

## EXPERIMENT NO- 9

**AIM:** WAP to find Factorial of a number using Macro

**Resource Required:** P-IV and above RAM 128MB, Dot Matrix Printer, Emu 8086, MASM 611/ TASM, Turbo C/C++, Printer, Printout Stationary.

### THEORY:

A **Macro** is a set of instructions grouped under a single unit. It is another method for implementing modular programming in the 8086 microprocessors (The first one was using Procedures).

The **Macro** is different from the Procedure in a way that unlike calling and returning the control as in procedures, the processor generates the code in the program every time whenever and wherever a call to the **Macro** is made.

A **Macro** can be defined in a program using the following assembler directives: **MACRO** (used after the name of Macro before starting the body of the Macro) and **ENDM** (at the end of the Macro). All the instructions that belong to the Macro lie within these two assembler directives.

The following is the syntax for defining a **Macro in the 8086 Microprocessor**:

```
Macro_name MACRO [ list of parameters ]  
    Instruction 1  
    Instruction 2  
    - - - - -  
    - - - - -  
    - - - - -  
    Instruction n  
ENDM
```

**CONCLUSION:** We have successfully calculated factorial of a number using macro in assembly language using EMU8086.

### Code and Output:

