

# Laboratory Exercise

## Data Types, Variables and Conversion

### Objectives:

*At the end of the exercise, the students should be able to:*

- Declare, initialize, and convert data types.

### Materials:

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

### Procedures:

#### Activity 1 Data Types and Variables

1. Write the following codes inside a **Form\_Load** and investigate the resulting value. Write the answer for each question on a separate clean sheet of paper. You can create a Button Click event handler to generate these statements.

```
const double budget = 12.10;
const double expenses = 10.50;
const string name = "[state your name]";
const string address = "[state your address]";
const string age = "[state your age]";
const bool answer = true;
const int count = 12;
double CashOnHand;
bool BoolResult = !answer;
int CountResult;
string Message;
```

1. CashOnHand = budget - expenses;
2. Message = "Hi! " + name + " your age is " + age;
3. Message = "there are " + name.Count().ToString() + "letters of your name.";
4. Message = "Your name is " + name.ToUpper();
5. Message = "Your name is " + name.ToLower();
6. Message = BoolResult.ToString();

#### Example 1:

```
private void Form1_Load(object sender, EventArgs e)
{
    CountResult = count - 2;
    MessageBox.Show(CountResult);
}
```

## Activity 2 Type Conversion

1. Write a program that **Converts** a data value by using **Convert** function and displaying the result by using **MessageBox.Show()** function.

### Example:

```
private void Form1_Load(object sender, EventArgs e)
{
    string StringNumberValue;
    StringNumberValue = "12";

    string stringDateValue;
    stringDateValue = "Dec 12, 2013";

    string stringDoubleValue;
    stringDoubleValue = "12";

    int intTextValue;
    intTextValue = 12;

    MessageBox.Show("The Result for Text to Number Conversion is : " +
        Convert.ToInt32(StringNumberValue));
    MessageBox.Show("The Result for Text to Date Conversion is: " +
        Convert.ToDateTime(stringDateValue));
    MessageBox.Show("The Result for Text to Double Conversion is: " +
        Convert.ToDecimal(stringDoubleValue));
    MessageBox.Show("The Result for Number to Text Conversion is: " +
        Convert.ToString(intTextValue));
}
```