


```
01 05 data segment
02 a dw 1312h
03 b dw 2212h
04 c dw ?
05 d dw ?
06
07 data ends
08
09 code segment
10 assume cs:code,ds:data
11 start:
12 mov ax,data
13 mov ds,ax
14 mov ax,a
15 mov bx,b
16 mul bx
17 mov cx,ax
18 mov c,dx
19 mov d,cx
20
21 code ends
22 end start
```

original source co...

```
01 05 data segment
02 a dw 1312h
03 b dw 2212h
04 c dw ?
05 d dw ?
06
07 data ends
08
09 code segment
10 assume cs:code,ds:data
11 start:
12 mov ax,data
13 mov ds,ax
14 mov ax,a
15 mov bx,b
16 mul bx
17 mov cx,ax
18 mov c,dx
19
20
21
22
23
24
25
26
27
28
29
30
31
```

emulator: noname.exe

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers	
H	L
AX	00 00
BX	00 00
CX	00 28
DX	00 00
CS	0711
IP	0000
SS	0710
SP	0000
BP	0000
SI	0000
DI	0000
DS	0700
ES	0700

0711: 0000

screen	source	reset	aux	vars	debug	stack	flags
0710: B8 184 ?	MOV AX, 00710h						
0711: 10 016 ?	MOV DS, AX						
0712: 07 007 BEEP	MOV AX, [00000h]						
0713: 8E 142 ?	MOV BX, [00002h]						
0714: D8 216 ?	MUL BX						
0715: A1 161 ?	MOV CX, AX						
0716: 00 000	MOV [00004h], DX						
0717: 00 000	MOV [00006h], CX						
0718: 8B 139 ?	NOP						
0719: 1E 030 ?	NOP						
071A: 02 002	NOP						
071B: 00 000	NOP						
071C: F7 247 ?	NOP						
071D: E3 227 ?	NOP						
071E: 8B 139 ?	NOP						
071F: C8 200 ?	NOP						
0720: 89 137 ?	NOP						
0721: 16 022 ?	NOP						
0722: 04 004	NOP						
0723: 00 000	NOP						
0724: 89 137 ?	NOP						
0725: 0E 014 ?	NOP						

```
01  ;4
02  data segment
03      a dw 1312h
04      b dw 2212h
05      c dw 3234h
06      d dw 6565h
07      e dw 5454h
08      t dw ?
09
10  data ends
11  code segment
12      assume cs:code,ds:data
13      start:
14      mov ax,data
15      mov ds,ax
16      mov ax,a
17      mov bx,b
18      mov cx,c
19      mov dx,d
20      mov cx,c
21      add ax,bx
22      adc ax,cx
23      mov dx,e
24      adc ax,dx
25      mov t,ax
26
27      int 3
28      code ends
29      end start
30
31
32
33
34
35
36
37
38
39
```

original source co...

```
01  ;4
02  data segment
03      a dw 1312h
04      b dw 2212h
05      c dw 3234h
06      d dw 6565h
07      e dw 5454h
08      t dw ?
09
10  data ends
11  code segment
12      assume cs:code,ds:data
13      start:
14      mov ax,data
15      mov ds,ax
16      mov ax,a
17      mov bx,b
18      mov cx,c
19      mov dx,d
20      mov cx,c
21      add ax,bx
22      adc ax,cx
23      mov dx,e
24      adc ax,dx
25      mov t,ax
26
27      int 3
28      code ends
29      end start
30
31
32
33
34
35
36
37
38
39
```

emulator: noname.exe

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers	H	L
AX	00	00
BX	00	00
CX	00	36
DX	00	00
CS	0711	
IP	0000	
SS	0710	
SP	0000	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

0711: 0000

0711: 0000

0710: B8 184 ?
0711: 10 016 ?
0712: 07 007 BEEP
0713: 8E 142 ?
0714: D8 216 ?
0715: A1 161 ?
0716: 00 000 NULL
0717: 00 000 NULL
0718: 8B 139 ?
0719: 1E 030 ?
071A: 02 002 NULL
071B: 00 000 NULL
071C: 8B 139 ?
071D: 0E 014 ?
071E: 04 004 ?
071F: 00 000 NULL
0720: 8B 139 ?
0721: 16 022 ?
0722: 06 006 ?
0723: 00 000 NULL
0724: B1 177 ?
0725: 05 005 ?

MOV DS, AX
MOV AX, [00000h]
MOV BX, [00002h]
MOV CX, [00004h]
MOV DX, [00006h]
MOV CL, 05h
ADD AX, BX
ADC AX, CX
ADC AX, DX
MOV DX, [00008h]
ADC AX, DX
MOV [0000Ah], AX
INT 3
NOP
NOP
NOP
NOP
NOP
NOP
NOP

```
01  ;3
02  data segment
03      a dw 1312h
04      b dw 2212h
05      c dw ?
06
07  data ends
08  code segment
09      assume cs:code,ds:data
10      start:
11      mov ax,data
12      mov ds,ax
13      mov bx,a
14      sub ax,bx
15      mov cx,ax
16      mov c,cx
17
18      int 3
19      code ends
20  end
```

original source co... — □ ×

```
01  ;3
02  data segment
03      a dw 1312h
04      b dw 2212h
05      c dw ?
06
07  data ends
08  code segment
09      assume cs:code,ds:data
10      start:
11      mov ax,data
12      mov ds,ax
13      mov bx,a
14      sub ax,bx
15      mov cx,ax
16      mov c,cx
17
18      int 3
19      code ends
20  end
```

emulator: noname.bin.

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers	
H	L
AX 00 00	01000: 12 018 ?
BX 00 00	01001: 13 019 ?
CX 00 00	01002: 12 034 ?
DX 00 00	01003: 22 034 ?
CS 0100	01004: 00 000 NULL
IP 0000	01005: 00 000 NULL
SS 0100	01006: 00 000 NULL
SP FFEE	01007: 00 000 NULL
BP 0000	01008: 00 000 NULL
SI 0000	01009: 00 000 NULL
DI 0000	0100A: 00 000 NULL
DS 0100	0100B: 00 000 NULL
ES 0100	0100C: 00 000 NULL

01000: 0000 01000: 0000

screen source reset aux vars debug stack flags

```
01000: 12 018 ?  ADC DL, [BP + DI]
01001: 13 019 ?  ADD [BX + SI], AL
01002: 12 034 ?  ADD [BX + SI], AL
01003: 22 034 ?  ADD [BX + SI], AL
01004: 00 000 NULL  ADD [BX + SI], AL
01005: 00 000 NULL  ADD [BX + SI], AL
01006: 00 000 NULL  ADD [BX + SI], AL
01007: 00 000 NULL  ADD [BX + SI], AL
01008: 00 000 NULL  MOV AX, 000000h
01009: 00 000 NULL  MOV DS, AX
0100A: 00 000 NULL  MOV BX, [000001h]
0100B: 00 000 NULL  MOV BX, [00002h]
0100C: 00 000 NULL  SUB AX, BX
0100D: 00 000 NULL  MOV CX, AX
0100E: 00 000 NULL  MOV [00004h], CX
0100F: 00 000 NULL  INT 3
01010: 00 000 NULL  NOP
01011: 00 000 NULL  NOP
01012: 00 000 NULL  NOP
01013: 00 000 NULL  NOP
01014: 00 000 NULL  NOP
01015: 00 000 NULL  NOP
```

```
01 ;6.2
02 data segment
03 a dw 1312h
04 b dw 2212h
05 c dw ?
06 d dw ?
07
08 data ends
09 code segment
10 assume cs:code,ds:data
11 start:
12 mov ax,data
13 mov ds,ax
14 mov bx,b
15 mov ax,a
16 idiv bx
17 mov cx,ax
18 mov c,cx
19 mov d,dx
20
21
22 code ends
23 end start
```

```
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
```

original source co...

```
01 ;6.2
02 data segment
03 a dw 1312h
04 b dw 2212h
05 c dw ?
06 d dw ?
07
08 data ends
09 code segment
10 assume cs:code,ds:data
11 start:
12 mov ax,data
13 mov ds,ax
14 mov bx,b
15 mov ax,a
16 idiv bx
17 mov cx,ax
18 mov c,cx
19 mov d,dx
20
```

emulator: noname.exe

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers	H	L
AX	00	00
BX	00	00
CX	00	28
DX	00	00
CS	0711	
IP	0000	
SS	0710	
SP	0000	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

