Computer Organization and Architecture (EET2211)

LAB IV: Evaluate Different Arithmetic Operations and Logical operations on two 32-bit data using ARM processor.

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

Marks: _____/10

Remarks:

Teacher's Signature

I. OBJECTIVE:

1. Perform Addition and Subtraction of two 32-bit numbers using data processing addressing mode (with immediate data).
2. Perform Addition, Subtraction, and Multiplication of two 32-bit numbers using load/store addressing mode.
3. Perform the logical operations (AND, OR, XOR, and NOT) on two 32-bit numbers using load/store addressing mode.

II. PRE-LAB

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

- Write the pseudocode.
- Write the assembly code with a 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:

- Screenshots of the Assembly language program (ALP)
- Observations (with screenshots)

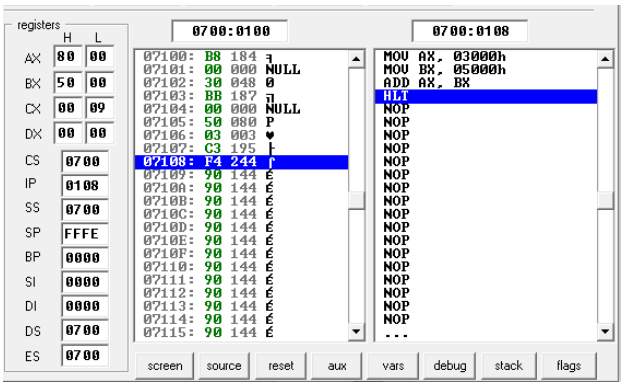

Fig. 1. Execution results of addition using immediate addressing mode of 8086 emulator.

From this result, I have observed……

Input:

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

Output:

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

IV. CONCLUSION

V. POST LAB

1. Give any examples of five arithmetic and logical instructions.

2. Differentiate between LDR and STR instruction

3. Which of the following instructions is not valid
   a) MOVR7.R2
   b) LDR R1, =LABEL