## A.Y. 2022-2023

Subject: Process Organization and Architecture SAP ID: 60004220253 – Devansh Mehta

# **Experiment 9**

Aim: Assembly program to find Factorial of a number

Part A: Factorial without macros.

**Code:** 

**DATA SEGMENT** 

N1 DW 05H

FACT DW?

**DATA ENDS** 

**CODE SEGMENT** 

START: MOV AX, DATA

MOV DS, AX

MOV AX, N1

L1: DEC N1

MUL N1

MOV CX, N1

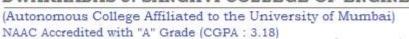
CMP CX, 01H

JNZ L1

MOV FACT, AX

**CODE ENDS** 

**END START** 

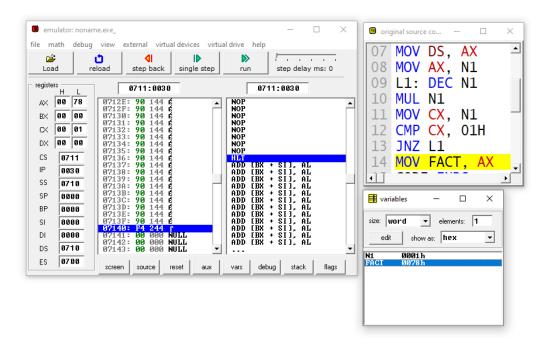




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## Part B: Factorial with macros.

## Code:

FACT MACRO F

UP:

MUL F

DEC F

JNZ UP

**ENDM** 

**DATA SEGMENT** 

NUM DW 05H

**RESULT DW?** 

**ENDS** 

**CODE SEGMENT** 

# DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING



(Autonomous College Affiliated to the University of Mumbai) NAAC Accredited with "A" Grade (CGPA: 3.18)

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START:

MOV AX,DATA

MOV DS,AX

MOV CX, NUM

MOV AX, 0001H

**FACT NUM** 

**MOV RESULT, AX** 

**ENDS** 

**END START** 

