Lab Report

Lab – 03

Course No: 3110

Course Name: Sessional Based on 3109 (Microprocessors and Assembly Language)

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Section: C

Experiment No: 03

Experiment Name: Write an assembly language program to find the largest number among 3 decimal numbers which are less than 10.

Code:

```
.MODEL SMALL

.STACK 100H

.DATA

MSG1 DB 0AH,0DH, 'Enter three numbers: $'

MSG2 DB 0AH,0DH, 'The largest number: $'


.CODE

MAIN PROC


   ;INITIALIZING PROMPT USER


   MOV AX, @DATA

   MOV DS, AX


   ; FIRST PROMPT USER MSG


   LEA DX, MSG1

   MOV AH,9
```

```asm
INT 21H


;INPUT


MOV AH, 1

INT 21H

MOV BL, AL


MOV DL, ' '

MOV AH, 2

INT 21H


MOV AH, 1

INT 21H

MOV BH, AL


MOV DL, ' '

MOV AH, 2

INT 21H


MOV AH, 1

INT 21H

MOV CL, AL
```

```
CMP BL, BH

JGE A


B:

CMP BH, CL

JGE C


;LINE FEED


MOV DL,0AH

MOV AH,2

INT 21H


;CARRIAGE RETURN


MOV DL,0DH

MOV AH,2

INT 21H


;SECOND PROMPT USER MSG


LEA DX, MSG2
```

```asm
        MOV AH,9

        INT 21H


        MOV AH, 2

        MOV DL, CL

        INT 21H

        JMP EXIT


C:

        ;LINE FEED


        MOV DL,0AH

        MOV AH,2

        INT 21H


        ;CARRIAGE RETURN


        MOV DL,0DH

        MOV AH,2

        INT 21H


        ;SECOND PROMPT USER MSG
```

```
        LEA DX, MSG2

        MOV AH,9

        INT 21H


        MOV AH, 2

        MOV DL, BH

        INT 21H

        JMP EXIT


        A:

        CMP BL, CL

        JGE D


        ;LINE FEED


        MOV DL,0AH

        MOV AH,2

        INT 21H


        ;CARRIAGE RETURN


        MOV DL,0DH

        MOV AH,2
```

```
        INT 21H


        ;SECOND PROMPT USER MSG


        LEA DX, MSG2

        MOV AH,9

        INT 21H


        MOV AH, 2

        MOV DL, CL

        INT 21H

        JMP EXIT


    D:


        ;LINE FEED


        MOV DL,0AH

        MOV AH,2

        INT 21H


        ;CARRIAGE RETURN
```
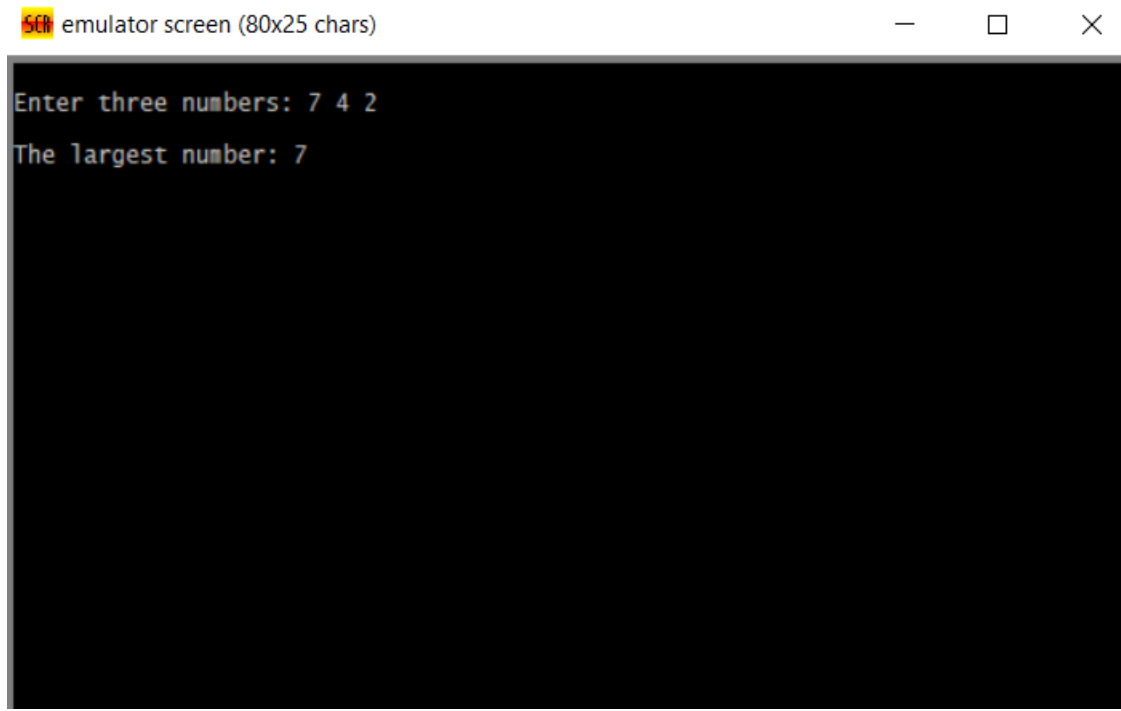
```asm
    MOV DL,0DH

    MOV AH,2

    INT 21H


;SECOND PROMPT USER MSG


    LEA DX, MSG2

    MOV AH,9

    INT 21H


    MOV AH, 2

    MOV DL, BL

    INT 21H


EXIT:

    MOV AH, 4CH

    INT 21H

    MAIN ENDP
END MAIN
```

Output:


```
Enter three numbers: 7 4 2
The largest number: 7
```

Discussion: The specified program needs 3 decimal digits to input. And printing extra space while taking the input was implemented. Then the "cmp" and "jge" was used to do the comparison and finally the output was found to be accurate.