0711:0000

0711:0000

screen	source	reset	aux	vars	debug	stack	flags
0710: B8 184 ?	MOV DS, AX						
0711: 10 016 ?	MOV BX, [00002h]						
0712: 07 007 BEEP	MOV AX, [00000h]						
0713: 8E 142 ?	IDIV BX						
0714: D8 216 ?	MOV CX, AX						
0715: 8B 139 ?	MOV [00004h], CX						
0716: 1E 030 ?	MOV [00006h], DX						
0717: 02 002 ?	NOP						
0718: 00 000 ?	NOP						
0719: 01 161 ?	NOP						
071A: 00 000 NULL	NOP						
071B: 00 000 NULL	NOP						
071C: F7 247 ?	NOP						
071D: FB 251 ?	NOP						
071E: 8B 139 ?	NOP						
071F: C8 200 ?	NOP						
0720: 89 137 ?	NOP						
0721: 0E 014 ?	NOP						
0722: 04 004 ?	NOP						
0723: 00 000 ?	NOP						
0724: 89 137 ?	NOP						
0725: 16 022 ?	NOP						


```
01  ;6
02  data segment
03      a dw 1312h
04      b dw 2212h
05      c dw ?
06      d dw ?
07
08  data ends
09  code segment
10      assume cs:code,ds:data
11  start:
12      mov ax,data
13      mov ds,ax
14      mov bx,b
15      div bx
16      mov cx,ax
17      mov c,cx
18      mov d,dx
19
20  code ends
21  end start
```

original source co... X

```
01  ;6
02  data segment
03      a dw 1312h
04      b dw 2212h
05      c dw ?
06      d dw ?
07
08  data ends
09  code segment
10      assume cs:code,ds:data
11  start:
12      mov ax,data
13      mov ds,ax
14      mov bx,b
15      div bx
16      mov cx,ax
17      mov c,cx
18      mov d,dx
19
```

emulator: noname.exe

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers	H	L
AX	00	00
BX	00	00
CX	00	25
DX	00	00
CS	0711	
IP	0000	
SS	0710	
SP	0000	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

0711: 0000

screen	source	reset	aux	vars	debug	stack	flags
0710: B8 184 ?	MOV DS, AX						
0711: 10 016 ?	MOV BX, [00002h]						
0712: 07 007 BEEP	DIV BX, AX						
0713: 8E 142 0	MOV CX, AX						
0714: D8 216 1	MOV [00004h], CX						
0715: 8B 139 1	MOV [00006h], DX						
0716: 1E 030 0	NOP						
0717: 02 002 0	NOP						
0718: 00 000 0	NOP						
0719: F7 247 2	NOP						
071A: F3 243 1	NOP						
071B: 8B 139 1	NOP						
071C: C8 200 1	NOP						
071D: 89 137 E	NOP						
071E: 0E 014 F	NOP						
071F: 04 004 0	NOP						
0720: 00 000 0	NOP						
0721: 89 137 E	NOP						
0722: 16 022 0	NOP						
0723: 06 006 0	NOP						
0724: 00 000 0	NOP						
0725: 90 144 E	...						

```
01  ;?
02  data segment
03  string1 dw 14h,10h,5h,15h,21h
04  data ends
05  code segment
06  assume cs:code,ds:data
07  start:
08  mov ax,data
09  mov ds,ax
10  mov bx,5
11  upl:lea si,string1
12  mov cx,4
13  up:mov ax,[si]
14  cmp ax,[si+2]
15  jc down
16  xchg ax,[si+2]
17  xchg ax,[si]
18  down:add si,2
19  loop up
20  dec bx
21  jnz upl
22  int 3
23  code ends
24  end start
25
26
27
28
29
30
31
```

