### **FACTORIAL OF A GIVEN NUMBER**

### EXP-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

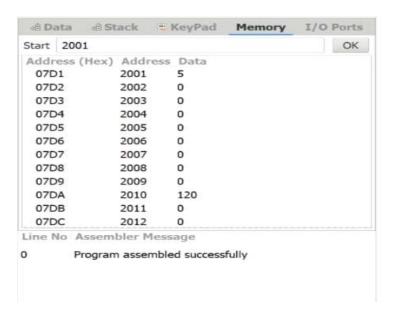
JNZ LOOP

MOV A,E

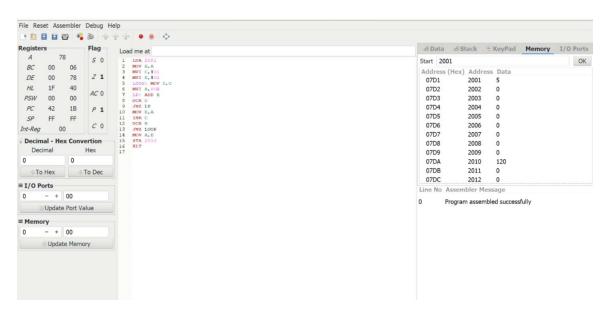
STA 2010

HLT

### **INPUT:**



#### **OUTPUT:**



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