Computer Organization and Architecture (EET2211)

LAB VI: Analyze and evaluate Recursion function using ARM processor.

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Marks: _____/10

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I. OBJECTIVE:

1. Find the factorial of a given 8-bit number.
2. Find the Fibonacci Series up to n digits (8-bit number).

II. SOFTWARE REQUIRED

III. PRE-LAB

- Write the assembly code with a description (ex. Mov ax,3000h – ax<-3000h)

IV. LAB

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

- Screenshots of the Assembly language program (ALP)
- Observation (screenshots)

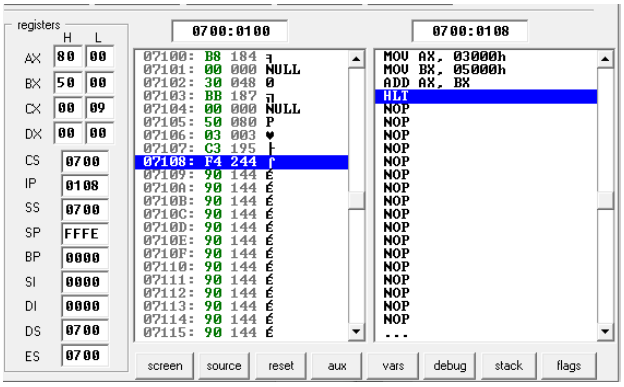

Fig. 1. Execution results of addition using immediate addressing mode of 8086 emulator.

From this result, I have observed……

Input:

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

Output:

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

V. CONCLUSION

VI. POST LAB

1. If the registers r1,r2,r3 contain the values 10,20,30 respectively, what will be the value in register r4 after the execution of the following code segment?
   ADD r4, r1, r3
   SUBS r4, r2, r4
   RSB r4, r1, r4

2. If the register r5 contains the hexadecimal number AA55AA55, the hexadecimal value of the number stored in register r2 after executing the following instruction will be _____.

   MVN R2,R5

3. If the registers r2, r5, r8 contain the values 3, 7, 8 respectively, the values of r10 and r5 after the execution of the following instruction will be _____.

   ADD r10, r8, r5, LSL r2