SLIIT ACADEMY

Programming Skills II

Lab Worksheet 03

1. Write and test the following C# program to understand about the relational operators.

```
using System;

class Program {
    static void Main(string[] args) {
        int a = 5;
        int b = 7;

        // Greater than
        bool isAGreaterThanB = a > b;
        Console.WriteLine("Is a>b? "+isAGreaterThanB);

        // Less than or equal to
        bool isALessThanOrEqualToB = a <= b;
        Console.WriteLine("Is a <= b?"+isALessThanOrEqualToB);

        // Equal to
        bool areAAndBEqual = a == b;
        Console.WriteLine("Are a and b equal? "+areAAndBEqual);

        // Not equal to
        bool areAAndBNotEqual = a != b;
        Console.WriteLine("Are a and b not equal? "+areAAndBNotEqual);
    }
}
```

2. Write and test the following C# program to understand about the logical operators.

```
using System;

class Program {
    static void Main(string[] args) {
        bool x = true;
        bool y = false;

        // Logical AND
        bool resultAND = x && y;
        Console.WriteLine("x && y = "+resultAND);

        // Logical OR
        bool resultOR = x || y;
        Console.WriteLine("x || y = "+resultOR);

        // Logical NOT
        bool resultNOTX = !x;
        Console.WriteLine("NOT x = "+resultNOTX);

        bool resultNOTY = !y;
        Console.WriteLine("NOT y = "+resultNOTY);
    }
}
```

3. Write and test the following C# program to understand about the relational and logical operators.

```
using System;

class Program {
    static void Main(string[] args) {
        int age = 25;
        bool isStudent = true;

        // Using logical AND to check both conditions
        bool canGetDiscount = age < 30 && isStudent;
        Console.WriteLine("Can get discount? "+canGetDiscount);

        // Using logical OR to check at least one condition
        bool canEnterClub = age >= 18 || isStudent;
        Console.WriteLine("Can enter club? "+canEnterClub);

        // Combining relational and logical operators
        bool isTeenager = age >= 13 && age <= 19;
        Console.WriteLine("Is teenager? "+isTeenager);
    }
}
```

4. Develop a program to understand the incrementation and decrementations in C#.