



**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**

| Name |                        | ID        |
|------|------------------------|-----------|
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**Submission Date : 29-10-2025**  
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**Lab Report Status**

**Marks: .....**  
**Comments:.....**

**Signature:.....**  
**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
```

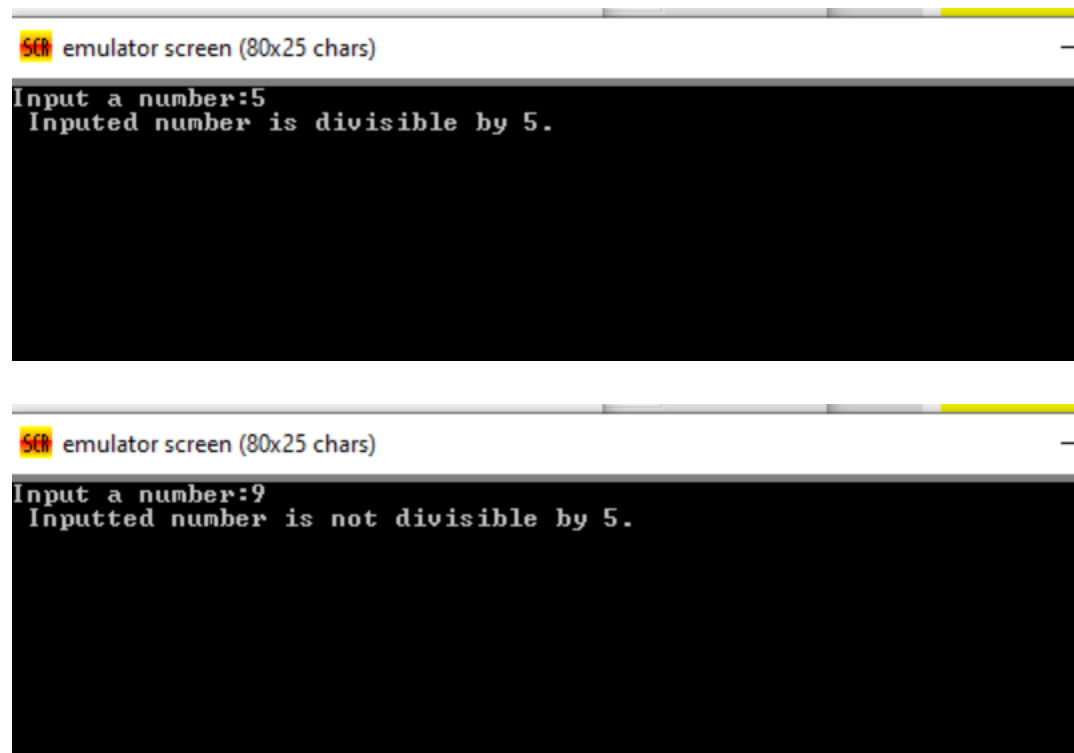
```
jmp exit_program
```

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

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

```
exit_program:
ret
```

## 5. TEST RESULT



The image contains two screenshots of an emulator window titled "56h emulator screen (80x25 chars)". The first screenshot shows the program's output for the input "5", displaying "Input a number:5" followed by "Inputted number is divisible by 5." on the next line. The second screenshot shows the output for the input "9", displaying "Input a number:9" followed by "Inputted number is not divisible by 5." on the next line. Both screenshots have a black background with white text.

```
56h emulator screen (80x25 chars)
Input a number:5
Inputted number is divisible by 5.

56h 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.