

```
01 .model small
02 .stack 100h
03
04 .data
05
06 .code
07 main proc
08     mov ax, @data
09     mov ds, ax
10
11     mov ah, 1
12     int 21h
13     mov bl, al
14
15     mov ah, 1
16     int 21h
17     mov bh, al
18
19     cmp bl, bh
20     jg 12
21     jmp 11
22
23 11:
24     mov ah, 2
25     mov dl, bl
26     int 21h
27     jmp end_program
28
29 12:
30     mov ah, 2
31     mov dl, bh
32     int 21h
33     jmp end_program
34
35 end_program:
36     mov ah, 4Ch
37     int 21h
38
39 main endp
40 end main
41 |
```



```
01 .model small
02 .stack 100h
03
04
```

emulator: noname.exe_

registers

	H	L
AX	4C	35
BX	36	35
CX	01	2B
DX	00	35
CS	F400	
IP	0204	
SS	0710	
SP	00FA	
BP	0000	
SI	0000	
DI	0000	
DS	0720	
ES	0700	

F400:0204

```
F4200: FF 255 RES
F4201: FF 255 RES
F4202: CD 205 =
F4203: 21 033 ?
F4204: CF 207 ±
F4205: 00 000 NULL
F4206: 00 000 NULL
F4207: 00 000 NULL
F4208: 00 000 NULL
F4209: 00 000 NULL
F420A: 00 000 NULL
F420B: 00 000 NULL
F420C: 00 000 NULL
F420D: 00 000 NULL
F420E: 00 000 NULL
F420F: 00 000 NULL
F4210: 00 000 NULL
F4211: 00 000 NULL
F4212: 00 000 NULL
F4213: 00 000 NULL
F4214: 00 000 NULL
F4215: 00 000 NULL
```

F400:0204

```
BIOS DI
INT 021h
I RET
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
ADD [BX + SI],
...
```

screen source reset aux vars debug stack

```
20 jg 12
21 jmp 11
22
23 11:
24 mov ah, 2
25 mov dl, b1
26 int 21h
27 jmp end_program
28
29 12:
30 mov ah, 2
31 mov dl, bh
32 int 21h
33 jmp end_program
34
```

emulator screen (80x25 chars)

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clear screen

change font

0/16

```
01 .model small
02 .stack 100h
03 .data
04 .code
05
06
07 main proc
08
09 mov ah, 1
10 int 21h
11 mov bl, al
12
13 mov ah, 1
14 int 21h
15 mov bh, al
16
17 cmp bl, bh
18 jg l1
19 jmp l2
20
21 l1:
22 mov ah, 2
23 mov dl, bl
24 int 21h
25
26 l2:
27 mov ah, 2
28 mov dl, bh
29 int 21h
30
31 end main
32 |
```



```
01 .model small
02 .stack 100h
03 .data
04
```

emulator: noname.exe_

registers

	H	L
AX	02	36
BX	36	34
CX	01	1E
DX	00	36
CS	0720	
IP	0032	
SS	0710	
SP	0100	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

0720:0032

0720:0

```
0721E: 90 144 E
0721F: 90 144 E
07220: 90 144 E
07221: 90 144 E
07222: 90 144 E
07223: 90 144 E
07224: 90 144 E
07225: 90 144 E
07226: 90 144 E
07227: 90 144 E
07228: 90 144 E
07229: 90 144 E
0722A: 90 144 E
0722B: 90 144 E
0722C: 90 144 E
0722D: 90 144 E
0722E: 90 144 E
0722F: 90 144 E
07230: 90 144 E
07231: 90 144 E
07232: F4 244 ↑
07233: 00 000 NULL
```

```
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
...
```

screen source reset aux vars debug

```
12
13 mov ah, 1
14 int 21h
15 mov bh, al
16
17 cmp bl, bh
18 jg l1
19 jmp l2
20
21 l1:
22 mov ah, 2
23 mov dl, bl
24 int 21h
25
26 l2:
```

emulator screen (80x25 chars)

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clear screen

change font

0/16