

TOOLS **assignment**

CSC 236

Assure you can access
development tools

- Create a source assembler file
- Access the assembler and linker
- Use the debugger

TOOLS

- Install MASM ... instructions on the web site
- Get the program hellom.asm
- Assemble and link hellom.asm
- Activate the CodeView debugger for hellom.exe

File Edit Search Run Data Options Calls Windows Help

[3] source1 CS:IP hellom.asm

```

42:      mov     ax,@data      ;establish addressab
05FE:0000 B8FF05      mov     dx,05FF      ;data segment for th
43:      mov     ds,ax
05FE:0003 8ED8      mov     ds,ax
44:      -----
45:      write out the message
46:      -----
47:      mov     dx,offset msg ;point to the messag
05FE:0005 BA0200      mov     dx,0002
48:      mov     ah,9          ;set the dos code to
05FE:0008 B409      mov     ah,09
49:      int     21h          ;write the string
05FE:000A CD21      int     21
50:      -----
51:      terminate program execution
52:      -----
53:      exit:
54:      mov     ax,4c00h      ;set dos code to ter
05FE:000C B8004C      mov     ax,4C00
55:      int     21h          ;return to dos
05FE:000F CD21      int     21
56:      end      hello       ;end marks the end o
57:      -----

```

[7] reg

```

AX = 0000
BX = 0000
CX = 0000
DX = 0000
SP = 3100
BP = 0000
SI = 0000
DI = 0000
DS = 251E
ES = 251E
SS = 2601
CS = 051E
IP = 0000
FL = 0200

```

```

NU UP 14 PL
NZ NA PO NC

```

[5] memory1 DS:0

```

05EE:0000 CD 20 FF 9F 00 EA FF FF = f.0
05EE:0008 AD DE 96 02 47 04 97 03 i f f f
05EE:0010 47 04 DD 0B 47 04 CB 05 G f f f
05EE:0018 01 01 01 00 01 01 03 FF 000.00
05EE:0020 FF FF FF FF FF FF FF FF
05EE:0028 FF FF FF FF DC 05 00 00

```

[9] command

CV1053 Warning: TOOLS.INI not found

>

>

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```

[13] source1 CS:IP hellom.asm
42:      mov     ax,0data      ;establish addressab
05FE:0000 B8FF05      mov     ax,05FF
43:      mov     ds,ax        ;data segment for th
05FE:0003 8ED8      mov     ds,ax
44:      ;-----
45:      ; write out the message
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57:      ; ....and specifies w

```

```

[17] reg
AX = 0000
BX = 0000
CX = 0000
DX = 0000
SP = 0100
BP = 0000
SI = 0000
DI = 0000
DS = 05EE
ES = 05EE
SS = 0601
CS = 05FE
IP = 0003
FL = 0202

```

```

NU UP EI PL
NZ NA PO NC

```

```

[15] memory1 b DS:0
05EE:0000 CD 20 FF 9F 00 EA FF FF = f.0
05EE:0008 AD DE 96 02 47 04 97 03 i 10Gdu
05EE:0010 47 04 DD 0B 47 04 CB 05 G 10Gπ
05EE:0018 01 01 01 00 01 01 FF 04 000.00
05EE:0020 FF FF FF FF FF FF FF FF
05EE:0028 FF FF FF FF DC 05 22 22 -+10

```

```

[19] command
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```


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```

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57:      ;-----

```

[7] reg

```

AX == 0000
BX == 0000
CX == 0000
DX == 0002
SP == 0100
BP == 0000
SI == 0000
DI == 0000
DS == 05FF
ES == 05EE
SS == 0601
CS == 05FE
IP == 000A
FL == 0202

```

```

NU UP EI PL
NZ NA PO NC

```

```

[5] memory1 b DS:0
05FF:0000 21 00 48 65 6C 6C 6F 20  !.Hello
05FF:0008 57 6F 72 6C 64 0D 0A 24  WorldPos
05FF:0010 0E 00 4E 42 4E 42 30 38  B.NBNB08
05FF:0018 E0 01 00 00 00 00 00 00  α@....
05FF:0020 01 00 43 56 01 00 00 00  @.C@....
05FF:0028 00 00 00 00 11 00 00 00  ....4....

```

```

[9] command
CV1053 Warning: TOOLS.INI not found
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```

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- Single step through each instruction
 - Go slowly and follow the instructions
 - Answer the questions in TOOLSSUB.TXT as you progress
- Experiment with 3 utilities
 - testfile
 - testkeys
 - compfile

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kind of like the hexdump utility we used in CSC 230
 - testkeys
 - compfile

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 - testfile : for reporting the contents of a file in hex and as characters
kind of like the hexdump utility we used in CSC 230
 - testkeys : for reporting keys pressed by the user
 - compfile

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 - Go slowly and follow the instructions
 - Answer the questions in TOOLSSUB.TXT as you progress
- Experiment with 3 utilities
 - testfile : for reporting the contents of a file in hex and as characters
kind of like the hexdump utility we used in CSC 230
 - testkeys : for reporting keys pressed by the user
 - compfile : for comparing two files
kind of like the diff utility we used in CSC 230