Ahsanullah University of Science & Technology

Department of Computer Science & Engineering

Course No	: CSE2214
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Assignment No	: 06

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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.

Answer:

- MODEL SMALL
- STACK 100H

- DATA
```
INPUT_MSG    DB  ODH, OAH, "ENTER A HEX DIGIT
                 FROM O TO F : $"

INPUT_MSG1   DB ODH, OAH, " ANOTHER INPUT ?! $ "
OUTPUT_MSG1  DB ODH, OAH, " DECIMAL : $"
OUTPUT_MSG2  DB ODH, OAH, "INVALID! $"
```

```
. CODE
    MAIN PROC

    INPUT:
    MOV AX, @DATA
    MOV DS, AX
    LEA DX, INPUT_MSG
    MOV AH, 9
    INT 21H

    MOV AH, 1
    INT 21H
    MOV CL, AL

    CMP CL, 'F'
    JG INVALID
    CMP CL, '0'
    JL INVALID

    CMP CL, '9'
    JLE DECIMAL_CONVERT
    JG DECIMAL_CONVERT1

    DECIMAL_CONVERT:
    LEA DX, OUTPUT_MSG1
    MOV AH, 9
    INT 21H
```

```asm
MOV AH, 2
MOV DL, CL
INT 21H
JMP AGAIN

DECIMAL_CONVERT1:
LEA DX, OUTPUT_MSG1
MOV AH, 9
INT 21H

MOV AH, 2
MOV DL, 31H
INT 21H

MOV AH, 2
SUB CL, 11H
MOV DL, CL
INT 21H
JMP AGAIN

AGAIN:
LEA DX, INPUT_MSG1
MOV AH, 9
INT 21H
MOV AH, 1
INT 21H
CMP AL, 'Y'
JE INPUT
CMP AL, 'N'
JE END
```

```
INVALID:
LEA  DX, OUTPUT_MSG2
MOV  AH,9
INT  21H
JMP  INPUT

END:
MOV  AH,4CH
INT  21H
END MAIN
```

Question No: 02

Question: Write a Program to read two capital letters and Display them on the next line in Alphabetical order.

Answer:

- MODEL SMALL
- STACK 100H

- DATA

```
INPUT_MSG  DB "ENTER TWO CAPITAL LETTER:$"
OUTPUT_MSG  DB 0DH, 0AH, "ALPHABETIC ORDER:$
```

```
.CODE
    MAIN PROC
    MOV AX, @DATA
    MOV DS, AX

    LEA DX, INPUT_MSG
    MOV AH, 9
    INT 21H

    MOV AH, 1
    INT 21H
    MOV BL, AL

    MOV AH, 1
    INT 21H
    MOV CL, AL

    CMP BL, CL
    JGE GREATER

    JL LESS

    GREATER:
    LEA DX, OUTPUT_MSG
    MOV AH, 9
    INT 21H
    MOV AH, 2
    MOV DL, BL
    INT 21H
```

```
MOV  AH, 2
MOV  DL, CL
INT  21H
JMP  END

LESS:
LEA DX, OUTPUT_MSG
MOV  AH, 9
INT  21H

MOV  AH, 2
MOV  DL, CL
INT  21H

MOV  AH, 2
MOV  DL, BL
INT  21H
JMP  END

END:
MOV AH, 4CH
INT 21H
END MAIN
```