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Experiment 13 : Write X86/64 ALP to count number ofpositive and negative numbers from the array.

Algorithm

1. Move the contents present at 00H to BL register .
2. Move the contents of 0AH into DL register.
3. LEA (Load effective address) will sets SI to 2000H memory address.
4. Move the contents at SI to AL register .
5. SHL instruction performs logical shift on the destination.
6. Jump if there is no carry else increment value at BL.
7. Jump loop 2 .In loop 1 , increment in CL by 1 and in loop 2 , increment in SI by 1 .
8. Decrement by 1 unit in content of DL register .

9. Jump when not zero and move the contents present at CL to memory location 1234H .
10. Move the content of BL register to 1235H memory location .
11. Stop .

Source Code :

```
MOV BL,00H

MOV CL,00H

MOV DL,0AH

LEA SI,[2000H]

LOOP:MOV AL, [SI]

SHL AL, 01

JNC  L1

INC  BL

JMP L2
```

L1:INC CL

L2:INC SI

DEC DL

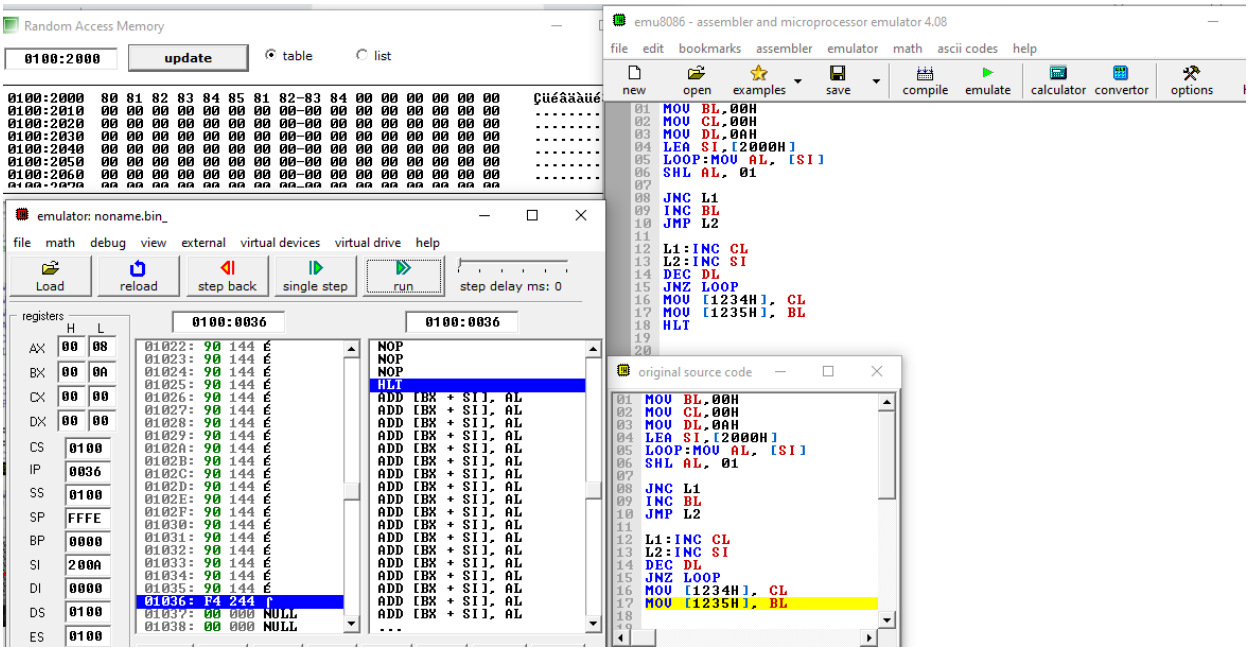
JNZ LOOP

MOV [1234H], CL

MOV [1235H], BL

HLT

Snap shots



Conclusion : Performed count of positive and negative numbers from the array using 8086 emulator .