

## **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,01H

MVI E,01H

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

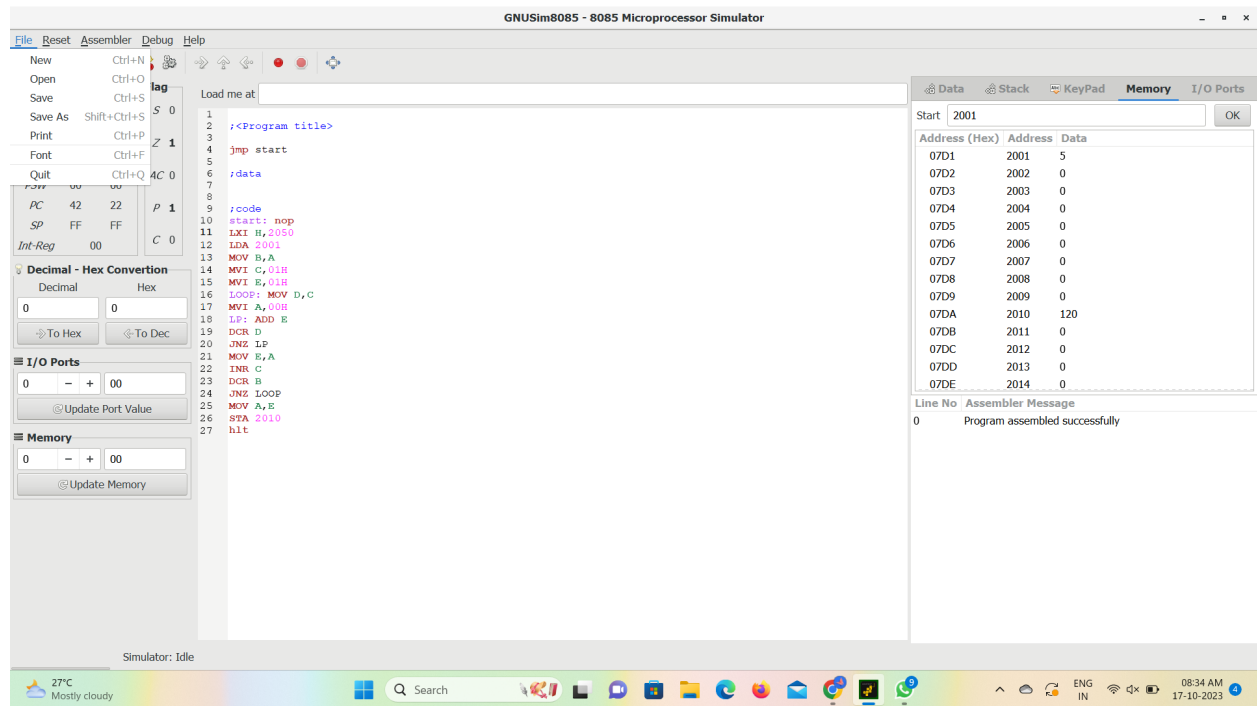
HLT

**INPUT:**

Start 2001

Address (Hex)	Address	Data
07D1	2001	5
07D2	2002	0

## OUTPUT:



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