

Task1:

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program:... File Edit Search View Options Help C:\NT1_L5.ASM

```
dosseg
.model small
.stack 100h
.data
.code
main proc
mov ah,1
int 21h
mov bl,al
mov ah,1
int 21h
add bl,al
sub bl,48
mov dl,bl
mov ah,2
int 21h
mov ah,4ch
int 21h
main endp
end main
```

Commands for manipulating files

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program:... File Edit Search View Options Help

```
C:\>t1_15.exe
123
C:\>edit t2_15.asm
```

Task 2:

```
C:\>edit t2_15.asm
C:\>masm t2_15.asm;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51708 + 464836 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\>link t2_15.obj;
Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>t2_15.exe
2349
C:\>_
```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program:... File Edit Search View Options Help C:\NT2_L5.ASM dosseg .model small .stack 100h .data msg db ? .code main proc mov ah,1 int 21h mov bl,al mov ah,1 int 21h mov bh,al mov ah,1 int 21h mov cl,al add bl,bh sub bl,48 mov ch,bl add ch,cl sub ch,48 mov msg,ch F1=Help Line:1 Col:1

Task 3:

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program:... File Edit Search View Options Help C:\NT5_L5.ASM dosseg .model small .stack 100h .data msg1 db 'number is equal\$' msg2 db 'number is not equal\$' .code main proc mov ax,@data mov ds,ax mov dl,'3' mov ah,1 int 21h cmp al,dl je move mov dx,offset msg2 mov ah,9 int 21h mov ah,4ch int 21h move: mov dx,offset msg1 F1=Help Line:1 Col:1

```

OS [dos] DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program:...
DOS:edit t7_15.asm
C:\edit t3_15.asm
C:\edit t5_15.asm
C:\>masm t5_15.asm;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51670 + 464874 Bytes symbol space free

0 Warning Errors
0 Severe Errors

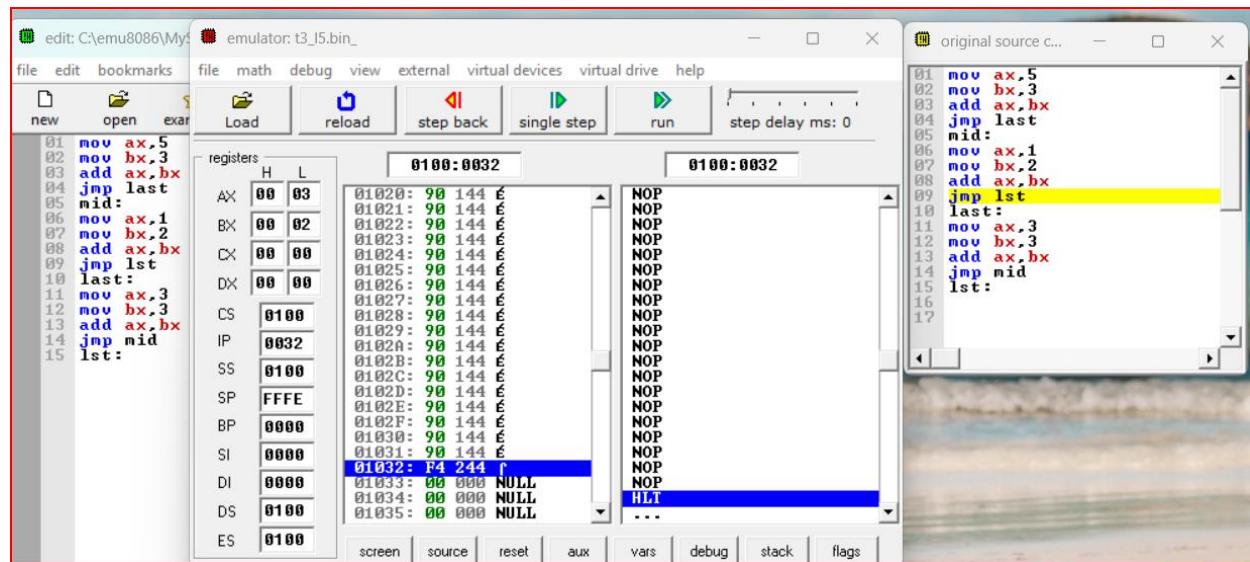
C:\>link t5_15.obj;

Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>t5_15.exe
Znumber is not equal
C:\>_

```

Task4:



Task5:

The screenshot shows the emu8086 IDE interface. The assembly code in the editor window is as follows:

```

01 include 'emu8086.inc'
02 .model
03 .stack 100h
04 .data
05 .code
06 main proc
07 mov dl,3
08 mov bl,10
09 cmp dl,bl
10 je move
11 print 'Both are not equal'
12 mov ah,04h
13 int 21h
14 move:
15 print ' Both are equal'
16 mov ah,04h
17 int 21h
18 main endp
19 end main

```

The code at address F4204 is highlighted in blue. The registers window shows:

	H	L
AX	04	00
BX	00	0A
CX	01	61
DX	00	03
CS	F400	
IP	0204	
SS	0710	
SP	00FA	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

The stack window shows memory starting at F400:

	F400: 0204	F400: 0204
F4200:	FF 255 RES	BIOS DI
F4201:	FF 255 RES	INT 021h
F4202:	CD 205 =	IRET
F4203:	21 033 !	ADD [BX + SI], AL
F4204:	CF 207 ↴	ADD [BX + SI], AL
F4205:	00 000 NULL	ADD [BX + SI], AL
F4206:	00 000 NULL	ADD [BX + SI], AL
F4207:	00 000 NULL	ADD [BX + SI], AL
F4208:	00 000 NULL	ADD [BX + SI], AL
F4209:	00 000 NULL	ADD [BX + SI], AL
F420A:	00 000 NULL	ADD [BX + SI], AL
F420B:	00 000 NULL	ADD [BX + SI], AL
F420C:	00 000 NULL	ADD [BX + SI], AL
F420D:	00 000 NULL	ADD [BX + SI], AL
F420E:	00 000 NULL	ADD [BX + SI], AL
F420F:	00 000 NULL	ADD [BX + SI], AL
F4210:	00 000 NULL	ADD [BX + SI], AL
F4211:	00 000 NULL	ADD [BX + SI], AL
F4212:	00 000 NULL	ADD [BX + SI], AL
F4213:	00 000 NULL	ADD [BX + SI], AL
F4214:	00 000 NULL	ADD [BX + SI], AL
F4215:	00 000 NULL	ADD [BX + SI], AL
...		

