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CLASS: BSSE (4th SEMESTER)
COURSE NAME: ASSEMBLY LANGUAGE
COURSE CODE: 402
DEPARTMENT: COMPUTER SCIENCE

TASK 1: Multiply two numbers

Program:

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT
File Edit Search View Options Help
E:\MUL.ASM

dosseg
.model small
.stack 100h
.data
.code
main proc
mov al,5
mov bl,2
mul bl
aam ;ASCII Adjust after multiply

mov ch,ah
mov cl,al
mov dl,ch
add dl,48 ;ASCII Code
mov ah,2
int 21h

mov dl,cl
add dl,48 ;ASCII Code
mov ah,2
int 21h

mov ah,4ch
int 21h

main endp
end main
```

OUTPUT:

```
E:\>edit mul.asm

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

51720 + 464824 Bytes symbol space free

0 Warning Errors
0 Severe Errors

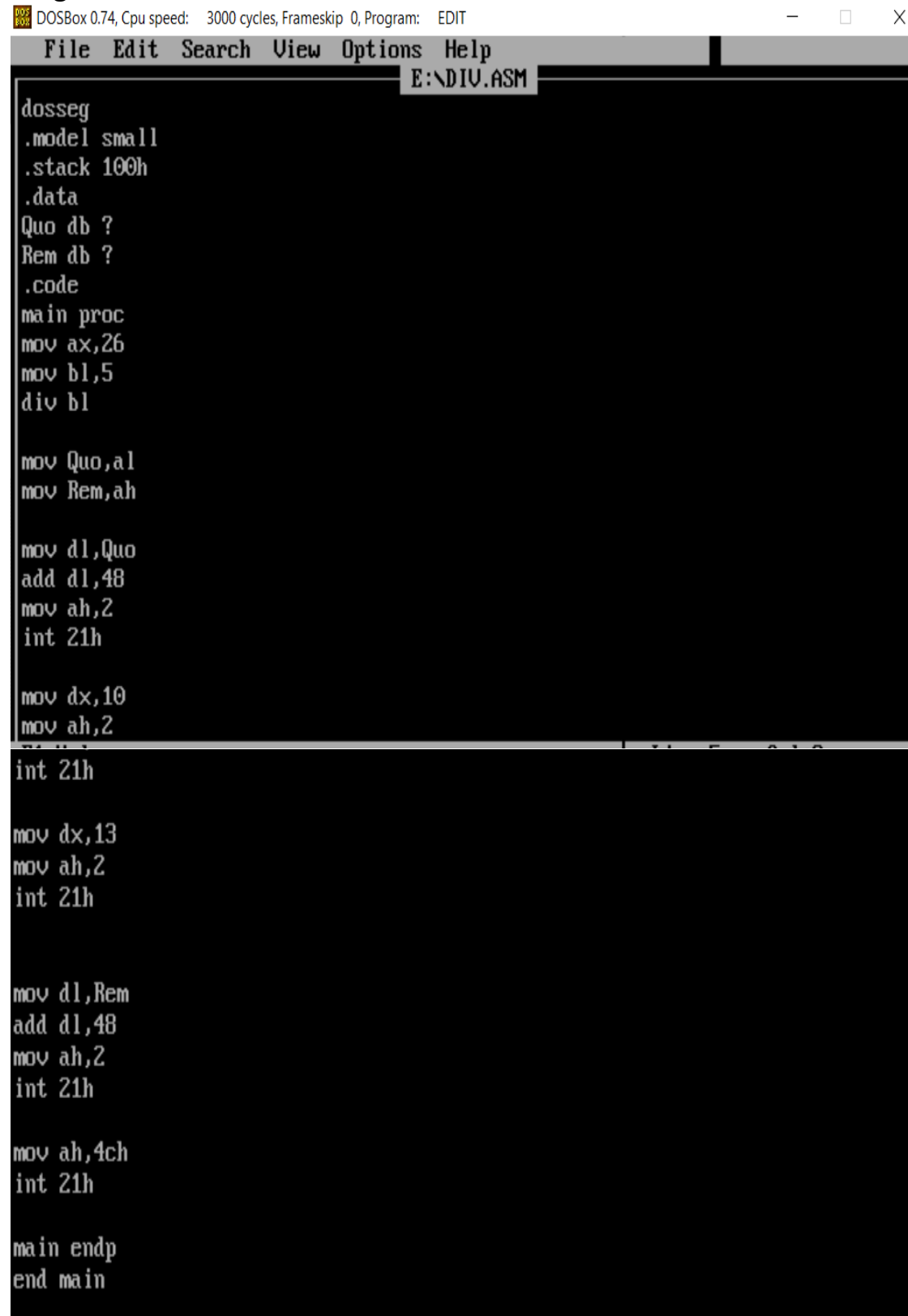
E:\>link mul.obj;

