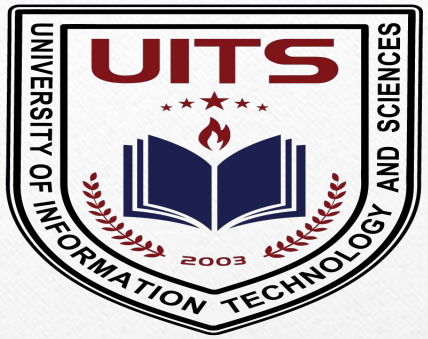

UITS

UNIVERSITY OF INFORMATION TECHNOLOGY AND SCIENCES

Experiment -1: Addition , Subtraction , Multiplication , Division Two number in Assembly

Submitted To : Sultana Rokeya Nahar Alin (Assistant Professor)

Submitted By: MD Shoayeb Islam

ID: 1814351071

Sec : 7A

Theory:

I use ADD instruction for addition and SUB instruction for subtraction. ADD and SUB instruction adds and subs an immediate data or contents of a memory location specified in the instruction or a register (source) to the contents of another register (destination) or memory location. The result is in the destination operand.

For multiplication, we use MUL instruction and for division we use DIV. .MUL instruction multiplies unsigned byte or word by the content of AX. DIV instruction divides an unsigned word or double word by a 16-bit or 8-bit operand.

Code :

```
org 100h
mov ax,4
mov bx,3
add ax,bx
sub ax,bx
mul bx
div bx
ret
```

Comment-Result:

org 100h **[org** (ORiGin) is an **assembly** directive (not an instruction). It defines where the machine **code** (translated **assembly** program) is to place in memory]

mov ax,4 [The **mov** instruction copies the data item referred to by its second operand 4 is constant into the location referred to by its first operand where I use AX is 16-bit primary accumulator register.]

mov bx,3 [The **mov** instruction copies the data item referred to by its second operand 3 is constant into the location referred to by its first operand where I use BX is 16-bit Base register.]

add ax,bx [here, add two value of ax and bx contain 4,3] OUTPUT: 7

sub ax,bx [sub two value of ax and bx contain 7,3] OUTPUT: 4

mul bx [Multiple two value ax,bx but it's just take the second register value bx] OUTPUT: 12 or 0C

div bx [Divide two value and it also take the bx value] OUTPUT: 4

ret [Return from Procedure]