original source co... X

```
01  ;?
02  data segment
03  string1 dw 14h,10h,5h,15
04  data ends
05  code segment
06  assume cs:code,ds:data
07  start:
08  mov ax,data
09  mov ds,ax
10  mov bx,5
11  upl:lea si,string1
12  mov cx,4
13  up:mov ax,[si]
14  cmp ax,[si+2]
15  jc down
16  xchg ax,[si+2]
17  xchg ax,[si]
18  down:add si,2
19  loop up
20  dec bx
21  jnz upl
22  int 3
23  code ends
24  end start
25
26
27
28
29
30
31
```

emulator: noname.exe

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers	H	L
AX	00	00
BX	00	00
CX	00	33
DX	00	00
CS	0711	
IP	0000	
SS	0710	
SP	0000	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

0711:0000

0711:0000

screen	source	reset	aux	vars	debug	stack	flags
0710: B8 184 ?	MOV DS, AX						
0711: 10 016 ?	MOV BX, 00005h						
0712: 07 007 BEEP	MOV SI, 00000h						
0713: 8E 142 ?	MOV CX, 00004h						
0714: D8 216 ?	MOV AX, SI + 02h						
0715: B8 187 ?	CMP AX, SI + 02h						
0716: 05 005 ?	JB 01Rh						
0717: 00 000 ?	XCHG SI, J + 02h, AX						
0718: BE 170 ?	XCHG SI, J, AX						
0719: 00 000 NULL	ADD SI, 02h						
071A: 00 000 NULL	LOOP 0Eh						
071B: B9 185 ?	DEC BX						
071C: 04 004 ?	JNE 08h						
071D: 00 000 ?	INT 3						
071E: 8B 139 ?	NOP						
071F: 04 004 ?	NOP						
0720: 3B 059 ?	NOP						
0721: 44 068 ?	NOP						
0722: 02 002 ?	NOP						
0723: 72 114 ?	NOP						
0724: 05 005 ?	NOP						
0725: 87 135 ?	...						



```
01 data segment
02 a dw 0064h
03
04 resultH dw ?
05
06 resultL dw ?
07
08 data ends
09
10 code segment
11
12 assume ds: data, cs: code
13
14 start:
15
16 mov ax, data
17
18 mov ds, ax
19
20 mov ax, a
21
22 mov bx, a
23
24 mul bx
25
26 mul bx
27
28 mov resultH, dx
29
30 mov resultL, ax
31
32 int 3
33 code ends
34
35 end start
```

original source co... — □ ×

```
01 data segment
02 a dw 0064h
03
04 resultH dw ?
05
06 resultL dw ?
07
08 data ends
09
10 code segment
11
12 assume ds: data, cs: cod
13
14 start:
15
16 mov ax, data
17
18 mov ds, ax
```

emulator: noname.exe

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers	
H	L
AX	00 00
BX	00 00
CX	00 28
DX	00 00
CS	0711
IP	0000
SS	0710
SP	0000
BP	0000
SI	0000
DI	0000
DS	0700
ES	0700

0711: 0000

screen	source	reset	aux	vars	debug	stack	flags
0710: B8 184 ?	MOV DS, AX						
0711: 10 016 ?	MOV AX, [00000h]						
0712: 07 007 BEEP	MOV BX, [00000h]						
0713: 8E 142 ?	MUL BX						
0714: D8 216 ?	MUL BX						
0715: A1 161 ?	MOV [00002h], DX						
0716: 00 000 NULL	MOV [00004h], AX						
0717: 00 000 NULL	INT 3						
0718: 8B 139 ?	NOP						
0719: 1E 030 ?	NOP						
071A: 00 000 NULL	NOP						
071B: 00 000 NULL	NOP						
071C: F7 247 ?	NOP						
071D: E3 227 ?	NOP						
071E: F7 247 ?	NOP						
071F: E3 227 ?	NOP						
0720: 89 137 ?	NOP						
0721: 16 022 ?	NOP						
0722: 02 002 ?	NOP						
0723: 00 000 NULL	NOP						
0724: A3 163 ?	NOP						
0725: 04 004 ?	NOP						