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

E:\>mul.exe
10
```

TASK 2: Divide two numbers

Program:



DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip: 0, Program: EDIT

File Edit Search View Options Help

E:\DIU.ASM

```
dosseg
.model small
.stack 100h
.data
Quo db ?
Rem db ?
.code
main proc
mov ax,26
mov bl,5
div bl

mov Quo,al
mov Rem,ah

mov dl,Quo
add dl,48
mov ah,2
int 21h

mov dx,10
mov ah,2
int 21h

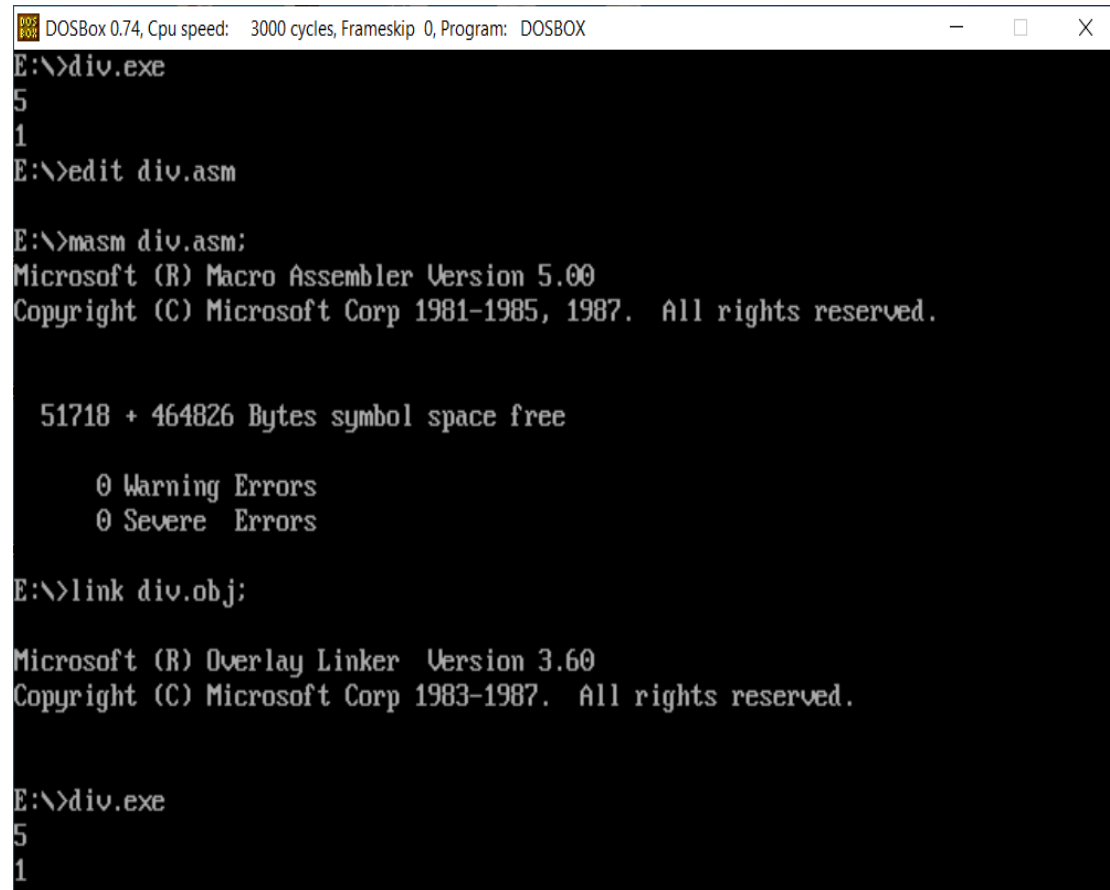
mov dx,13
mov ah,2
int 21h

mov dl,Rem
add dl,48
mov ah,2
int 21h

mov ah,4ch
int 21h

main endp
end main
```

Output:



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
E:\>div.exe
5
1
E:\>edit div.asm

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

51718 + 464826 Bytes symbol space free

0 Warning Errors
0 Severe Errors

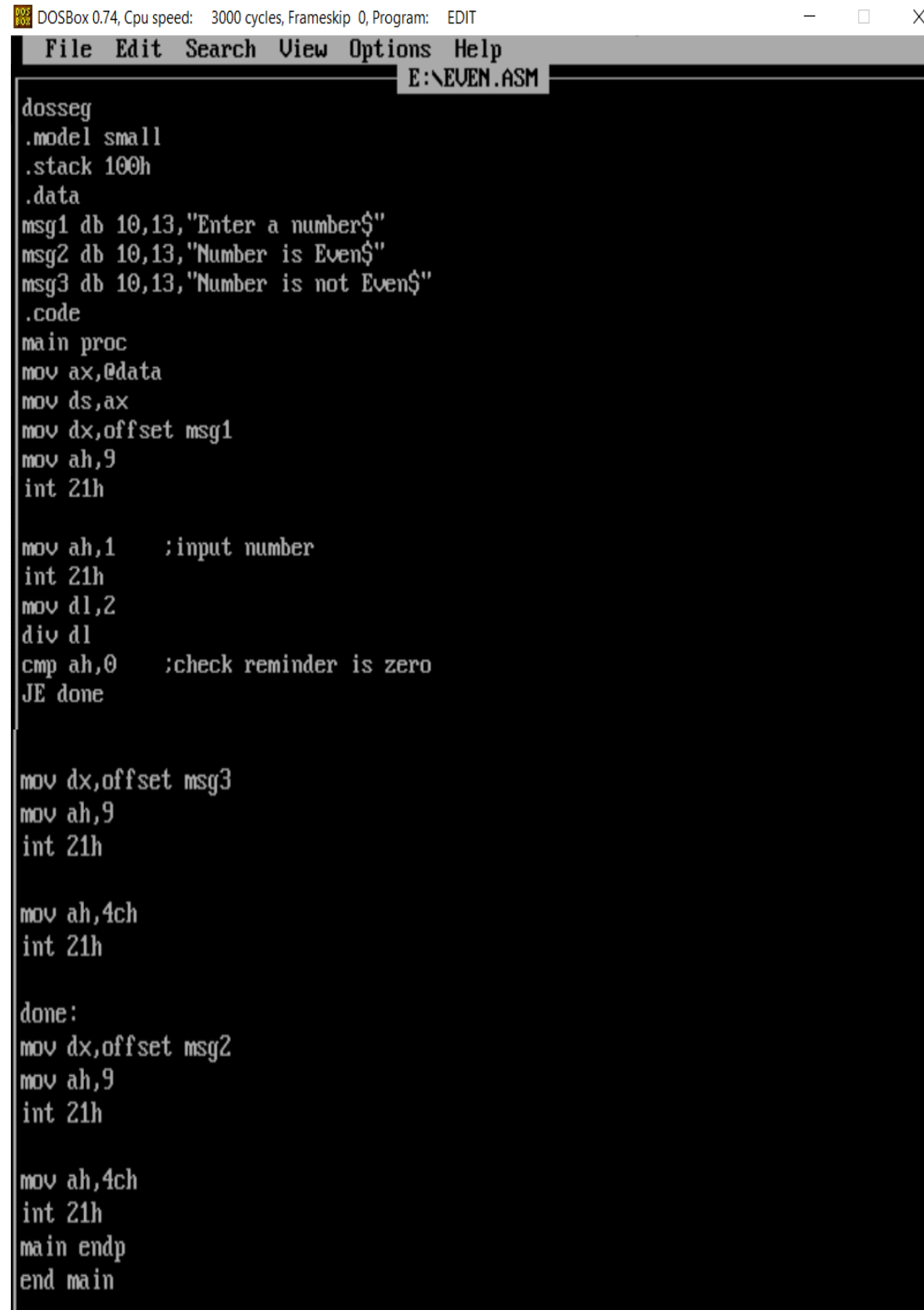
E:\>link div.obj;

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

E:\>div.exe
5
1
```

Task3: input number and check it is even or not.

Program:



The screenshot shows a DOSBox window titled "DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT". The window has a menu bar with "File", "Edit", "Search", "View", "Options", and "Help". The title bar indicates the file is "E:\NEVEN.ASM". The assembly code is as follows:

```
dosseg
.model small
.stack 100h
.data
msg1 db 10,13,"Enter a number$"
msg2 db 10,13,"Number is Even$"
msg3 db 10,13,"Number is not Even$"
.code
main proc
mov ax,@data
mov ds,ax
mov dx,offset msg1
mov ah,9
int 21h

mov ah,1    ;input number
int 21h
mov dl,2
div dl
cmp ah,0    ;check reminder is zero
JE done

mov dx,offset msg3
mov ah,9
int 21h

mov ah,4ch
int 21h

done:
mov dx,offset msg2
mov ah,9
int 21h

mov ah,4ch
int 21h
main endp
end main
```

Output:

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
E:\>masm even.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

E:\>link even.obj;

Microsoft (R) Overlay Linker Version 3.60
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E:\>even.exe

Enter a number3
Number is not Even
E:\>even.exe

Enter a number6
Number is Even
```