

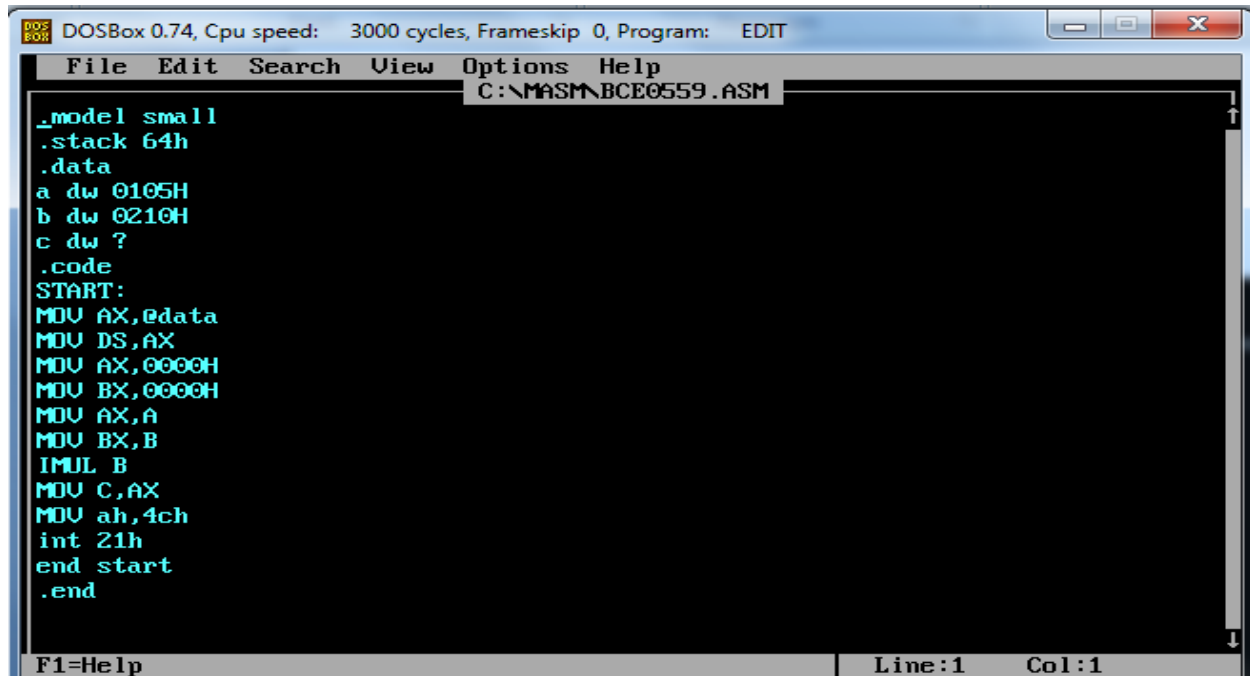
**Reg No:** 18BCE0559

**Name:** Sreenitya Mandava

**Slot:** L29+L30

## ASSESSMENT-1

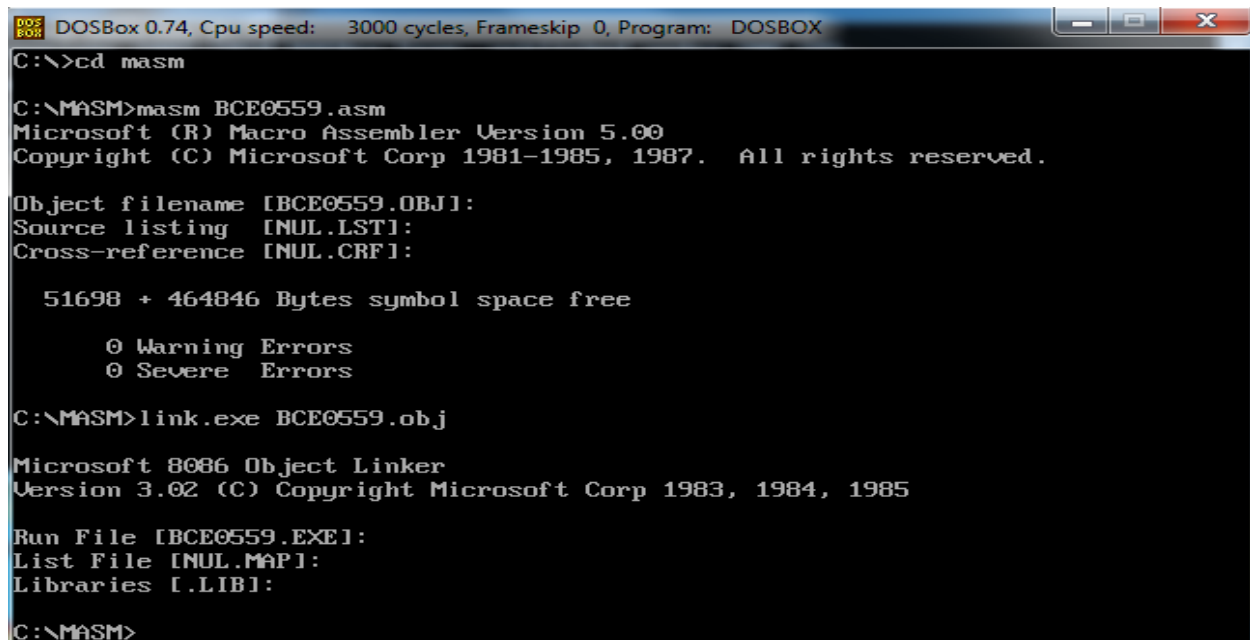
### Multiplication



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT
File Edit Search View Options Help
C:\MASM\BCE0559.ASM

.model small
.stack 64h
.data
a dw 0105H
b dw 0210H
c dw ?
.code
START:
MOV AX,@data
MOV DS,AX
MOV AX,0000H
MOV BX,0000H
MOV AX,A
MOV BX,B
IMUL B
MOV C,AX
MOV ah,4ch
int 21h
end start
.end

F1=Help Line:1 Col:1
```



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
C:\>cd masm
C:\MASM>masm BCE0559.asm
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

Object filename [BCE0559.OBJ]:
Source listing [NUL.LST]:
Cross-reference [NUL.CRF]:

51698 + 464846 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\MASM>link.exe BCE0559.obj
Microsoft 8086 Object Linker
Version 3.02 (C) Copyright Microsoft Corp 1983, 1984, 1985

Run File [BCE0559.EXE]:
List File [NUL.MAP]:
Libraries [.LIB]:

C:\MASM>
```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
List File [NUL.MAP]:
Libraries [.LIB]:

C:\MASM>debug BCE0559.exe
-t
AX=0745 BX=0000 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0734 ES=0734 SS=0747 CS=0744 IP=0003 NU UP EI PL ZR NA PE NC
0744:0003 8ED8          MOV     DS,AX
-
AX=0745 BX=0000 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0005 NU UP EI PL ZR NA PE NC
0744:0005 B80000      MOV     AX,0000
-
AX=0000 BX=0000 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0008 NU UP EI PL ZR NA PE NC
0744:0008 B80000      MOV     BX,0000
-
AX=0000 BX=0000 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=000B NU UP EI PL ZR NA PE NC
0744:000B A10E00      MOV     AX,[000E]                      DS:000E=0105
-
AX=0105 BX=0000 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=000E NU UP EI PL ZR NA PE NC
0744:000E 8B1E1000    MOV     BX,[0010]                      DS:0010=0210
-

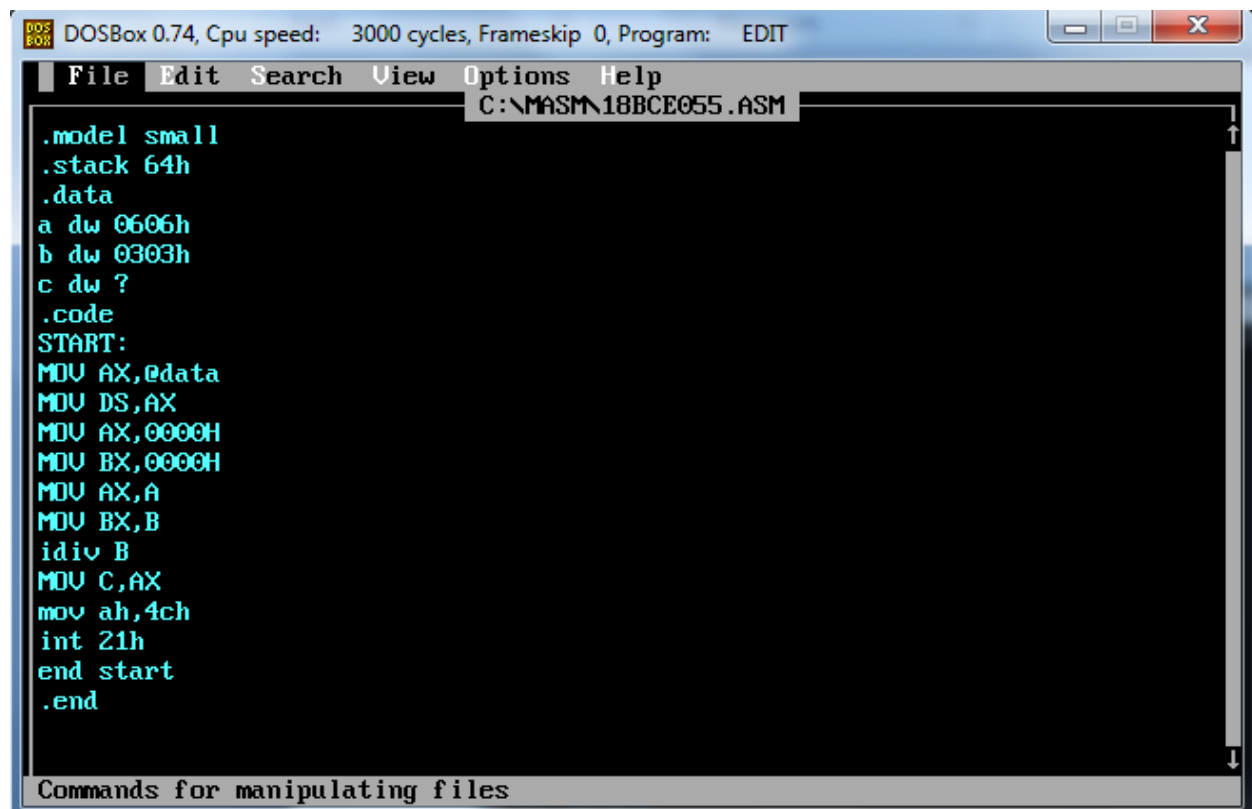
```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
0744:000B A10E00      MOV     AX,[000E]                      DS:000E=0105
-
AX=0105 BX=0000 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=000E NU UP EI PL ZR NA PE NC
0744:000E 8B1E1000    MOV     BX,[0010]                      DS:0010=0210
-
AX=0105 BX=0210 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0012 NU UP EI PL ZR NA PE NC
0744:0012 F72E1000    IMUL    WORD PTR [0010]                      DS:0010=0210
-
AX=1A50 BX=0210 CX=0024 DX=0002 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0016 OU UP EI PL ZR NA PE CY
0744:0016 A31200      MOV     [0012],AX                      DS:0012=0000
-
AX=1A50 BX=0210 CX=0024 DX=0002 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0019 OU UP EI PL ZR NA PE CY
0744:0019 B44C          MOV     AH,4C
-
AX=4C50 BX=0210 CX=0024 DX=0002 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=001B OU UP EI PL ZR NA PE CY
0744:001B CD21          INT     21
-
Program terminated normally (0050)
-18BCE0559

```

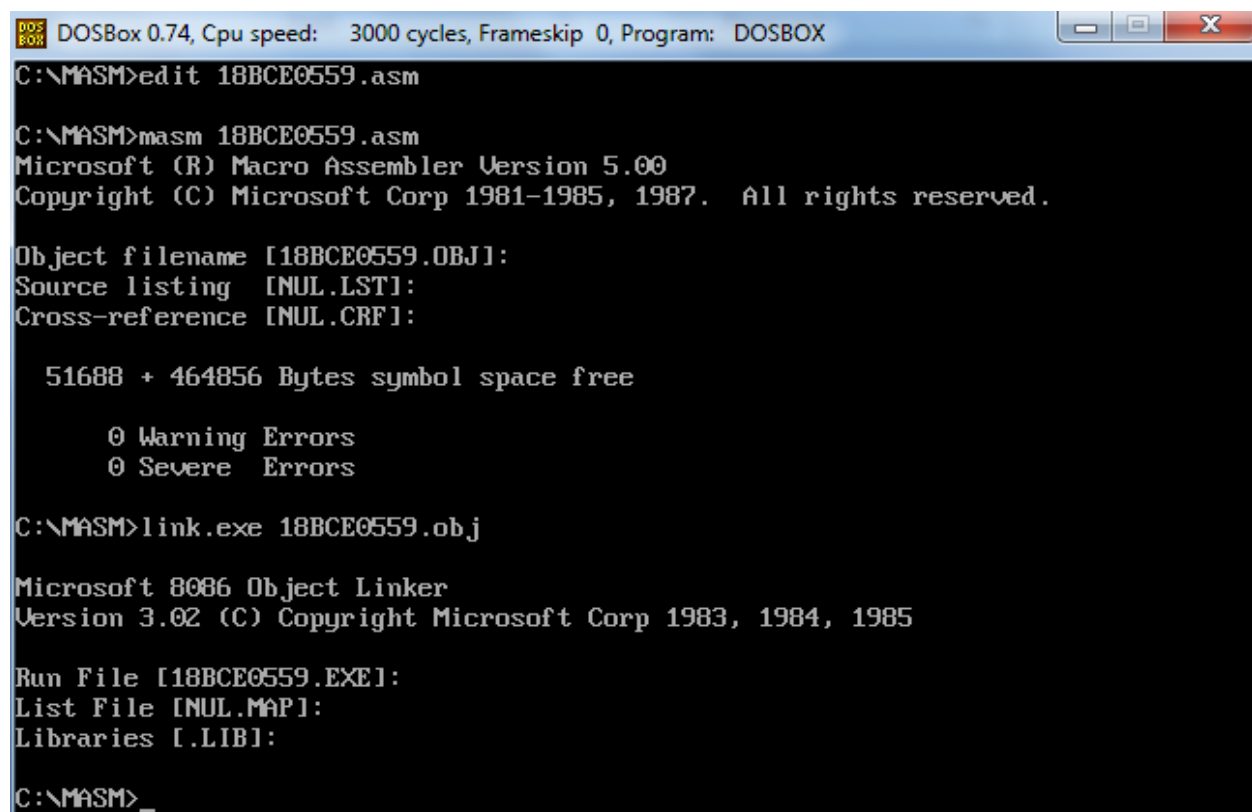
## Division



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT
File Edit Search View Options Help
C:\MASM\18BCE055.ASM

.model small
.stack 64h
.data
a dw 0606h
b dw 0303h
c dw ?
.code
START:
MOV AX,0data
MOV DS,AX
MOV AX,0000H
MOV BX,0000H
MOV AX,A
MOV BX,B
idiv B
MOV C,AX
mov ah,4ch
int 21h
end start
.end

Commands for manipulating files
```



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
C:\MASM>edit 18BCE0559.asm
C:\MASM>masm 18BCE0559.asm
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

Object filename [18BCE0559.OBJ]:
Source listing [NUL.LST]:
Cross-reference [NUL.CRF]:

51688 + 464856 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\MASM>link.exe 18BCE0559.obj
Microsoft 8086 Object Linker
Version 3.02 (C) Copyright Microsoft Corp 1983, 1984, 1985

Run File [18BCE0559.EXE]:
List File [NUL.MAP]:
Libraries [LIB]:

C:\MASM>_
```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
List File [NUL.MAP]:
Libraries [.LIB]:

C:\MASM>debug 18BCE0559.exe
-t
AX=0745 BX=0000 CX=0022 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0734 ES=0734 SS=0747 CS=0744 IP=0003 NU UP EI PL ZR NA PE NC
0744:0003 8ED8          MOV     DS,AX
-
AX=0745 BX=0000 CX=0022 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0005 NU UP EI PL ZR NA PE NC
0744:0005 B80000       MOV     AX,0000
-
AX=0000 BX=0000 CX=0022 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0008 NU UP EI PL ZR NA PE NC
0744:0008 B80000       MOV     BX,0000
-
AX=0000 BX=0000 CX=0022 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=000B NU UP EI PL ZR NA PE NC
0744:000B A10C00       MOV     AX,[000C]                DS:000C=0606
-
AX=0606 BX=0000 CX=0022 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=000E NU UP EI PL ZR NA PE NC
0744:000E 8B1E0E00     MOV     BX,[000E]                DS:000E=0303
-

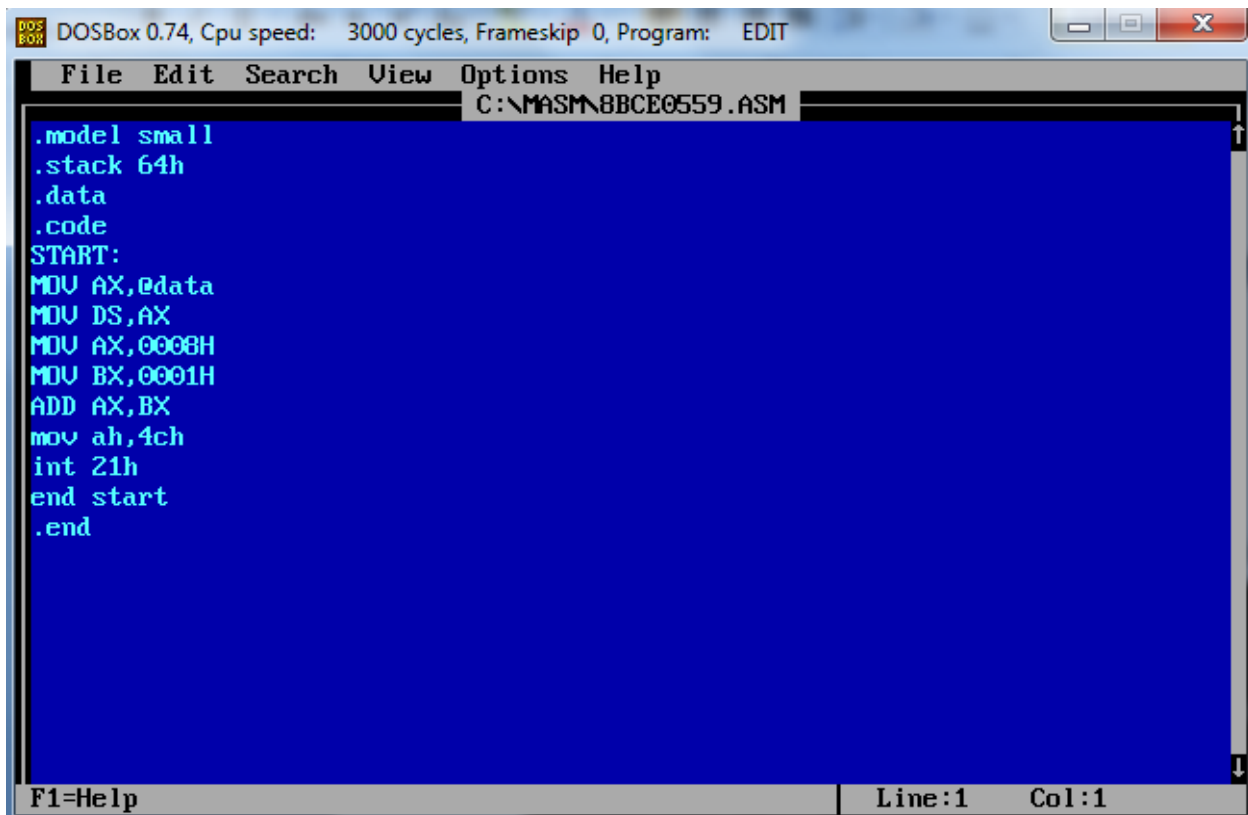
```

```

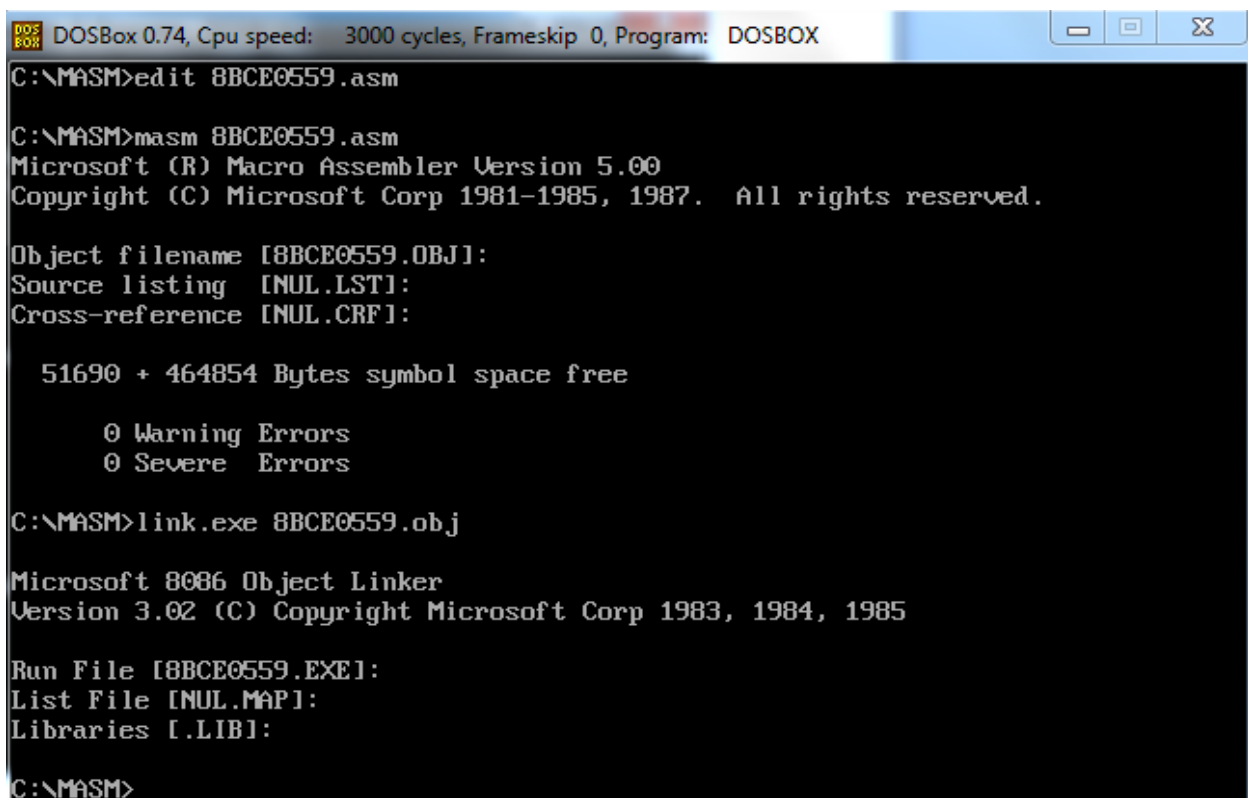
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
0744:000B A10E00       MOV     AX,[000E]                DS:000E=0606
-
AX=0606 BX=0000 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=000E NU UP EI PL ZR NA PE NC
0744:000E 8B1E1000     MOV     BX,[0010]                DS:0010=0303
-
AX=0606 BX=0303 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0012 NU UP EI PL ZR NA PE NC
0744:0012 F73E1000     IDIV    WORD PTR [0010]                DS:0010=0303
-
AX=0002 BX=0303 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0016 NU UP EI PL ZR NA PE NC
0744:0016 A31200       MOV     [0012],AX                DS:0012=0000
-
AX=0002 BX=0303 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=0019 NU UP EI PL ZR NA PE NC
0744:0019 B44C       MOV     AH,4C
-
AX=4C02 BX=0303 CX=0024 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0747 CS=0744 IP=001B NU UP EI PL ZR NA PE NC
0744:001B CD21       INT     21
-
Program terminated normally (0002)
-18BCE0559_

```

## Addition



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT
File Edit Search View Options Help
C:\MASM\8BCE0559.ASM
.model small
.stack 64h
.data
.code
START:
MOV AX,0data
MOV DS,AX
MOV AX,0008H
MOV BX,0001H
ADD AX,BX
mov ah,4ch
int 21h
end start
.end
F1=Help Line:1 Col:1
```



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
C:\MASM>edit 8BCE0559.asm
C:\MASM>masm 8BCE0559.asm
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

Object filename [8BCE0559.OBJ]:
Source listing [NUL.LST]:
Cross-reference [NUL.CRF]:

51690 + 464854 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\MASM>link.exe 8BCE0559.obj

Microsoft 8086 Object Linker
Version 3.02 (C) Copyright Microsoft Corp 1983, 1984, 1985

Run File [8BCE0559.EXE]:
List File [NUL.MAP]:
Libraries [.LIB]:

C:\MASM>
```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
List File [NUL.MAP]:
Libraries [.LIB]:

C:\MASM>debug 8BCE0559.exe
-t
AX=0745 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0734 ES=0734 SS=0746 CS=0744 IP=0003 NU UP EI PL ZR NA PE NC
0744:0003 8ED8          MOV     DS,AX
-
AX=0745 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0005 NU UP EI PL ZR NA PE NC
0744:0005 B80800      MOV     AX,0008
-
AX=0008 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0008 NU UP EI PL ZR NA PE NC
0744:0008 BB0100      MOV     BX,0001
-
AX=0008 BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000B NU UP EI PL ZR NA PE NC
0744:000B 03C3        ADD     AX,BX
-
AX=0009 BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000D NU UP EI PL NZ NA PE NC
0744:000D B44C        MOV     AH,4C
-

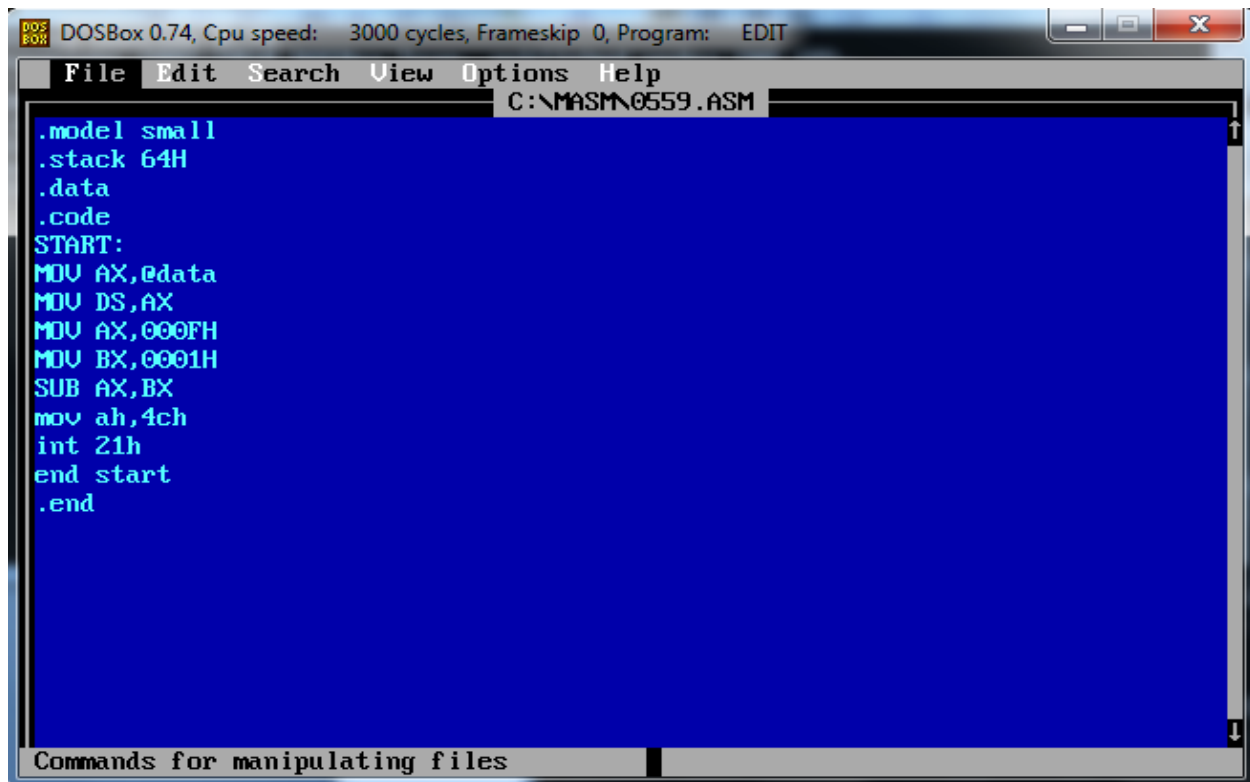
```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-
AX=0745 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0005 NU UP EI PL ZR NA PE NC
0744:0005 B80800      MOV     AX,0008
-
AX=0008 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0008 NU UP EI PL ZR NA PE NC
0744:0008 BB0100      MOV     BX,0001
-
AX=0008 BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000B NU UP EI PL ZR NA PE NC
0744:000B 03C3        ADD     AX,BX
-
AX=0009 BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000D NU UP EI PL NZ NA PE NC
0744:000D B44C        MOV     AH,4C
-
AX=4C09 BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000F NU UP EI PL NZ NA PE NC
0744:000F CD21        INT     21
-
Program terminated normally (0009)
-18BCE0559_

```

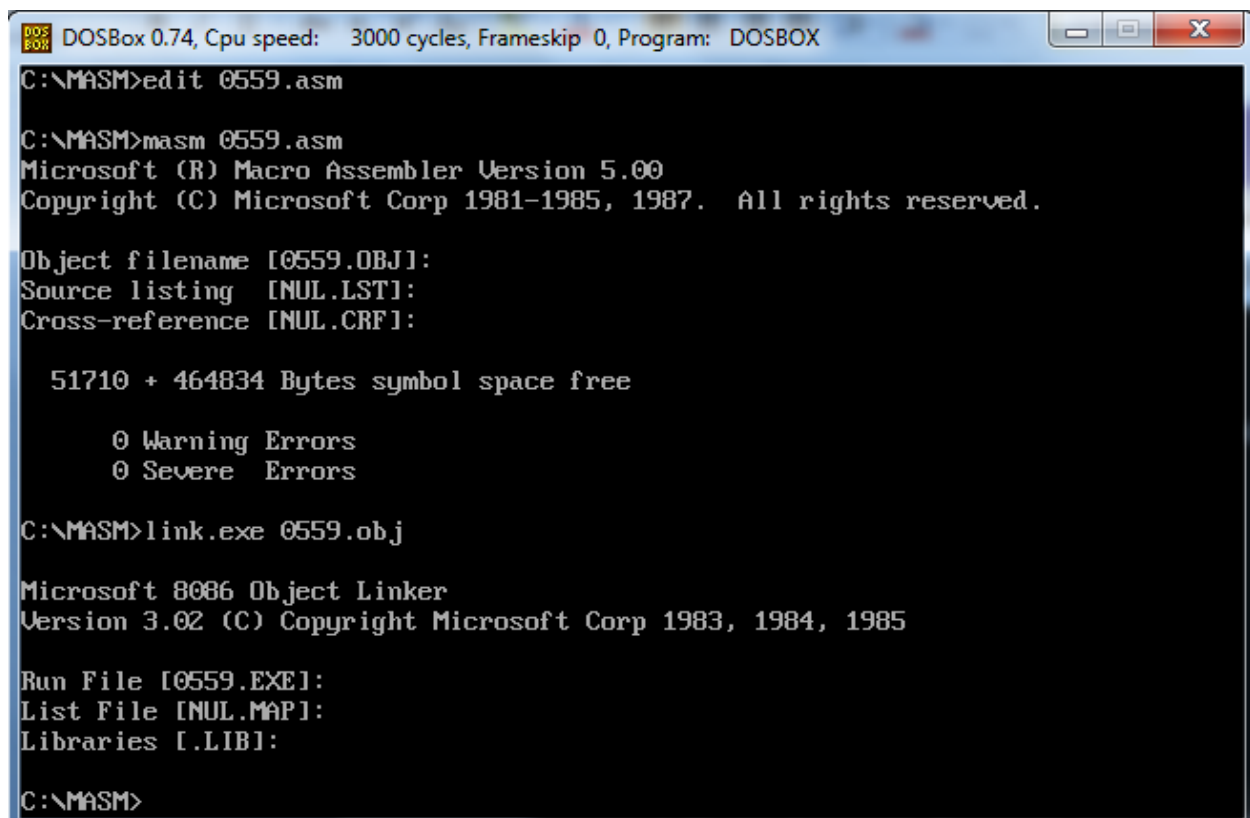
## Subtraction



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT
File Edit Search View Options Help
C:\MASM\0559.ASM

.model small
.stack 64H
.data
.code
START:
MOV AX,0data
MOV DS,AX
MOV AX,000FH
MOV BX,0001H
SUB AX,BX
mov ah,4ch
int 21h
end start
.end

Commands for manipulating files
```



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
C:\MASM>edit 0559.asm
C:\MASM>masm 0559.asm
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

Object filename [0559.OBJ]:
Source listing [NUL.LST]:
Cross-reference [NUL.CRF]:

51710 + 464834 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\MASM>link.exe 0559.obj

Microsoft 8086 Object Linker
Version 3.02 (C) Copyright Microsoft Corp 1983, 1984, 1985

Run File [0559.EXE]:
List File [NUL.MAP]:
Libraries [.LIB]:

C:\MASM>
```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
List File [NUL.MAP]:
Libraries [.LIB]:

C:\MASM>debug 0559.exe
-t
AX=0745 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0734 ES=0734 SS=0746 CS=0744 IP=0003 NU UP EI PL ZR NA PE NC
0744:0003 8ED8          MOV     DS,AX
-
AX=0745 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0005 NU UP EI PL ZR NA PE NC
0744:0005 B80F00      MOV     AX,000F
-
AX=000F BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0008 NU UP EI PL ZR NA PE NC
0744:0008 BB0100      MOV     BX,0001
-
AX=000F BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000B NU UP EI PL ZR NA PE NC
0744:000B 2BC3        SUB     AX,BX
-
AX=000E BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000D NU UP EI PL NZ NA PO NC
0744:000D B44C        MOV     AH,4C
-

```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
0744:0003 8ED8          MOV     DS,AX
-
AX=0745 BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0005 NU UP EI PL ZR NA PE NC
0744:0005 B80F00      MOV     AX,000F
-
AX=000F BX=0000 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=0008 NU UP EI PL ZR NA PE NC
0744:0008 BB0100      MOV     BX,0001
-
AX=000F BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000B NU UP EI PL ZR NA PE NC
0744:000B 2BC3        SUB     AX,BX
-
AX=000E BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000D NU UP EI PL NZ NA PO NC
0744:000D B44C        MOV     AH,4C
-
AX=4C0E BX=0001 CX=0011 DX=0000 SP=0064 BP=0000 SI=0000 DI=0000
DS=0745 ES=0734 SS=0746 CS=0744 IP=000F NU UP EI PL NZ NA PO NC
0744:000F CD21        INT     21
-
Program terminated normally (000E)
-18BCE0559

```