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
```

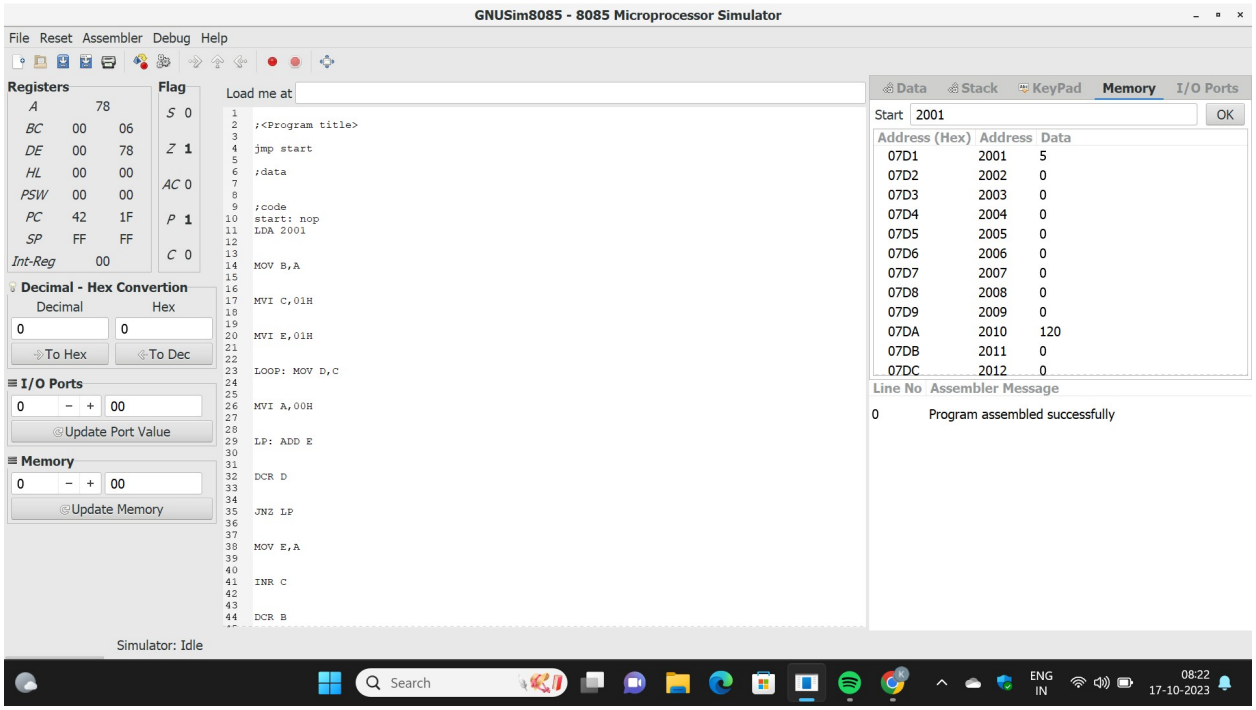
INPUT:

Data Stack KeyPad Memory I/O Ports

Start 2001 OK

Address (Hex)	Address	Data
07D1	2001	5
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	120

OUTPUT:



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