

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

PROGRAM TO SWAP TWO NUMBERS:

```
File Edit Search View Options Help
C:\LT61.ASM

DOSSEG
.MODEL SMALL ;MODEL DIRECTIVE
.STACK 100H ;STACK DIRECTIVE
.DATA ;VARIABLE DECLARATION
.CODE ;CODE SPACE
MAIN PROC

MOV AX,'1'
PUSH AX
MOV BX,'2'
PUSH BX

POP AX
POP BX

MOV DX,AX
MOV AH,2
INT 21H

MOV DX,BX
MOV AH,2
INT 21H

F1=Help | Line:1 Col:1

C:\>EDIT LT61.ASM

C:\>MASM LT61.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 LT61.OBJ:

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

C:\>LT61.EXE
21
C:\>_
```

PROGRAM TO REVERSE A STRING:

```
File Edit Search View Options Help
C:\LT62.ASM
DOSSEG
.MODEL SMALL ;MODEL DIRECTIVE
.STACK 100H ;STACK DIRECTIVE
.DATA ;VARIABLE DECLARATION
STRING DB 'MUHAMMAD AMAS'
.CODE ;CODE SPACE
MAIN PROC
MOV AX,@DATA
MOV DS,AX
MOV SI,OFFSET STRING

MOV CX,13
L1:
MOV BX,[SI]
PUSH BX
INC SI
LOOP L1

MOV CX,13
L2:
POP DX
MOV AH,2

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

```
File Edit Search View Options Help
C:\LT62.ASM
MOV SI,OFFSET STRING

MOV CX,13
L1:
MOV BX,[SI]
PUSH BX
INC SI
LOOP L1

MOV CX,13
L2:
POP DX
MOV AH,2
INT 21H
LOOP L2

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

MAIN ENDP
END MAIN

F1=Help Line:28 Col:1
```

C:\>EDIT LT62.ASM

C:\>MASM LT62.ASM;

Microsoft (R) Macro Assembler Version 5.00

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51632 + 464912 Bytes symbol space free

0 Warning Errors

0 Severe Errors

C:\>LINK LT62.OBJ;

Microsoft (R) Overlay Linker Version 3.60

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C:\>LT62.EXE

SAMA DAMMAHUM

C:\>_