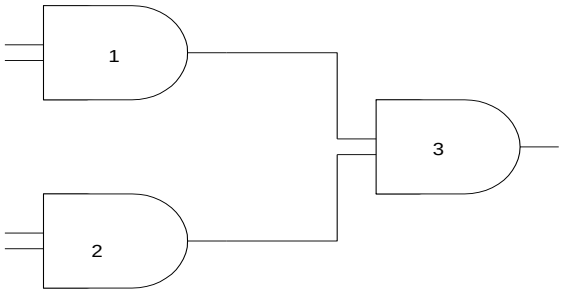
PRG355 **LAB ASSIGNMENT 2**

(Marks: 1.5%) Due: Next lab class

Design a **header file** that contains a **namespace** named **Gates.** The **Gates** namespace contains definitions of five **inline** user-defined functions, each of which computes and returns the output (0 or 1) for the AND, OR, NAND, NOR and XOR gate respectively.

Design the **main** program that uses the functions from the **Gates** namespace. The program should obtain the types of gates (1 to 5) for three gates from the user and four logic inputs (0s and 1s) for gates 1 and 2 respectively for the digital circuit that is shown in figure below. The program should compute and display the output of each gate.



A sample run of the program could be as shown in figure below.

```
Types of gates available:
1. AND
2. OR
3. NAND
4. NOR
5. XOR

Select gate #1 (1 to 5) => 1
Enter two inputs for gate #1 (separated by a space) => 0 1

Select gate #2 (1 to 5) => 3
Enter two inputs for gate #2 (separated by a space) => 1 0

Select gate #3 (1 to 5) => 2

 Outputs =>
            y1 = 0
            y2 = 1
            y3 = 1
```

ZIP your project folder and submit the .ZIP file on the BlackBoard.