COMPUTER ENGINEERING

**TITLE OF MICRO-PROJECT: -** MICRO-PROJECT TO FIND FACTORIAL OF NUMBER USING ASSEMBY LANGUAGE PROGRAMMING

**GROUP MEMBERS**

|  |  |  |
| --- | --- | --- |
| **ROLL NO** | **CLASS** | **NAME OF MEMBER** |
| 2202 | C04I | VARUN CHAUDRI  (GROUP LEADER) |
| 2203 | CO4I | DRAVIN CHAUHAN |
| 2217 | CO4I | HERAMB PAWAR |

**GUIDE NAME**: - MRS.ASHWINI PENDSE

**PART A PLAN**

**TITLE OF MICRO-PROJECT: -** MICRO-PROJECT TO FIND FACTORIAL OF NUMBER USING ASSEMBY LANGUAGE PROGRAMMING

## BRIEF DESCRIPTION: -

8086 MICROPROCESSOR IS AN ENHANCED VERSION OF 8085 MICROPROCESSOR IT IS A 16-BIT MICROPROCESSOR HAVING 20 ADDRESS LINES AND16 DATA LINES THAT PROVIDES UP TO 1MB STORAGE.

* IT CONSISTS OF POWERFUL INSTRUCTION SET, WHICH PROVIDES OPERATIONS LIKE MULTIPLICATION AND DIVISION EASILY.
* IN [COMPUTER PROGRAMMING](https://en.wikipedia.org/wiki/Computer_programming), ASSEMBLY LANGUAGE (OR ASSEMBLER LANGUAGE), OFTEN ABBREVIATED ASM, IS ANY [LOW-LEVEL PROGRAMMING LANGUAGE](https://en.wikipedia.org/wiki/Low-level_programming_language) IN WHICH THERE IS A VERY STRONG CORRESPONDENCE BETWEEN THE INSTRUCTIONS IN THE LANGUAGE AND THE [ARCHITECTURE'S](https://en.wikipedia.org/wiki/Computer_architecture) [MACHINE CODE](https://en.wikipedia.org/wiki/Machine_code) [INSTRUCTIONS](https://en.wikipedia.org/wiki/Instruction_set_architecture).
* THE DIFFERENT COMPONENTS OF ASSEMBLY LANGUAGE PROGRAM ARE EDITOR, ASSEMBLER, LINKER AND DEBUGGER
* IN THE PROJECT DIFFERENT REGISTERS SUCH AS ACCUMULATOR (AX) AND COUNTER LOOP(CX) ARE USED.
* THE PROJECT CONSIST OF DIFFERENT INSTRUCTION SUCH AS JNZ, MOV, CMP
* THE PROJECT ALSO CONSIST OF DIFFERENT ASSEMBLER DIRECTIVES SUCH AS DATA SEGMENT, CODE SEGMENT,ASSUME,END,ETC
* THE RESULT I.E THE FACTORIAL OF RESPECTIVE NUMBER IS STORED IN THE AX REGISTER WHICH IS ALSO KNOWN AS ACCUMLATOR.

**AIM OF MICRO PROJECT :**

THIS MICRO PROJECT AIMS AT:

* TO FIND FACTORIAL OF NUMBER USING ASSEMBLY LANGUAGE PROGRAMMING
* TO MAKE USE OF DIFFERENT REGISTER IN ASSEMBLY LANGUAGE PROGRAMMING
* TO UNDERSTAND THE USE OF DIFFERENT ASSEMBLER DIRECTIVES OF 8086 MICROPROCESSOR
* TO UNDERSTAND THE USE OF DIFFERENT INSTRUCTION IN 8086 MICROPROCESSOR.

**3.0 ACTION PLAN: -**

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| **SR NO** | **DETAIL OF ACTIVITIES** | **PLAN START DATE** | **PLAN END DATE** | **NAME OF TEAM MEMBERS** |
| 1 | GROUP FORMED ACCORDING TO ROLL NO & GROUP LEADERS WERE ELECTED ALSO DETAILED INFORMATION ON MICRO PROJECT WAS GIVEN | 9/12/19 | 21/12/19 | VARUN CHAUDARI |
| 2 | FINALIZATION OF MICROPROJECT AS WELL AS DETAILED DISCUSSION REGARDING TOPIC | 23/12/19 | 4/1/20 | DRAVIN CHAUHAN |
| 3 | PLANNING OF MICRO-PROJECT REGARDING LANGUAGE, RESOURCES, SOFTWARE USED, SUBMISSION DATE AND COMPLETING PART A PLAN OF MICRO – PROJECT | 6/1/20 | 18/1/20 | HERAMB  PAWAR |
| 4 | COMPLETE ANALYSIS OF DESIGN PART OF MICRO-PROJECT & DISTRIBUTION OF MODULE AMONG GROUP MEMEBERS | 20/1/20 | 1/2/20 | VARUN CHAUDARI |
| 5 | GETTING IT FINALIZED BY THE GUIDE | 3/2/20 | 15/2/20 | DRAVIN CHAUHAN |
| 6 | IMPLEMENTATION OF  PROJECT REPORT | 17/2/20 | 29/2/20 | HERAMB  PAWAR |
| 7 | PRESENTATION OF 1ST PART OF MICRO-PROJECT INFRONT OF GUIDE BY EACH GROUP MEMBER AND  PREPARING OF PART B PLAN FOR MICRO-PROJECT | 2/3/20 | 14/3/20 | DRAVIN CHAUHAN |
| 8 | SUBMISSION OF MICRO-PROJECT | 16/3/20 | 28/3/20 | VARUN CHAUDARI |

**4.0** **RESOURCES USED: -**

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| SR NO | NAME OF RESOURCES USED | SPECIFICATION | QUANTITY | REMARKS |
| 1 | COMPUTER | **PROCESSOR**-AMD  **HARD DISK-**2 TB  **RAM**-16GB  **OPERATING SYSTEM**-WINDOWS 10 PRO | 1  1  1  1 | HARDWARE & SOFTWARE USED |
| 2 | TASM |  | 1 | EDITOR, ASSEMBLER, LINKER, DEBUGGER  FOR ASSEMBLY LANGUAGE PROGRAMMING |
| 3 | DOS BOX | 0.74-3 | 1 | SOFTWARE TO RUN TASM |
| 3 | PROGRAMMING LANGUAGE | ASSEMBLY LANGUAGE |  | PROGRAMMING LANGUAGE |