

# Lab 2 : Arithmetic Operations



16th August - 2023

# Multiplication

- There are no “MUL” and “DIV” command in 8085
- We will use Repeated “Addition” Method for Multiplication
- $8 * 3 = 24$ 
  - $8 + 8 + 8 = 24$
  - $3 * 3 * 3 * 3 * 3 * 3 * 3 * 3 = 24$

# Division

- $\text{Dividend} = \text{Divisor} * \text{Quotient} + \text{Remainder}$
- Our Main aim is to find the Quotient and Remainder
- $10/3 = 3 + \frac{1}{3}$
- Use successive subtraction to find the Quotient and Remainder

# AIM

- ❖ Write a program using 8085 & test for typical data:
  - Multiplication of Two 8-Bit Numbers by Repeated Addition Method.
    - Store two 8-bit numbers at locations 7501H and 7503H
    - Perform multiplication of these numbers
    - Store the result in memory location 7504
  - Division of Two 8-Bit Numbers by Repeated Subtraction Method.
    - Store two 8-bit numbers at locations 7501H and 7502H
    - Perform division of these numbers
    - Store the result in memory location 7504.



