

LAB NO#10

Muhammad Ahmed Baig

20i-1884

Section B

Q1. Multiply two numbers using procedures.

```
.model small
.stack 100h
.data

.code
main proc
mov al, 2
mov bl, 3

call multiply

mov dx, ax
mov ah, 02
int 21h

mov ah, 4ch
int 21h
main endp

multiply proc
mul bl
add ax, 48
ret
multiply endp

end
```

```
DOS FOR DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
Z:\>mount c c:\masm615\BIN
Drive C is mounted as local directory c:\masm615\BIN\
Z:\>c:
C:\>ml task.asm
Microsoft (R) Macro Assembler Version 6.11
Copyright (C) Microsoft Corp 1981-1993. All rights reserved.

Assembling: task.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]: task.obj
Run File [task.exe]: "task.exe"
List File [nul.map]: NUL
Libraries [.lib]:
Definitions File [nul.def]:
LINK : warning L4038: program has no starting address

C:\>task.exe
6
C:\>_
```

Q2. Divide two numbers using procedures by passing parameters through variables.

```
.model small
.stack 100h
.data
var1 dw 8
var2 dw 3
q dw ?
r dw ?
.code
main proc

mov ax,@data
mov ds,ax

call divide
mov dx,r
add dx,48
mov ah,02
int 21h

mov dx,q
add dx,48
mov ah,02
int 21h
mov ah,4ch
main endp
divide proc
mov dx,0
mov ax,[var1]
mov cx,[var2]
```

```

div cx
mov r,dx
mov q,ax
ret
divide endp
END

```

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...
Z:\>mount c c:\masm615\BIN
Drive C is mounted as local directory c:\masm615\BIN\
Z:\>c:
C:\>ml task.asm
Microsoft (R) Macro Assembler Version 6.11
Copyright (C) Microsoft Corp 1981-1993. All rights reserved.

Assembling: task.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]: task.obj
Run File [task.exe]: "task.exe"
List File [nul.map]: NUL
Libraries [.lib]:
Definitions File [nul.def]:
LINK : warning L4038: program has no starting address

C:\>task.exe
22
C:\>_

```

Q3. Divide two numbers using procedures by passing parameters through variables. (In Stack)

```

.MODEL SMALL
.STACK 100H
.DATA
NUM1 DW 24
NUM2 DW 12
RES DW ?
REMAINDER DW ?
.CODE

MAIN PROC
MOV AX,@DATA
MOV DS,AX

PUSH NUM1
PUSH NUM2

CALL DIVISION

EXIT:
MOV AH,4CH

```

```
INT 21H
MAIN ENDP
```

```
DIVISION PROC
MOV AX,0
MOV DX,0
MOV BX,0
PUSH BP
MOV BP,SP
MOV AX,[BP+6]
MOV BX,[BP+4]
```

```
DIV BX
```

```
MOV RES,AX
MOV REMAINDER,DX
```

```
MOV DX,RES
ADD DX,48 ;QUOTIENT
MOV AH,02
INT 21H
```

```
MOV DX,0
MOV DL,10
MOV AH,02
INT 21H
```

```
MOV DX,REMAINDER
ADD DX,48
MOV AH,02
INT 21H
POP BP
```

```
RET
DIVISION ENDP
END MAIN
```



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



Z:\>mount c c:\masm615\BIN

Drive C is mounted as local directory c:\masm615\BIN\

Z:\>c:

C:\>ml task.asm

Microsoft (R) Macro Assembler Version 6.11

Copyright (C) Microsoft Corp 1981-1993. All rights reserved.

Assembling: task.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]: task.obj

Run File [task.exe]: "task.exe"

List File [nul.map]: NUL

Libraries [.lib]:

Definitions File [nul.def]:

C:\>task.exe

2

0

C:\>