Experiment 9

Aim: Find the factorial of an 8-bit number.

Algorithm:

1) Assigns source index a value to point at an address ‘0100:1000h’ in RAM.

2) Moving CX register to source index and fetching the 8-bit number in the register.

3) Initialising AX register with value 0001h, to set a base for our answer.

4) Now loop “mult” will run until CX reaches value 1.

5) In the loop, CX will get multiplied but AX and value will be stored their in AX register. 6) For After CX reaches 1, program will continue, moving forward with source index. 7) Now value obtained in AX register will be moved to the memory.

8) AH will be stored first and AL next to it, just to give it an order. ([si+15] is only to print them in next line, just for more clarity).

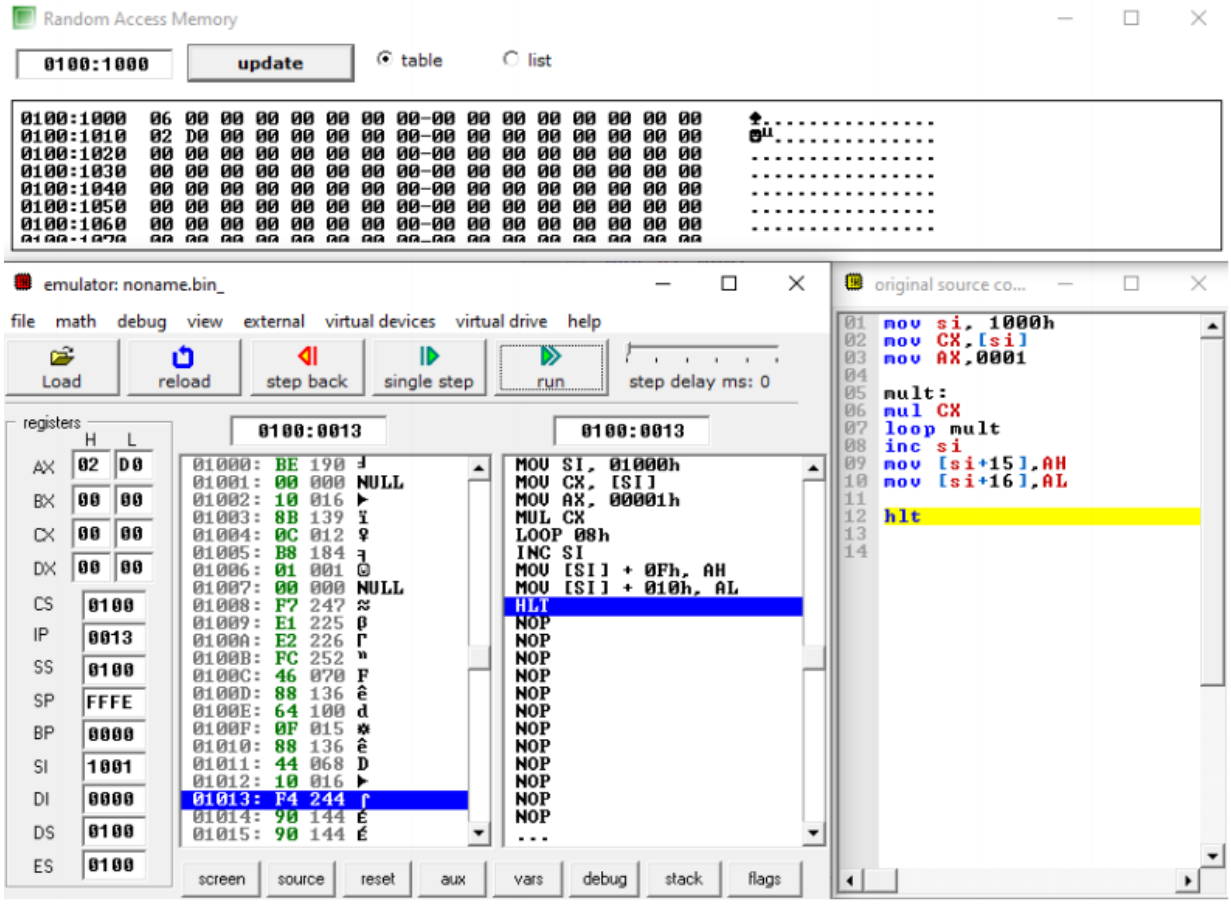
9) Hence, we obtain our desired result, and program ends with halt command.

Code:

```
; add your code here


 mov si, 1000h
mov CX,[si]
mov AX,0001
mult:
mul CXloop mult
inc si
mov [si+15],AH
mov [si+16],AL
hlt
```

Output:



(ARKAJYOTI 2K19/EP/022)