Creating Multi-Form Applications

When creating multi-form applications, there are two issues to be considered.
1. We have to "construct" the form
2. We have to get data from one form to another.

To construct a new form we need to call the constructor. Assume we have a form in our project called frmOptions. Note: when you create a new windows form application, the default form in named Form1.

    frmOptions options = new frmOptions();
This creates a frmOptions class object called options
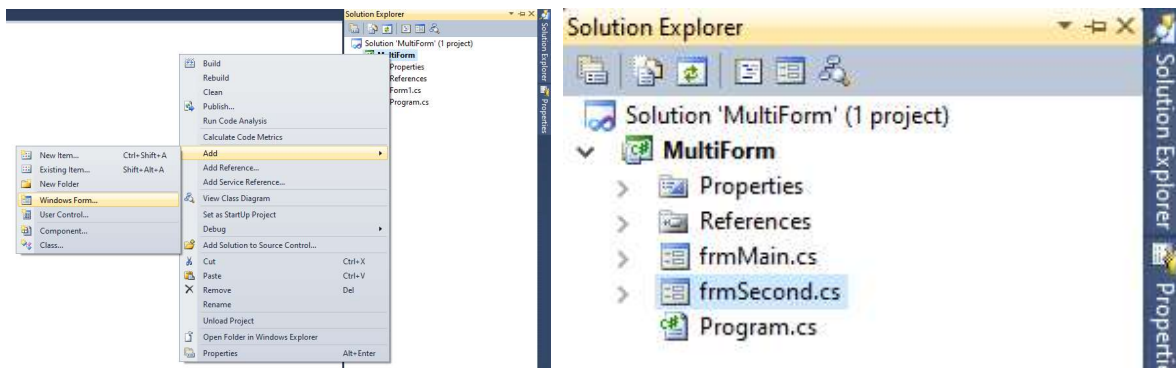
Once the form is constructed, we need to show it.

    options.ShowDialog();

The second issue is how get data transferred from one form to another. Here is one technique:
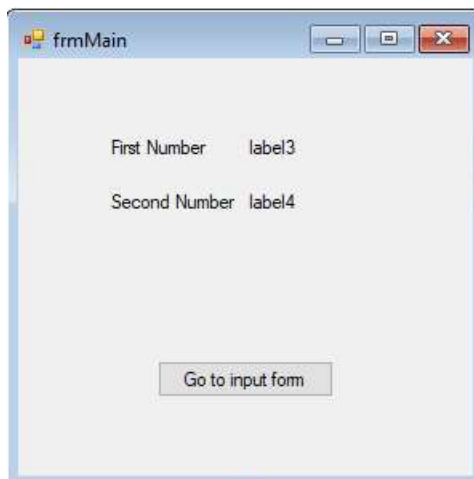1. Create a global public static variable in the form to receive the data.
2. Transfer the data from the variable to a control (e.g. a label) on the form.
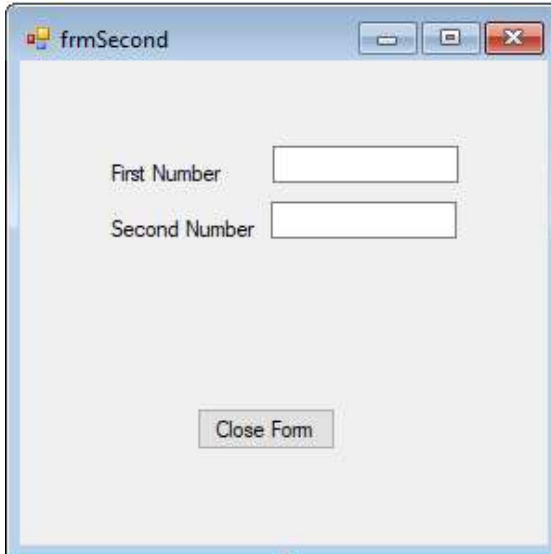
Here is an example on how to do that.
1. Create a new Windows Form Application project. Call it MultiForm
2. Add a new form to the project and name it frmSecond. Rename Form1.cs to frmMain.cs

3. Add controls to frmMain (4 labels and a button).

4. Set the following properties
   Label1.Text = "First Number"
   Label2.Text = "Second Number"
   Label3.Name = lblFirst
   Label4.Name = lblSecond
   Button1.Name = btnNewForm
   Button1.Text = "Go to input form"
   Form1.Text = "frmMain"

5. Add controls to frmSecond (2 labels, 2 textboxes, and 1 button)

6. Set the following properties
   Label1.Text = "First Number"
   Label2.Text = "Second Number"
   Textbox1.Name = txtFirst
   Textbox2.Name = txtSecond
   Button1.Name = btnClose
   Button1.Text = "Close Form"

7. Add the following event handler to frmMain

```
private void btnNewForm_Click(object sender, EventArgs e)
{
        frmSecond second = new frmSecond();
        second.ShowDialog();
}
```

8. Create a global public static variables for frmMain

```
public static double number1;
public static double number2;
```

```
namespace MultiForm
{
    public partial class frmMain : Form
    {
        public static double number1;
        public static double number2;

        public frmMain()
        {
            InitializeComponent();
        }

        private void btnNewForm_Click(object sender, EventArgs e)
        {
            frmSecond second = new frmSecond();
            second.ShowDialog();
        }
    }
}
```

frmMain code

9. Add the following event handler to frmSecond

```
private void btnClose_Click(object sender, EventArgs e)
{
        //Declare variables
        double num1, num2;

        //Get values from textboxes
        num1 = Convert.ToDouble(txtFirst.Text);
        num2 = Convert.ToDouble(txtSecond.Text);

        //send data back to frmMain
        frmMain.number1 = num1;
        frmMain.number2 = num2;

        //Close the form
        this.Close();
}
```
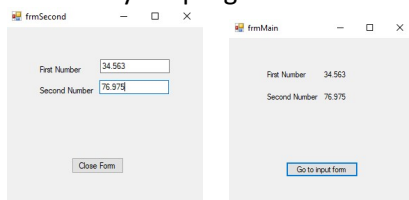
10. Add the following lines to the btnNewForm_Click event handler.
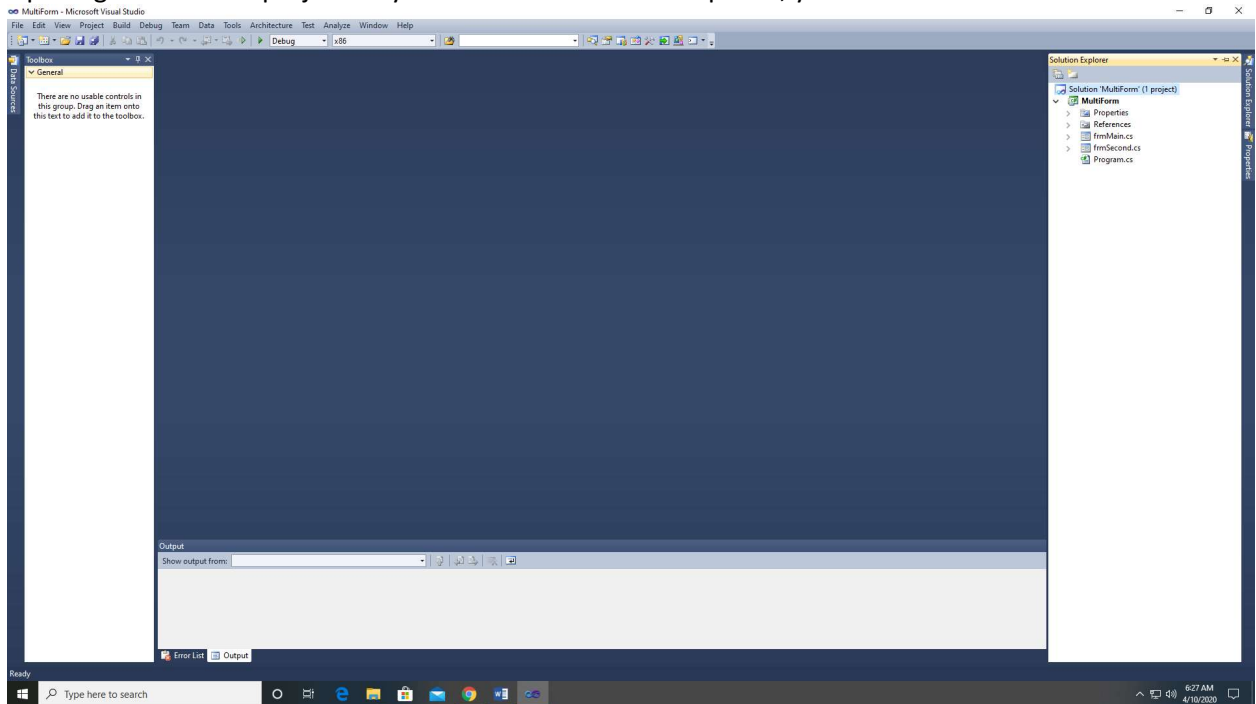```
