

**Varendra University**  
**Dept. of Computer Science and Engineering**  
**Assignment [CO4]**

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Course code: CSE 333

Course title: Microprocessor and Assembly Language

**Assignment description:**

**6-Function ALU Simulation**

**Objective:** Simulate a simple ALU that performs one of six operations: **ADD, SUB, AND, OR, NOT, X-OR** based on a control input.

**Inputs:** AL = operand1, BL = operand2, CL = control

- CL = 000b → ADD
- CL = 001b → SUB
- CL = 010b → AND
- CL = 011b → OR
- CL = 100b → NOT
- CL = 101b → X-OR

**Use:** CMP, JE, and the logic/arithmetic instructions

**Sample input/output:**

Enter 1st operand: 10100011 [N.B. insert a 8 bit binary no.]

Enter 2nd operand: 11000110 [N.B. insert a 8 bit binary no.]

Select the operation: 011 [N.B. OR operation]

Result: 11100111 [N.B. OR operation of operand1 and operand2]

COs	Description	POs
CO4	Solve problems using logic operations in assembly language.	PO2

**Deadline of submission:** 18 June 2025.

Provide hard copy of your code and output.