**Lab Manual # 08**

**Implementation of Assembly Language programs using Procedures and CALL using EMU8086**

**Procedure:**

Procedure is a part of code that can be called from your program in order to make some specific task (remember the functions in C). Procedures make program more structural and easier to understand.

**Procedure Syntax:**

name PROC

; here goes the code

; of the procedure ...

RET

name ENDP

**Example:**

ORG 100h

MOV AL, 1

MOV BL, 2

CALL m2

RET; return to operating system.

m2 PROC

MUL BL ; AX = AL \* BL.

RET ; return to caller

m2 ENDP

ret

Generally, procedure returns to the same point from where it was called

**CALL a Procedure: -**

Transfer control to a procedure. RET is used to return control to the instruction after the call.

**Lab Tasks**

**Execute the following tasks CLO [1]**

**TASK 1:**

Write a program to find the factorial of given number by using procedure of FACT?

**TASK 2:**

Write a program to swap any two numbers by using procedure of SWAP?

**TASK 3:**

Write a program to find the minimum number of a byte sized array and store it in a variable min, by using procedure of MIN?

**TASK 4:**

Write a procedure which searches a number in an array of words. The procedure should receive the start address of the array from the SI register, the number to be searched from the BX register, and the number of elements in the array from the CX register. The procedure should return the offset of the number in DI register. If the number is not found, DI should be zero