



Ahsanullah University of Science & Technology

Department of Computer Science and Engineering

Course No : CSE 2214
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Question no:01

Question: Write a program that will prompt the user to enter a hex digit character (0-F), display it on the next line in decimal and ask the user if he or she wants to do it again. If the user types “Y”, the program repeats. If the user types “N” the program terminates. If the user enters an illegal character, prompt the user to try again.

Solution:

```
.MODEL SMALL

.STACK 100H

.DATA
CR EQU 0DH
LF EQU 0AH
M1 DB 0DH,0AH,'ENTER A HEXA DIGIT :','$'
M2 DB 0DH,0AH,'IN DECIMAL IT IS : '
C1 DB ?, '$'
M3 DB 0DH,0AH,'DO YOU WANT TO DO IT AGAIN ? Y/N:','$'
M4 DB 0DH,0AH,'ILLEGAL CHARACTER - ENTER 0-F :','$'
M5 DB 0DH,0AH,'IN DECIMAL IT IS :1'
C2 DB ?, '$'

.CODE

MAIN PROC

    MOV AX,@DATA
```

MOV DS,AX

BEGIN:

MOV AH,9

LEA DX,M1

INT 21H

NEW:

MOV AH,1

INT 21H

CMP AL,'0'

JL ILLEGAL1

CMP AL,'9'

JG ILLEGAL1

MOV C1,AL

MOV AH,9

LEA DX,M2

INT 21H

MSG:

MOV AH,9

LEA DX,M3

INT 21H

MOV AH,1

INT 21H

CMP AL,'Y'

JE BEGIN

JMP ENDD

ILLEGAL1:

CMP AL,'A'

JL ILLEGAL2

CMP AL,'F'

JG ILLEGAL2

SUB AL,11H

MOV C2,AL

MOV AH,9

LEA DX,M5

INT 21H

JMP MSG

ILLEGAL2:

MOV AH,9

LEA DX,M4

INT 21H

JMP NEW

ENDD:

MOV AH,4CH

INT 21H

```
MAIN ENDP
```

```
END MAIN
```

Question no:02

Question: Write a program to read two capital letters and display them on the next line in alphabetical order.

Solution:

```
.MODEL SMALL
```

```
.STACK 100H
```

```
.DATA
```

```
MSG1 DB 'ENTER 1ST CAPITAL LETTER : $'
```

```
MSG2 DB 'ENTER 2ND CAPITAL LETTER: $'
```

```
MSG3 DB 'IN ALPHABETICAL ORDER : $'
```

```
CHAR DB 0DH,0AH,"$"
```

```
.CODE
```

```
MAIN PROC
```

```
MOV AX, @DATA
```

```
MOV DS, AX
```

```
LEA DX, CHAR
```

```
MOV AH, 9
```

```
INT 21H
```

LEA DX, MSG1

INT 21H

MOV AH, 1

INT 21H

MOV BL, AL

LEA DX, CHAR

MOV AH, 9

INT 21H

LEA DX, MSG2

INT 21H

MOV AH, 1

INT 21H

MOV BH, AL

LEA DX, CHAR

MOV AH, 9

INT 21H

LEA DX, MSG3

INT 21H

MOV AH, 2

CMP BL, BH

JAE @GREATER

MOV DL, BL

INT 21H

MOV DL, BH

INT 21H

JMP @END

@GREATER:

MOV DL, BH

INT 21H

MOV DL, BL

INT 21H

@END:

MOV AH, 4CH

INT 21H

MAIN ENDP

END MAIN