Laboratory Exercise
Operators

Objectives:

At the end of the exercise, the students should be able to:
- Know the different uses of operators

Materials:
- Flash drive
- PC with installed Microsoft Visual C# 2010 Express

Procedures:

Activity 1   Arithmetic Operators
1. Put the following inside the **Form_Load()** then run the program and observe what will be the result.
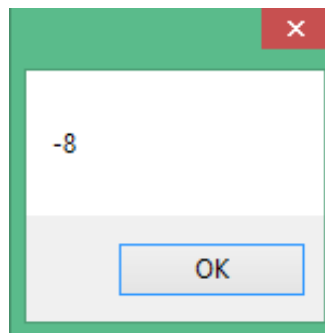
```
int a = 1;
int b = 2;
int c = 3;
int d = 4;
int f = 5;
int result;
```

a. a - b – c – d;
b. a – b + c – d;
c. a + b / c / d;
d. a + b / c * d;
e. a / b * c * d;
f. a – (b – c) – d;
g. (a – (b – c)) – d;

h. a – ((b – c) – d);
i. a ^ (b * c) * d * f;
j. a + (b – c) * d – f;
k. f % b;
l. a ++;
m. b--;

```
Example:
    result = a – b – c – d;
    MessageBox.Show(result.ToString());
```

Acitivity 2   Relational Operators

1.   Put the following inside the **Form_Load()** then run the program and observe what will be the result.

```csharp
int a = 1;
int b = 2;

if (a == 1)
{
    MessageBox.Show("a has a value of 1");
}

if (a != b)
{
    MessageBox.Show("a is not equal to b");
}

if (a > 0)
{
    MessageBox.Show("a is greater than zero");
}

if (a < b)
{
    MessageBox.Show("a is less than b");
}


if (b >= 2)
{
    MessageBox.Show("b is greater than or equal to two");
}

if (a >=  1)
{
    MessageBox.Show("a is greater than or equal to one");
}
```

Activity 3   Logical Operators

1.   Put the following inside the **Form_Load()** then run the program and observe what will be the result.

```csharp
string name = String.Empty;
string age = String.Empty;

name = "Kevin"; //you change the value of name to observe the changes of the condition
age = "18"; //you change the value of age to observe the changes of the condition

if (name == "Kevin" && age == "18")
{
    MessageBox.Show("First Condition is true");
}
else
{
    MessageBox.Show("First Condition is false");
}

if (name == "Kevin" || age == "18")
{
    MessageBox.Show("Second Condition is true");
}
else
{
    MessageBox.Show("Second Condition is false");
}

if (!(name == "Kevin" && age == "18"))
{
    MessageBox.Show("Third Condition is true");
}
else
{
    MessageBox.Show("Third Condition is false");
}
```