



Green University of Bangladesh
Department of Computer Science and Engineering
(CSE)

Faculty of Sciences and Engineering
Semester: (Fall, Year:2025), B.Sc. in CSE (Day)

Lab Report NO# 01

Course Title: Microprocessors & Microcontrollers Lab

Course Code: CSE 304 Section:232_D2

Lab Experiment Name: Take a number input from user and check whether the given number is divisible by 5 or not

Student Details

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Lab Date : 22-10-2025

Submission Date : 29-10-2025

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Lab Report Status

Marks:

Signature:.....

Comments:.....

Date:.....

1. TITLE OF THE LAB REPORT EXPERIMENT

Take a number input from user and check whether the given number is divisible by 5 or not

2. OBJECTIVES

The main objectives of this experiment are:

- To learn how to take multiple inputs in Assembly Language.
- To understand comparison between two numbers using CMP instruction.
- To display result using conditional jumps.
- To understand logical decision-making in Assembly.

3. PROCEDURE

1. Open **EMU8086 software** and create a new file.
2. Write a program that takes two numbers as input from the keyboard.
3. Compare the two numbers using the **CMP** instruction.
4. If the first number is greater, show “First number is greater.”
5. Otherwise, show “Second number is greater.”
6. Run the program and test with different inputs.

4. IMPLEMENTATION

```
org 100h

.data

str db "Enter a number:$"
newline db 0AH, 0DH, "$"
msg1 db "The number is divisible by 5$"
msg2 db "The number is not divisible by 5"

.code

mov ax, @data
mov ds, ax

lea dx, str
mov ah, 09
int 21h
```

```
mov ah, 01  
int 21h  
sub al, 48  
mov bl, al
```

```
mov al, bl  
mov ah, 0  
mov cl, 5  
div cl
```

```
cmp ah, 0  
je divisible
```

```
lea dx, newline  
mov ah, 09  
int 21h
```

```
lea dx, msg2  
mov ah, 09  
int 21h
```

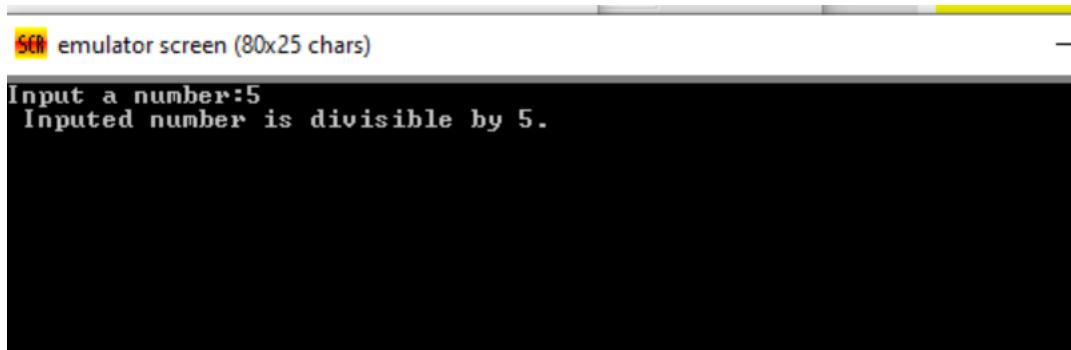
```
jmp exit_program
```

```
divisible:  
lea dx, newline  
mov ah, 09  
int 21h
```

```
lea dx, msg1  
mov ah, 09  
int 21h
```

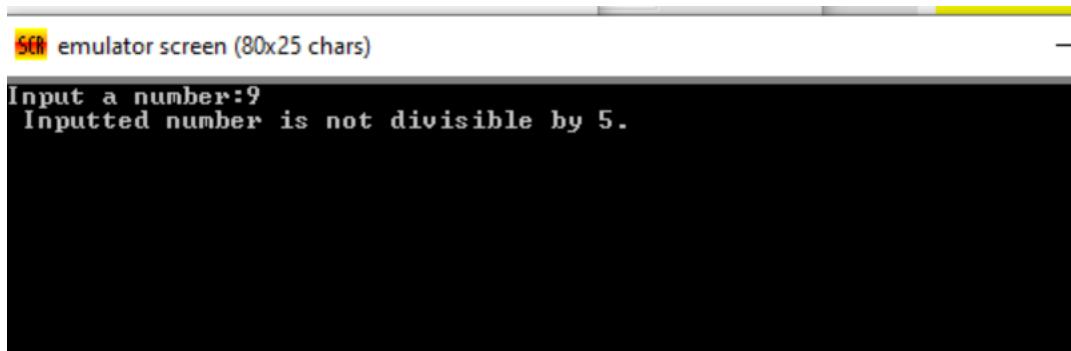
```
exit_program:  
ret
```

5. TEST RESULT



SCR emulator screen (80x25 chars)

```
Input a number:5
Inputted number is divisible by 5.
```



SCR emulator screen (80x25 chars)

```
Input a number:9
Inputted number is not divisible by 5.
```

6. ANALYSIS AND DISCUSSION

In this lab, I used the **CMP** instruction to compare two numbers and **JG/JL** for conditional jumping. When one number is greater, the program jumps to the correct label and prints the message. This helped me understand conditional logic and flow control in Assembly programming.

7. SUMMARY:

In this lab, I learned how to take two inputs and compare them using Assembly Language. I also learned how jump instructions (JG, JL) help in making decisions. This lab increased my confidence in logical and comparison-based Assembly programs.