Marie Project 12th

Zeyad Mohamed Ahmed – 222007589   **Dr. Asmaa Hasan**

━━━━━━━━━━━━━━━━━━━━━

1st:

2nd:

Assembly code: Autosaved file

```
1   Input   / Zeyad Mohamed Ahmed 222007589
2
3   Store Factorial
4   Fac, Load Factorial
5   Store MulA
6   Load Sum
7   Skipcond 800
8   Load One
9   Store MulB
10  Load Zero
11  Store MulS
12  Jump Mul
13  FacLoop, Load MulS
14  Store Sum
15  Load Factorial
16  Subt One
17  Skipcond 800
18  Jump Finish
```

Running...

Register	Value
AC	0000
IR	5000
MAR	000
MBR	5000
PC	001
IN	0000
OUT	0000

Output log RTL log Watches Inputs

Display

OUTPUT MODE: DEC

Input Value

Please input a value.

Value:

5

Type:

Decimal

Cancel and pause   Accept

	+0	+1	+2	+3
000	5000	201F	101F	2021	1020	8800	1025	2022	1024	2023	9013	1023	2020	101F	4025	8800
010	901C	201F	9002	1023	3022	2023	1021	4025	2021	8400	9013	900B	1020	6000	7000	0000
020	0000	0000	0000	0000	0000	0001	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
030	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
040	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
050	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

Assemble Step Microstep Step Back Pause Restart Delay: 1 ms

3rd:

Assembly code: Autosaved file

```
1   Input   / Zeyad Mohamed Ahmed 222007589
2
3   Store Factorial
4   Fac, Load Factorial
5   Store MulA
6   Load Sum
7   Skipcond 800
8   Load One
9   Store MulB
10  Load Zero
11  Store MulS
12  Jump Mul
13  FacLoop, Load MulS
14  Store Sum
15  Load Factorial
16  Subt One
17  Skipcond 800
18  Jump Finish
```

Machine halted normally.

Register	Value
AC	0078
IR	7000
MAR	01E
MBR	7000
PC	01F
IN	0005
OUT	0078

Output log RTL log Watches Inputs

Display

OUTPUT MODE: DEC

120

	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
000	5000	201F	101F	2021	1020	8800	1025	2022	1024	2023	9013	1023	2020	101F	4025	8800
010	901C	201F	9002	1023	3022	2023	1021	4025	2021	8400	9013	900B	1020	6000	7000	0001
020	0078	0000	0078	0078	0000	0001	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
030	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
040	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
050	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

Assemble Step Microstep Step Back Halted Restart Delay: 1 ms
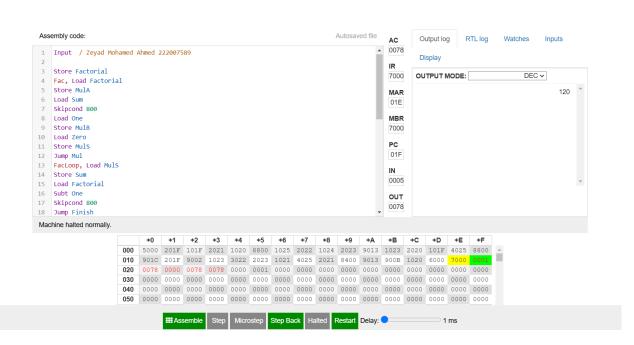
Code

Input / Zeyad Mohamed Ahmed 222007589

Store Factorial

Fac, Load Factorial

Store MulA

Load Sum

Skipcond 800

Load One

Store MulB

Load Zero

Store MulS

Jump Mul

FacLoop, Load MulS

Store Sum

Load Factorial

Subt One

Skipcond 800

Jump Finish

Store Factorial

Jump Fac

```
Mul, Load MulS

Add MulB

Store MulS

Load MulA

Subt One

Store MulA

Skipcond 400

Jump Mul

Jump FacLoop

Finish, Load Sum

Output

Halt


Factorial, DEC 0

Sum, DEC 0

MulA, DEC 0

MulB, DEC 0

MulS, DEC 0

Zero, DEC 0

One, DEC 1


END
```