EXPERIMENT NO- 7

AIM: WAP to find Maximum number from an array

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

THEORY:

Instructions used in this program are:

1) **LEA:** Load Effective Address loads the specified register with the offset of a memory location.

   Syntax: LEA register, memory

2) **JC (Jump if carry):** This is conditional Jump. This instruction will jump to specified label when carry flag is set.

3) **JNZ (Jump if not Zero):** This is conditional Jump. This instruction will jump to specified label when zero flag is not set.

4) **DEC:** DEC decrements the source by one

   Syntax: DEC source

5) **CMP:** Compare the numerical value of the destination with the source and set flags appropriately. This comparison is carried out in the form of a subtraction to determine which of the operands has a greater value. After a CMP instruction, OF, SF, ZF and CF are set appropriately. For example, if the operands have equal values, then ZF if set.

   Syntax:

   ```
   CMP destination, source
   ```

ALGORITHM:

Step I **:** Initialize the data segment

Step II **:** Move the length to CX

Step III **:** Initialize BL register to 00h

Step IV : Load the first number to SI register.

Step V : Move contents pointed by SI register to AL register

Step VI : Compare the contents of AL and BL register.

Step VII : If AL< BL, then go to Step IX else go to Step VIII

Step VIII : Move the contents of AL to BL register

Step IX : Increment SI

Step X : Decrement CX contents by 1

Step XI : Repeat till CX=0

Step XII : Display the value in max variable

Step XIII : Stop

<u>CONCLUSION</u>: We have successfully found the maximum number from an array in Assembly Language using EMU8086.

<u>Code and Output</u>: