 66-69 6C 65 2E 20 50 6C 65 n this file. Ple
0859:0120 61 73 65 20 64 6F 20 6E-6F 74 20 6F 70 65 6E 20 ase do not open
0859:0130 76 69 72 75 73 75 73 20-69 6E 20 00 68 69 73 20 virusus in .his
0859:0140 66 69 6C 65 2E 20 50 6C-65 61 73 65 20 64 6F 20 file. Please do
0859:0150 6E 6F 74 20 6F 70 65 6E-20 69 74 2E 20 00 00 00 not open it. ...
0859:0160 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0170 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
-S_
```

Part 2

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
0859:010B mov [0210],ax
0859:010E
-g 010E
AX=CDAB BX=3412 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=0859 ES=0859 SS=0859 CS=0859 IP=010E NU UP EI NG NZ NA PE NC
0859:010E 20696E AND [BX+DI+6E],CH DS:3480=00
-d 100
0859:0100 A1 00 02 BB 1E 10 02 89-1E 00 02 A3 10 02 20 69 ..... i
0859:0110 6E 20 74 68 69 73 20 66-69 6C 65 2E 20 50 6C 65 n this file. Ple
0859:0120 61 73 65 20 64 6F 20 6E-6F 74 20 6F 70 65 6E 20 ase do not open
0859:0130 76 69 72 75 73 75 73 20-69 6E 20 00 68 69 73 20 virusus in .his
0859:0140 66 69 6C 65 2E 20 50 6C-65 61 73 65 20 64 6F 20 file. Please do
0859:0150 6E 6F 74 20 6F 70 65 6E-20 69 74 2E 20 00 00 00 not open it. ...
0859:0160 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0170 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
-d 200
0859:0200 12 34 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .4.....
0859:0210 AB CD 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0220 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0230 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0240 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0250 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0260 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0270 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
-S_
```

Direct method 32 bits

Part 1

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
E:\>debugx
-rx
386 regs on
-e 200
0859:0200 12.ab 34.cd 00.ef 00.
-r 210
^ Error
-e 210
0859:0210 AB.12 CD.34 00.56 00.
-a 100
0859:0100 mov Eax,[0200]
0859:0104 mov ebx,[0210]
0859:0109 mov [0200],ebx
0859:010E mov [0210],eax
0859:0112
-g 0112
EAX=00EFCDA8 EBX=00563412 ECX=00000000 EDX=00000000 ESP=0000FFFE EBP=00000000
ESI=00000000 EDI=00000000 EIP=00000112 EFL=00007286 NU UP EI NG NZ NA PE NC
DS=0859 ES=0859 SS=0859 CS=0859 FS=0000 GS=0000
0859:0112 7468 JZ 017C
-S
```

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
-r 210
^ Error
-e 210
0859:0210 AB.12 CD.34 00.56 00.
-a 100
0859:0100 mov Eax,[0200]
0859:0104 mov ebx,[0210]
0859:0109 mov [0200],ebx
0859:010E mov [0210],eax
0859:0112
-g 0112
EAX=00EFCDA8 EBX=00563412 ECX=00000000 EDX=00000000 ESP=0000FFFE EBP=00000000
ESI=00000000 EDI=00000000 EIP=00000112 EFL=00007286 NU UP EI NG NZ NA PE NC
DS=0859 ES=0859 SS=0859 CS=0859 FS=0000 GS=0000
0859:0112 7468 JZ 017C
-d 200
0859:0200 12 34 56 00 00 00 00 00-00 00 00 00 00 00 00 00 .4U.....
0859:0210 AB CD EF 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0859:0220 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0230 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0240 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0250 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0260 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0270 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-S_
```

Register Relative addressing

8 bits

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
E:\>debugx
-e 200
0059:0200 12.ab 34.
-e 210
0059:0210 AB.12 CD.
-mov bp,0200
^ Error
-a 100
0059:0100 mov bp,200
0059:0103 mov al,[bp]
0059:0106 mov bl,[bp+10]
0059:0109 mov [bp],,bl
^ Error
0059:0109 mov [bp],bl
0059:010C mov 10[bp],al
0059:010F
-g 010F
AX=00AB BX=0012 CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=0059 ES=0059 SS=0059 CS=0059 IP=010F NU UP EI NG NZ NA PE NC
0059:010F A31002 MDU [0210],AX DS:0210=CDAB
-S_
```

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
-mov bp,0200
^ Error
-a 100
0059:0100 mov bp,200
0059:0103 mov al,[bp]
0059:0106 mov bl,[bp+10]
0059:0109 mov [bp],,bl
^ Error
0059:0109 mov [bp],bl
0059:010C mov 10[bp],al
0059:010F
-g 010F
AX=00AB BX=0012 CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=0059 ES=0059 SS=0059 CS=0059 IP=010F NU UP EI NG NZ NA PE NC
0059:010F A31002 MDU [0210],AX DS:0210=CDAB
-d 200
0059:0200 12 34 56 00 00 00 00 00-00 00 00 00 00 00 00 00 .4U.....
0059:0210 AB CD EF 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0220 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0230 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0240 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0250 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0260 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0270 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
-S_
```

