# Lab Week 12&13 – Using Multiplication & Division Instructions

## Objectives

The objectives of this lab are to learn how to use MUL and DIV instructions for different programming applications.

## Lab Tasks

**TASK 1:** Use following algorithm and code to read a number in decimal from user:

TOTAL = 0

READ AN ASCII DIGIT

REPEAT

CONVERT CHARACTER TO BINARY VALUE

TOTAL = 10 X TOTAL + VALUE

READ A CHARACTER

UNTIL CHARACTER IS CARRIAGE RETURN

**TASK 2:** Use following algorithm and code to display a number stored in AX register in decimal on console:

1. IF AX < 0 THEN
2. PRINT A MINUS SIGN
3. REPLACE AX BY ITS 2’S COMPLEMENT
4. END IF
5. GET THE DIGITS IN AX’S DECIMAL REPRESENTATION
6. CONVERT THESE DIGITS TO CHARACTER AND PRINT THEM

LINE 5:

COUNT = 0

REPEAT

DIVIDE QUOTIENT BY 10

PUSH REMAINDER ON THE STACK

COUNT = COUNT + 1

UNTIL QUOTIENT = 0

LINE 6

FOR COUNT TIMES DO

POP A DIGIT FROM STACK

CONVERT IT INTO A CHARACTER

OUTPUT THE CHARACTER

END FOR