

TASK 1:

.model small

.stack

.data

.code

main proc

mov al,3

mov bl,2

call mult

call disp

call exit

main endp

mult proc

mul bl

mult endp

ret

disp proc

mov dx,ax

add dx,48

mov ah,02

int 21h

ret

disp endp

exit proc

mov ah,4ch

int 21h

exit endp

end main

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
Libraries [.lib]:
Definitions File [nul.def]:

C:\>182
4
C:\>181
6
C:\>ml 181.asm
Microsoft (R) Macro Assembler Version 6.11
Copyright (C) Microsoft Corp 1981-1993. All rights reserved.

Assembling: 181.asm

Microsoft (R) Segmented Executable Linker Version 5.31.009 Jul 13 1992
Copyright (C) Microsoft Corp 1984-1992. All rights reserved.

Object Modules [.obj]: 181.obj
Run File [181.exe]: "181.exe"
List File [nul.map]: NUL
Libraries [.lib]:
Definitions File [nul.def]:

C:\>181
6
C:\>_
```

For values 2 & 3

TASK 2:

.model small

.stack

.data

.code

main proc

mov al,7

mov bl,2

call mult

call exit

main endp

mult proc

div bl

mov cl,al

mov ch,ah

add cl,48

mov dl,cl

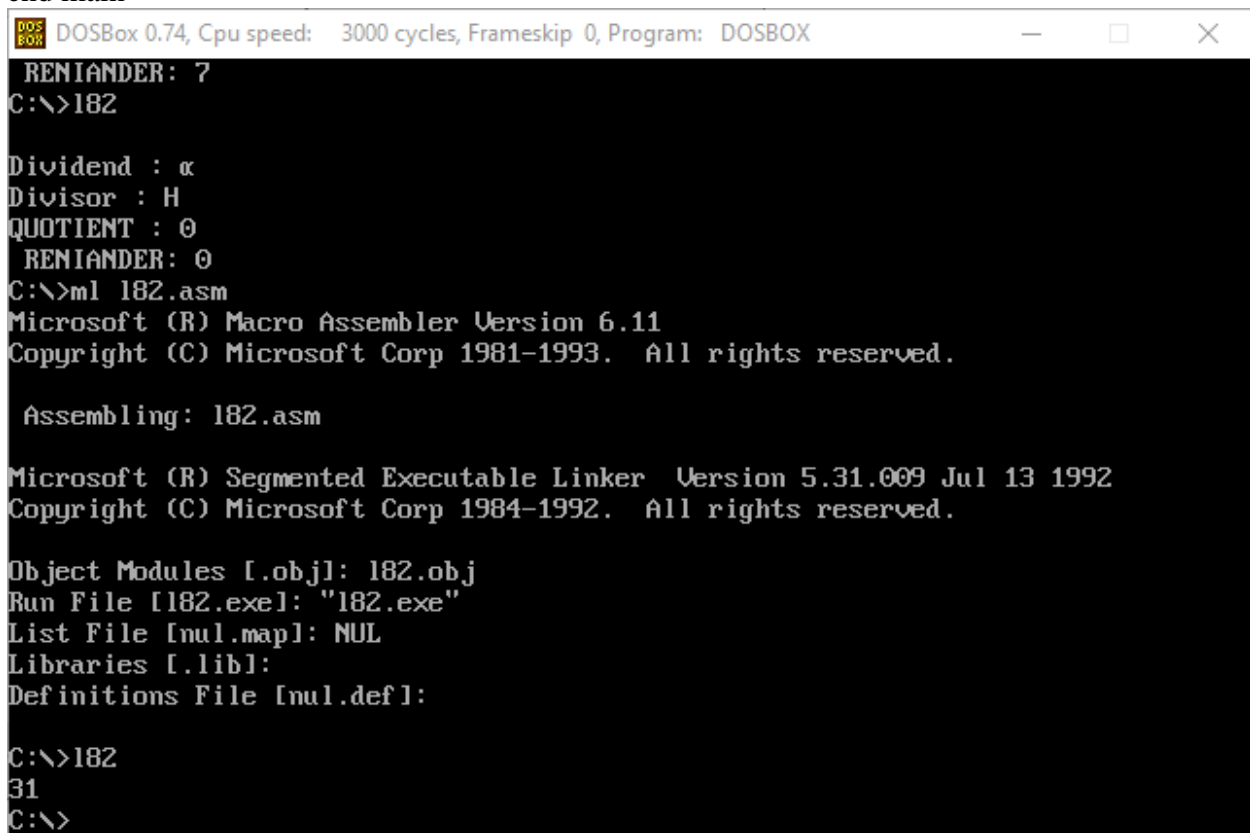
mov ah,02

int 21h

add ch,48

```
mov dl,ch
mov ah,02
int 21h
mult endp
ret
```

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

A screenshot of a DOSBox window. The title bar reads "DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX". The window has standard minimize, maximize, and close buttons. The main area is a black terminal with white text. It shows the output of running a program named 182, which displays division results: Dividend: α, Divisor: H, QUOTIENT: 0, and REMAINDER: 0. Then, it shows the command "C:\>ml 182.asm" followed by the output of the Microsoft Macro Assembler (Version 6.11), including copyright information. Next, it shows the command "C:\>link 182.obj" followed by the output of the Microsoft Segmented Executable Linker (Version 5.31.009), also including copyright information. Finally, it shows the command "C:\>182" and the output "31".

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
REMAINDER: 7
C:\>182

Dividend : α
Divisor : H
QUOTIENT : 0
REMAINDER: 0
C:\>ml 182.asm
Microsoft (R) Macro Assembler Version 6.11
Copyright (C) Microsoft Corp 1981-1993. All rights reserved.

Assembling: 182.asm

Microsoft (R) Segmented Executable Linker Version 5.31.009 Jul 13 1992
Copyright (C) Microsoft Corp 1984-1992. All rights reserved.

Object Modules [obj]: 182.obj
Run File [182.exe]: "182.exe"
List File [nul.map]: NUL
Libraries [lib]:
Definitions File [nul.def]:

C:\>182
31
C:\>
```

TASK 3

```
.Model Small
.Stack 100H
```

```
.Data
```

```
dividend DW 8
divisor DW 2
quo DB ?
rem DB ?
```

```
.Code  
main proc  
Mov Ax,@data  
Mov Ds,Ax
```

```
Push dividend  
Push divisor
```

```
Call division  
Call Exit  
main endp
```

```
division proc  
Push Bp  
Mov Bp,Sp  
Mov Ax,[Bp+6]  
Mov Bl,[Bp+4]  
Div Bl  
Mov quo,Al  
Mov rem,Ah  
Pop Bp  
Ret  
Division endp
```

```
Exit proc  
Mov Ah,4ch  
INT 21H  
Ret  
Exit endp
```

```
End main
```

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: CV

File Edit Search Run Data Options Calls Windows Help

locals

source1 CS:IP

05E6:0000 B8E805 MOV AX,05E8

05E6:0003 8ED8 MOV DS,AX

05E6:0005 FF360C00 PUSH WORD PTR [000C]

05E6:0009 FF360E00 PUSH WORD PTR [000E]

05E6:000D E80300 CALL 0013

05E6:0010 E81400 CALL 0027

05E6:0013 55 PUSH BP

05E6:0014 8BEC MOV BP,SP

05E6:0016 8B4606 MOV AX,WORD PTR [BP+06]

05E6:0019 8A5E04 MOV BL, BYTE PTR [BP+04]

05E6:001C F6F3 BL

05E6:001E A21000 MOV BYTE PTR [0010],AL

05E6:0021 88261100 MOV BYTE PTR [0011],AH

05E6:0025 5D POP BP

05E6:0026 C3 RET

05E6:0027 B44C MOV AH,4C

05E6:0029 CD21 INT 21

05E6:002B C3 RET

05E6:002C 0800 OR BYTE PTR [BX+SI],AL

05E6:002E 0200 ADD AL, BYTE PTR [BX+SI]

05E6:0030 0400 ADD AL,00

memory1 b DS:0

05D6:0000 CD 20 FF 9F 00 EA FF FF AD DE 96 02 3F = f.Ω i 10?

05D6:000D 04 97 03 3F 04 DD 0B 3F 04 BB 05 01 01 = u? d? 1000

memory2 b DS:0

05D6:0000 CD 20 FF 9F 00 EA FF FF AD DE 96 02 3F = f.Ω i 10?

05D6:000D 04 97 03 3F 04 DD 0B 3F 04 BB 05 01 01 = u? d? 1000

command

CU1053 Warning: TOOLS.INI not found

CV0101 Warning: no CodeView information for 'C:\183.EXE'

>

<F8=Trace> <F10=Step> <F5=Go> <F3=S1 Fmt> <Sh+F3=M2 Fmt>

DEC