16 bits

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
-e 200
0059:0200 00.12 00.34 00.
-e 210
0059:0210 00.ab 00.cd 00.
-a 100
0059:0100 mov bp,0200
0059:0103 mov ax,[bp]
0059:0106 mov bx,10[bp]
0059:0109 mov [bp],bx
0059:010C mov 10[bp],ax
0059:010F
-g 010F
AX=3412 BX=CDAB CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=0059 ES=0059 SS=0059 CS=0059 IP=010F NU UP EI NG NZ NA PE NC
0059:010F A31002 MDU [0210],AX DS:0210=3412
-d 200
0059:0200 AB CD 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0210 12 34 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .4.....
0059:0220 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0230 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0240 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0250 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0260 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0270 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
-S_
```


32 bits

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
-w 210
Cannot write: no file name given
-e 210
0859:0210 12.09 34.87 00.76 00.65 00.54 00.
-a 100
0859:0100 mov bp,200
0859:0103 mov eax,[bp]
0859:0107 mov ebx,10[bp]
0859:010B mov [bp],ebx
0859:010F mov 10[bp],eax
0859:0113
-g 0113
AX=3412 BX=8709 CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=0859 ES=0859 SS=0859 CS=0859 IP=0113 NU UP EI NG NZ NA PE NC
0859:0113 686973 PUSH WORD 7369
-d 200
0859:0200 09 87 76 65 00 00 00 00-00 00 00 00 00 00 00 00 ..ve.....
0859:0210 12 34 56 78 54 00 00 00-00 00 00 00 00 00 00 00 .4UxT.....
0859:0220 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0230 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0240 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0250 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0260 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0270 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-S_
```

Base indexed:

32 bits

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
-e 210
072A:0210 30.09 01.87 2B.76 01.65 2A.
-a 100
072A:0100 mov bp,200
^ Error
072A:0100 mov si,0
072A:0103 mov al,10[bp+si]
072A:0106 mov bl,[bp+si]
072A:0108 mov [bp+si],al
072A:010A mov 10[bp+si],bl
072A:010D
-g 0110
AX=0018 BX=00CD CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=072A ES=072A SS=072A CS=072A IP=0110 NU UP EI PL NZ NA PE NC
072A:0110 0000 ADD [BX+SI],AL DS:00CD=00
-d 200
072A:0200 12 34 56 78 ED 02 90 02-91 02 E1 02 31 01 E0 02 .4Ux.....1...
072A:0210 09 87 76 65 2A 01 09 01-01 01 08 00 09 00 0B 01 ..ve*.....
072A:0220 03 01 18 00 19 00 0D 01-05 01 28 00 29 00 A0 02 .....(.)...
072A:0230 A1 02 86 00 87 00 0E 01-06 01 30 00 31 00 00 01 .....0.1...
072A:0240 04 07 0A 0D 10 13 16 19-1B 1E 21 23 25 27 29 2B .....!#%'')+
072A:0250 2D 30 32 34 37 3A 3E 40-42 44 46 49 4B 4D 51 55 -0247:>eBDFIKMQU
072A:0260 59 5D 60 63 65 67 69 6B-6D 70 73 76 79 7C 7F 83 Yl`cegi kmpsuy!..
072A:0270 87 8A 8D 8F 92 95 98 9B-9E A0 A2 A6 AA AD B0 B2 .....
-S
```

16 bits

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
072A:0106 mov ax,[bp+sil]
072A:0108 mov bx,10[bp+sil]
072A:010B mov [bp+sil],bx
072A:010D mov 10[bp+sil],ax
072A:0110 g 110
^ Error
072A:0110
-g 100
AX=0000 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=072A ES=072A SS=072A CS=072A IP=0100 NU UP EI NG NZ NA PO NC
072A:0100 BD0002 MOV BP,0200
-g 110
AX=0201 BX=0403 CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=072A ES=072A SS=072A CS=072A IP=0110 NU UP EI NG NZ NA PO NC
072A:0110 0000 ADD [BX+SI],AL DS:0403=00
-d 200
072A:0200 03 04 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
072A:0210 01 02 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0220 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0230 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0240 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0250 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0260 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0270 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-S

