

# COP-4226 Advanced Windows Programming

## Prograaming Assignment 1

### 1 Assignment Specification

In this assignment, you are developing a simple calculator using `System.Windows.Forms`. You need to use Visual Studio 2019 as the IDE and C# Programming Language. The appropriate VS19 project type for this assignment is “Windows Forms App (.Net Framework)/C#”. You can work on this assignment individually, or in groups of size two.

The main form of your application must include the following control objects (you can add more):

- One `System.Windows.Forms.TextBox` object for displaying the input algebraic expression and the result of calculation. Clicking on the display should erase the content of it.
- Ten `System.Windows.Forms.Button` objects for entering digits  $0, 1, \dots, 9$ .
- One `System.Windows.Forms.Button` object for entering decimal point.
- four `System.Windows.Forms.Button` objects for entering operations  $+, -, \times, \div$ .
- two `System.Windows.Forms.Button` objects for entering parentheses ( and ).
- One `System.Windows.Forms.Button` object for calculating the current algebraic expression on display. For performing calculation, you can use the code depicted below:

You can decide on the location of each button and the text box.

### 2 Deliverables

Only one member from each team should submit a zip file containing the following items:

- A short mp4 video (less than 2 minutes) illustrating how to interact with the application.
- The source files of your program (.cs files)
- readme.txt containing your name ( and your teammate)

```
DataTable dt = new DataTable();
var v = new object();
try
{
    v = dt.Compute(text, "");
}
catch(Exception e) {
    v = "NaN";
}
```

Figure 1: Calculating the expression stored in variable text.