Computer Organization and Architecture (EET2211)

LAB II: Analyze and Evaluate the Branching operation in the 8086 Microprocessor.

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Branch:		Section:	
S. No.	Name	Registration No.	Signature

Marks: _____/10

Remarks:

Teacher's Signature

I.   OBJECTIVES:

1. Multiplication of two 16-bit numbers without using MUL instruction in direct addressing mode.
2. Find the sum and average of N 16-bit numbers.
3. Count no. of 0's in an 8-bit number.
4. Move a block of 16-bit data from one location to another.

II.   PRE-LAB

Note: For each objective in prelab describe the following points:

- Write the pseudocode.
- Write the assembly code with description (ex. Mov ax,3000h – ax<-3000h)
- Examine & analyze the input/output of assembly code.

III.   LAB

Note: For each objective do the following job and assessment:

- Screen shots of the Assembly language program (ALP)
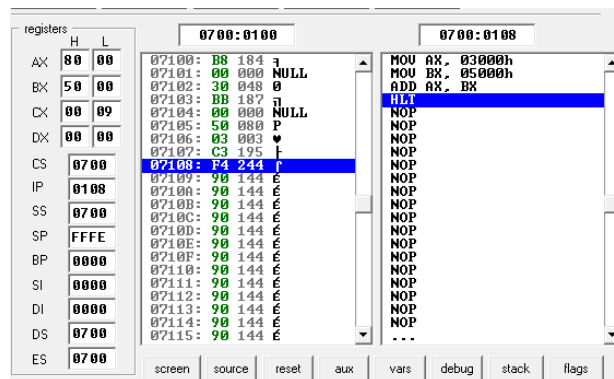- Observations (with screen shots)

Fig. 1. Execution result of addition using immediate addressing mode of 8086 emulator.

From this result I have observed……

Observation Table:

Input:

Sl. No.	Memory Location	Operand (Data)
1		
2		
…		

Output:

Sl. No.	Memory Location	Operand (Data)
1		
2		
…		

IV.   CONCLUSION

V.   POST LAB
1.   Analyze the following code and find out the value of registers.
MOV AX, 4246H
MOV BX, 123FH
AND AX, BX
ADD AX, BX
ROR AX, 02H
INC BX
INC BX
MOV [BX], AX
HLT
2. Division of two 16-bit numbers without using DIV instruction in direct addressing mode.