```

8 bits

Part 1

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
AX=0201 BX=0403 CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=072A ES=072A SS=072A CS=072A IP=0110 NU UP EI NG NZ NA PO NC
072A:0110 0000 ADD [BX+SI],AL DS:0403=00
-d 200
072A:0200 03 04 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0210 01 02 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0220 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0230 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0240 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0250 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0260 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0270 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-a 100
072A:0100 mov bp,200
072A:0103 mov si,0
072A:0106 mov al,[bp+sil]
072A:0108 mov bl,10[bp+sil]
072A:010B mov 10[bp+sil],al
072A:010E mov [bp+sil],bl
072A:0110
-g 110
AX=0201 BX=0403 CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=072A ES=072A SS=072A CS=072A IP=0110 NU UP EI NG NZ NA PO NC
072A:0110 0000 ADD [BX+SI],AL DS:0403=00
-d S

```

Part 2

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
072A:0250 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0260 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0270 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-a 100
072A:0100 mov bp,200
072A:0103 mov si,0
072A:0106 mov al,[bp+sil]
072A:0108 mov bl,10[bp+sil]
072A:010B mov 10[bp+sil],al
072A:010E mov [bp+sil],bl
072A:0110
-g 110
AX=0201 BX=0403 CX=0000 DX=0000 SP=FFFE BP=0200 SI=0000 DI=0000
DS=072A ES=072A SS=072A CS=072A IP=0110 NU UP EI NG NZ NA PO NC
072A:0110 0000 ADD [BX+SI],AL DS:0403=00
-d 200
072A:0200 03 04 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0210 01 02 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0220 00 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0230 00 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0240 00 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0250 00 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0260 00 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
072A:0270 00 00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-S

```

Task 2

```
E:\>debugx
-N DontOpen.txt
-L 100
-D 100
0059:0100  54 68 65 72 65 20 69 73-20 76 69 72 75 73 20 69 There is virus i
0059:0110  6E 20 74 68 69 73 20 66-69 6C 65 2E 20 50 6C 65 n this file. Ple
0059:0120  61 73 65 20 64 6F 20 6E-6F 74 20 6F 70 65 6E 20 ase do not open
0059:0130  69 74 2E 20 00 00 00 00-00 00 00 00 00 00 00 00 it. ....
0059:0140  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0150  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0160  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
0059:0170  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
-S 100 1000 "virus"
0059:0109
-
```

Task 3

```
DOS
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
D:\BIN>debugx
-e 200
0059:0200  00.ab  00.cd  00.
-a 100
0059:0100  mov ax,[0200]
0059:0103  mov bx,[0200]
0059:0107  mov cx,[0200]
0059:010B  mov dx,[0200]
0059:010F  mov si,[0200]
0059:0113  mov di,[0200]
0059:0117
-N d:\new file.com
-r bx 0
-r cx 100
-w 100
Writing 0100 bytes
-
```

Task 4

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
E:\>debugx
-N DontOpen.txt
-l 100
-d 100
0859:0100 54 68 65 72 65 20 69 73-20 76 69 72 75 73 20 69 There is virus i
0859:0110 6E 20 74 68 69 73 20 66-69 6C 65 2E 20 50 6C 65 n this file. Ple
0859:0120 61 73 65 20 64 6F 20 6E-6F 74 20 6F 70 65 6E 20 ase do not open
0859:0130 69 74 2E 20 72 75 73 20-69 6E 20 74 68 69 73 20 it. rus in this
0859:0140 66 69 6C 65 2E 20 50 6C-65 61 73 65 20 64 6F 20 file. Please do
0859:0150 6E 6F 74 20 6F 70 65 6E-20 69 74 2E 20 00 00 00 not open it. ...
0859:0160 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0170 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-M 0109 L 5 0130
-d 100
0859:0100 54 68 65 72 65 20 69 73-20 76 69 72 75 73 20 69 There is virus i
0859:0110 6E 20 74 68 69 73 20 66-69 6C 65 2E 20 50 6C 65 n this file. Ple
0859:0120 61 73 65 20 64 6F 20 6E-6F 74 20 6F 70 65 6E 20 ase do not open
0859:0130 76 69 72 75 73 75 73 20-69 6E 20 74 68 69 73 20 virusus in this
0859:0140 66 69 6C 65 2E 20 50 6C-65 61 73 65 20 64 6F 20 file. Please do
0859:0150 6E 6F 74 20 6F 70 65 6E-20 69 74 2E 20 00 00 00 not open it. ...
0859:0160 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
0859:0170 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 .....
-S

```

Task 5

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
E:\>debugx
-H 14F 22
0171 012D
-S_

```

Task 6

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
E:\>debugx
-F 0210 L 17 "H"
-d 0210
0059:0210  48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 HHHHHHHHHHHHHHHHH
0059:0220  48 48 48 48 48 48 48 00 00 00 00 00 00 00 00 HHHHHHH.....
0059:0230  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0059:0240  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0059:0250  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0059:0260  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0059:0270  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0059:0280  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
_
```