The output window shows the printed message:

```
Both are not equal
```

Task6:

The screenshot shows the emu8086 IDE interface. The assembly code in the editor window is as follows:

```

01 include 'emu8086.inc'
02 .model
03 .stack 100h
04 .data
05 .code
06 main proc
07 mov ax,4h
08 mov bx,7h
09 cmp ax,bx
10 jg move
11 mov ax,3
12 mov ah,04h
13 int 21h
14 move:
15 mov bx,4
16 mov ah,04h
17 int 21h
18 main endp
19 end main

```

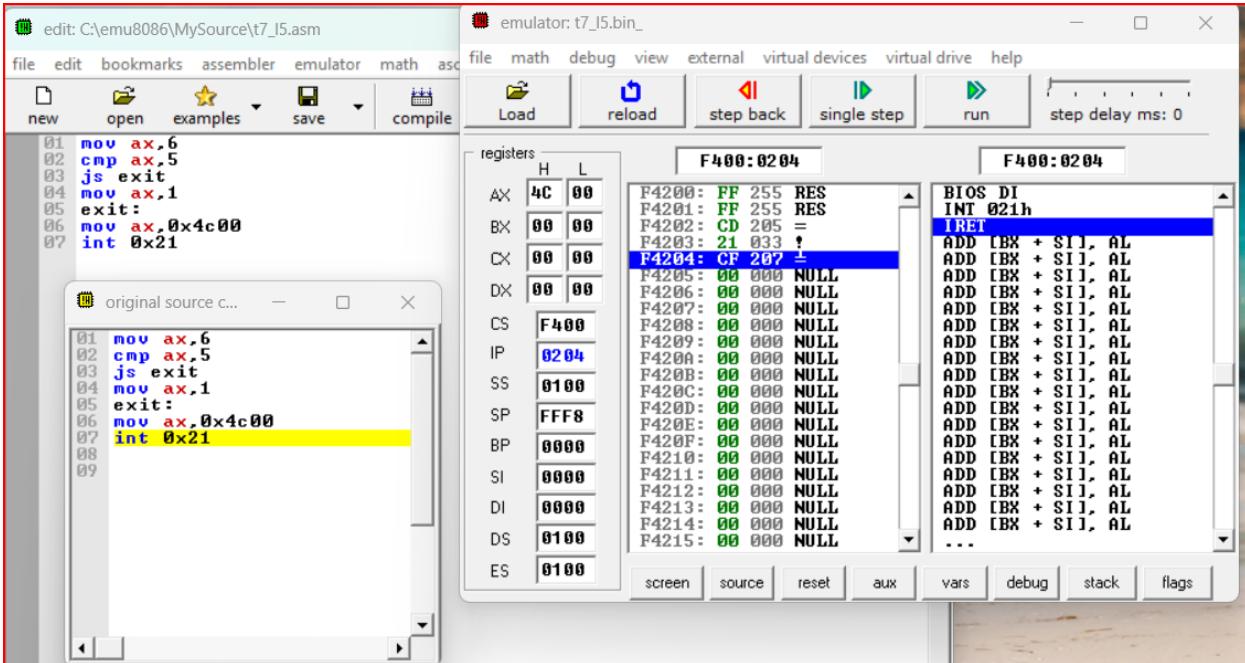
The code at address F4204 is highlighted in blue. The registers window shows:

	H	L
AX	04	03
BX	00	07
CX	01	18
DX	00	00
CS	F400	
IP	0204	
SS	0710	
SP	00FA	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

The stack window shows memory starting at F400:

	F400: 0204	F400: 0204
F4200:	FF 255 RES	BIOS DI
F4201:	FF 255 RES	INT 021h
F4202:	CD 205 =	IRET
F4203:	21 033 !	ADD [BX + SI], AL
F4204:	CF 207 ↴	ADD [BX + SI], AL
F4205:	00 000 NULL	ADD [BX + SI], AL
F4206:	00 000 NULL	ADD [BX + SI], AL
F4207:	00 000 NULL	ADD [BX + SI], AL
F4208:	00 000 NULL	ADD [BX + SI], AL
F4209:	00 000 NULL	ADD [BX + SI], AL
F420A:	00 000 NULL	ADD [BX + SI], AL
F420B:	00 000 NULL	ADD [BX + SI], AL
F420C:	00 000 NULL	ADD [BX + SI], AL
F420D:	00 000 NULL	ADD [BX + SI], AL
F420E:	00 000 NULL	ADD [BX + SI], AL
F420F:	00 000 NULL	ADD [BX + SI], AL
F4210:	00 000 NULL	ADD [BX + SI], AL
F4211:	00 000 NULL	ADD [BX + SI], AL
F4212:	00 000 NULL	ADD [BX + SI], AL
F4213:	00 000 NULL	ADD [BX + SI], AL
F4214:	00 000 NULL	ADD [BX + SI], AL
F4215:	00 000 NULL	ADD [BX + SI], AL
...		

Task7:



Task8:

