

UNIVERSITY OF KARACHI



ASSEMBLY LANGUAGE PROGRAMMING

BSCS-403

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Section: A

Semester No: 3rd

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DEPARTMENT OF COMPUTER SCIENCE

UNIVERSITY OF KARACHI

DIVISION CODE:

```
File Edit Search View Options Help
C:\LT81.ASM
DOSSEG
.MODEL SMALL ;MODEL DIRECTIVE
.STACK 100H ;STACK DIRECTIVE
.DATA ;VARIABLE DECLARATION
Q DB ? ;VARIABLE DEFINED FOR QUOTIENT
R DB ? ;VARIABLE DEFINED FOR REMINDER
.CODE ;CODE SPACE
MAIN PROC

MOV AX,21
MOV BL,5
DIV BL
MOV Q,AL
MOV R,AH
MOV DL,Q
ADD DL,48
MOV AH,2
INT 21H
MOV DL,R
ADD DL,48
MOV AH,2
INT 21H
F1=Help
Line:1 Col:1
```

```
File Edit Search View Options Help
C:\LT81.ASM

MAIN PROC

MOV AX,21
MOV BL,5
DIV BL
MOV Q,AL
MOV R,AH
MOV DL,Q
ADD DL,48
MOV AH,2
INT 21H
MOV DL,R
ADD DL,48
MOV AH,2
INT 21H

MOV AH,4CH      ;TO EXIT THE REGISTER
INT 21H

MAIN ENDP
END MAIN

F1=Help Line:29 Col:1
```

```
C:\>EDIT LT81.ASM

C:\>MASM LT81.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 LT81.OBJ:

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

C:\>LT81.EXE
41
C:\>
```

MULTIPLICATION CODE:

```
File Edit Search View Options Help
C:\LT82.ASM
DOSSEG
.MODEL SMALL ;MODEL DIRECTIVE
.STACK 100H ;STACK SEGMENT DIRECTIVE
.DATA ;USED TO DEFINE VARIABLES
.CODE ;EXECUTABLE CONSTRUCTION ARE WRITTEN HERE
MAIN PROC
MOV AL,5
MOV BL,3
MUL BL
AAM
MOV CH,AH
MOV CL,AL
MOV DL,CH
ADD DL,48
MOV AH,2
INT 21H
MOV DL,CL
ADD DL,48
MOV AH,2
INT 21H
MOV AH,4CH ;TO EXIT REGISTER
F1=Help Line:1 Col:1

C:\>EDIT LT82.ASM

C:\>MASM LT82.ASM:
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51710 + 464834 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\>LINK LT82.OBJ:

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

C:\>LT82.EXE
15
C:\>
```

EVEN OR ODD CHECKER:

```
File Edit Search View Options Help
C:\LT83.ASM
DOSSEG
.MODEL SMALL ;MODEL DIRECTIVE
.STACK 100H ;STACK DIRECTIVE
.DATA ;VARIABLE DECLARATION
VAR1 DB 10,13, 'EVEN NUMBER$'
VAR2 DB 10,13, 'ODD NUMBER$'
.CODE ;CODE SPACE
MAIN PROC

MOV AX,@DATA
MOV DS,AX
MOV AH,1
INT 21H
MOV BL,2
DIV BL
CMP AH,0
JE L1
MOV DX,OFFSET VAR2
MOV AH,9
INT 21H
JMP exit
L1:
```

F1=Help Line:1 Col:1

```
File Edit Search View Options Help
C:\LT83.ASM
MOV AH,1
INT 21H
MOV BL,2
DIV BL
CMP AH,0
JE L1
MOV DX,OFFSET VAR2
MOV AH,9
INT 21H
JMP exit
L1:
MOV DX,OFFSET VAR1
MOV AH,9
INT 21H
exit:

MOV AH,4CH      ;TO EXIT THE REGISTER
INT 21H

MAIN ENDP
END MAIN

F1=Help | Line:33 Col:1
```

C:\>EDIT LT83.ASM

C:\>MASM LT83.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 LT83.OBJ:

Microsoft (R) Overlay Linker Version 3.60

Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>LT83.EXE

4

EVEN NUMBER

C:\>LT83.EXE

3

ODD NUMBER

C:\>_