            lblFirst.Text = number1.ToString();
            lblSecond.Text = number2.ToString();
```
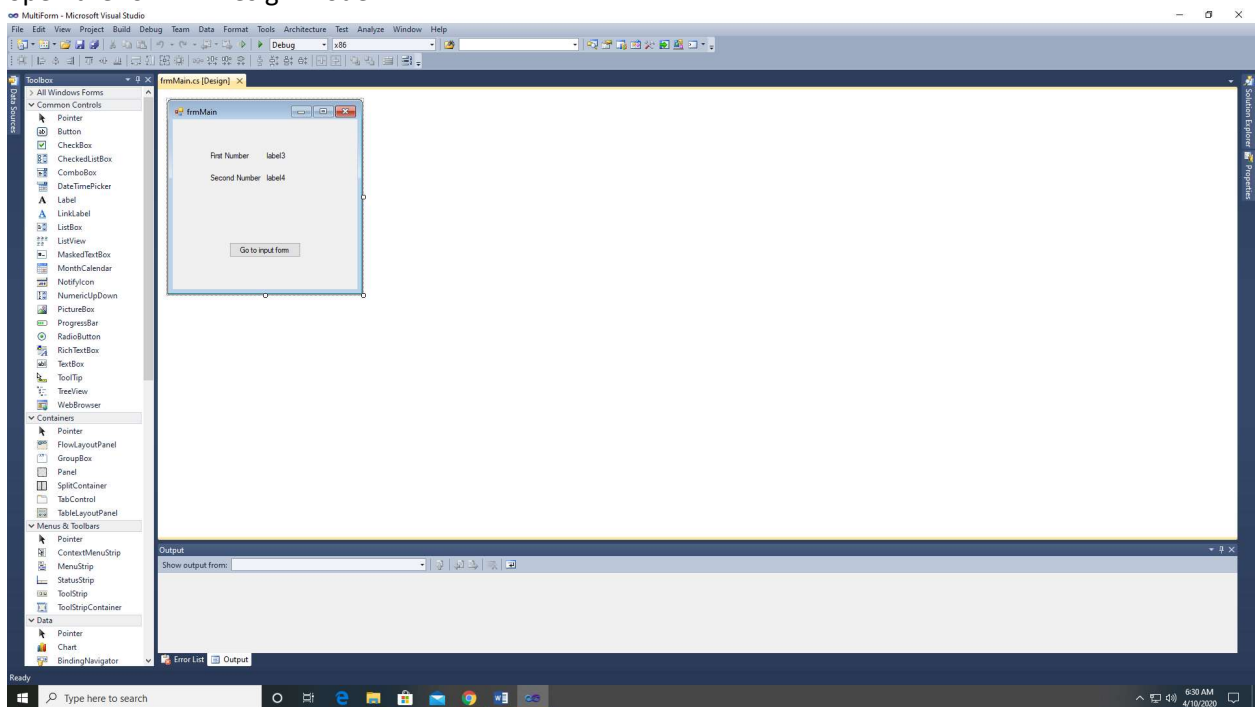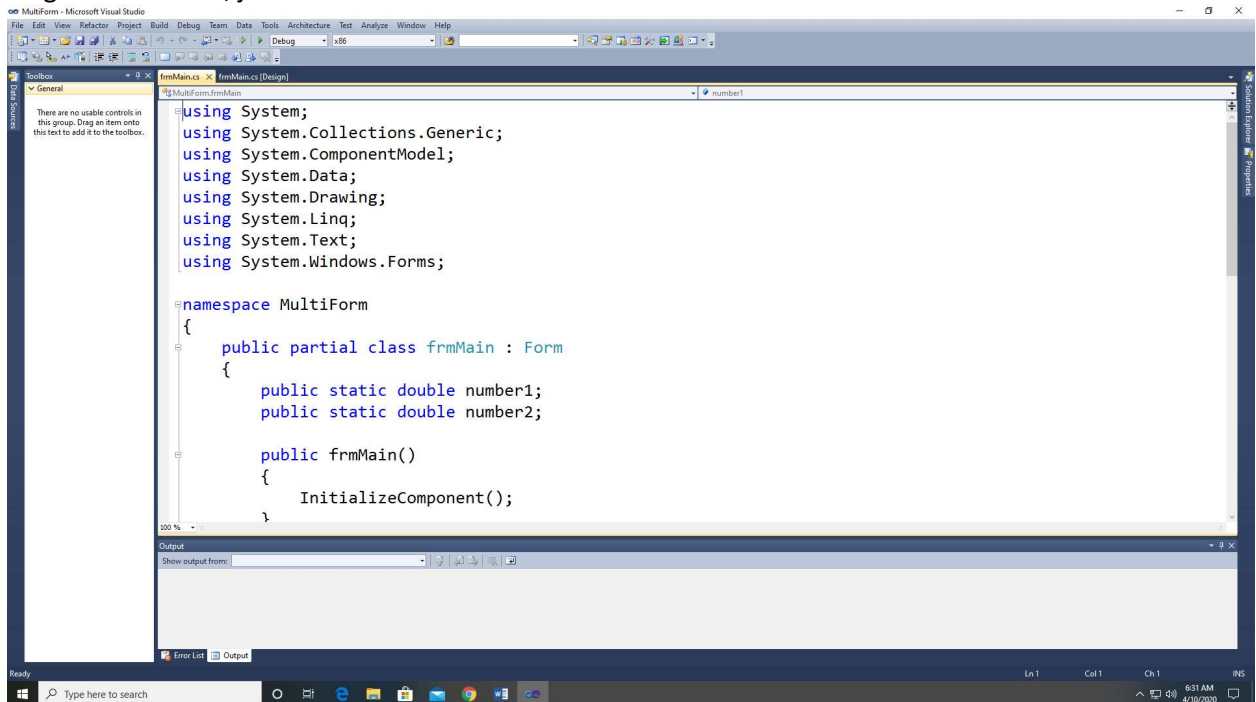11. Now test your program.

12. Opening a multiform project.  If you look at the Solution Explorer, you should see this.
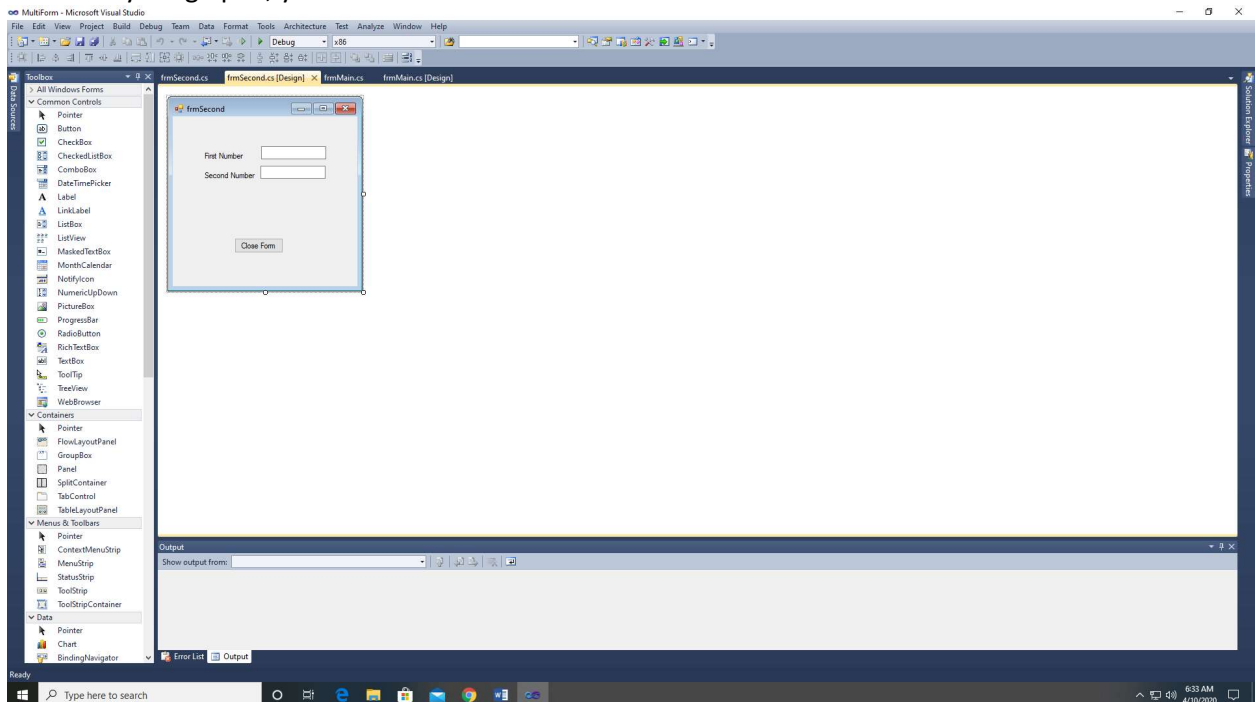


13. To open a form (such as frmMain), just double-click on frmMain.cs or frmSecond.cs.  This will open the form in Design mode.

14. To get to the code, just hit F7.



15. With everything open, your screen should look like this.



16. Notice the 4 tabs across the top; frmSecond.cs, frmSecond.cs(Design), frmMain.cs, and frmMain.cs(Design).