FACTORIAL OF A GIVEN NUMBER

EXP NO: 9

AIM: To find the factorial of a given number using 8085 microprocessor.

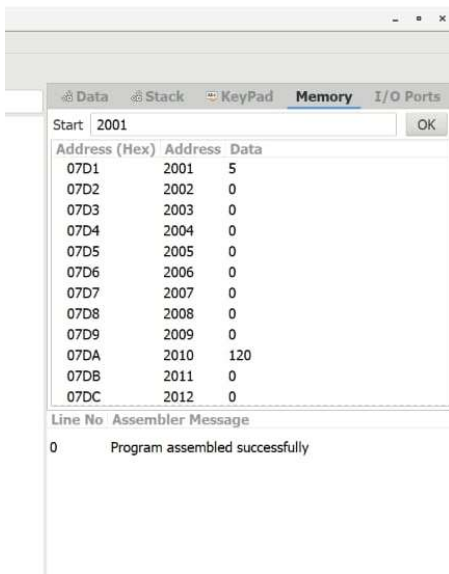**ALGORITHM:**

1) Load the data into register B

2) To start multiplication set D to 01H

3) Jump to step 7

4) Decrements B to multiply previous number

5) Jump to step 3 till value of B>0

6) Take memory pointer to next location and store result

7) Load E with contents of B and clear accumulator

8) Repeatedly add contents of D to accumulator E times

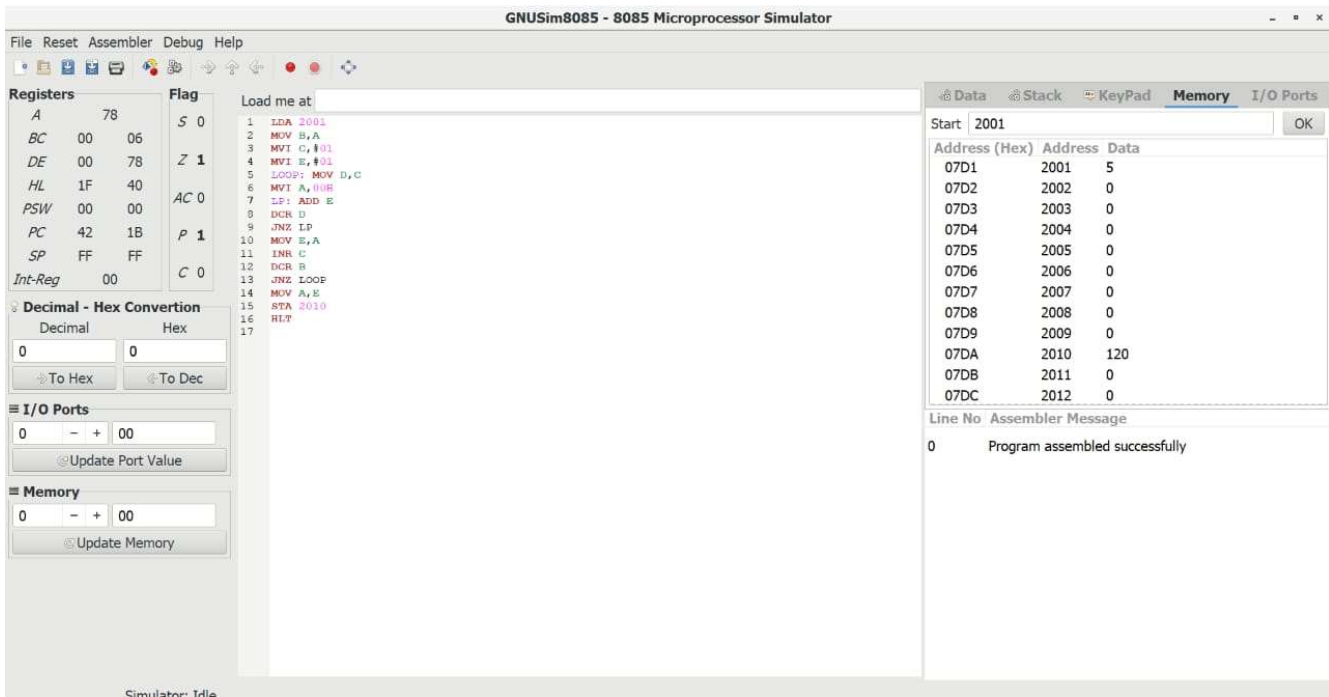9) Store accumulator content to D

10) Go to step 4

PROGRAM:

```
LDA 2001
MOV B,A
MVI C,#01
MVI E,#01
LOOP: MOV D,C
MVI A,00H
LP: ADD E
DCR D
JNZ LP
MOV E,A
INR C
DCR B
JNZ LOOP
MOV A,E
STA 2010
HLT
```

INPUT:

OUTPUT:

RESULT: Thus the program was executed successfully using 8085 processor simulator.