



Computer Architecture and Assembly Language **Programming-Lab**

Home Work- 01 (Deadline 8-Mar-2022)

Please carefully read the following instructions before attempting assignment.

RULES FOR MARKING

It should be clear that your assignment would not get any credit if:

- The assignment is submitted after the due date.
- The submitted assignment does not open or file is corrupt.
- Zero marks will be given if the submitted solution is copied from any other student or from the internet.

Q. Write an assembly language program to find largest digit of your Roll No and store it in the memory.

- Store all the digits of Roll No in the memory.
- Use CMP to check digit is greater or not and move to next.
- Store the largest digit in memory.

Note: Make it sure to use your own Roll No, otherwise zero marks will be awarded.

Submission details:

Following are required in a single MS-Word document.

- Assembly language program.
- Screenshot of AFD debugger at the start of program.
- Screenshot of AFD debugger showing the final values.



Hint: for more detail see **Coal handouts Page 30**

DEST = SRC	ZF = 1	When the source is subtracted from the destination and both are equal the result is zero and therefore the zero flag is set. This works for both signed and unsigned numbers.
UDEST < USRC	CF = 1	When an unsigned source is subtracted from an unsigned destination and the destination is smaller, borrow is needed which sets the carry flag.
UDEST ≤ USRC	ZF = 1 OR CF = 1	If the zero flag is set, it means that the source and destination are equal and if the carry flag is set it means a borrow was needed in the subtraction and therefore the destination is smaller.
UDEST ≥ USRC	CF = 0	When an unsigned source is subtracted from an unsigned destination no borrow will be needed either when the operands are equal or when the destination is greater than the source.
UDEST > USRC	ZF = 0 AND CF = 0	The unsigned source and destination are not equal if the zero flag is not set and the destination is not smaller since

“Best of luck”