Visual C# Programming Basics

In this tutorial you will learn how to make applications for Windows in C#. You will learn how to use Visual Studio to build simple applications, how to use most of the Windows Forms controls, and several tips on how to publish your application.

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General Requirements

To follow this tutorial you will need the following items:

-Knowing the basics of at least one programming language (To know what variables, arrays, functions, etc… are)
-A computer running Windows XP/Vista/7
-Microsoft Visual C# Express (Click for download)

You can also use Microsoft Visual Studio Professional, but this is a commercial version of the Visual C# Express, and it has more features. We will not use most of them in this tutorial though.

If you are interested in some specific part of this tutorial, check out the table of contents on the last page because you might find what you are looking for.

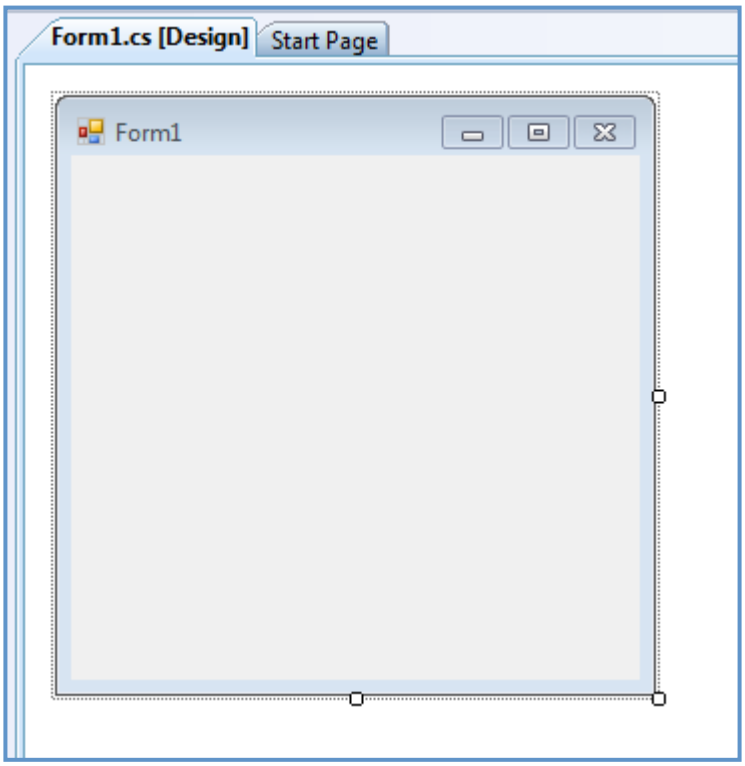
Quick Start – Your first application

In this chapter, you will learn how to make an application in Visual Studio from start to finish. How to code it, design it and publish it.

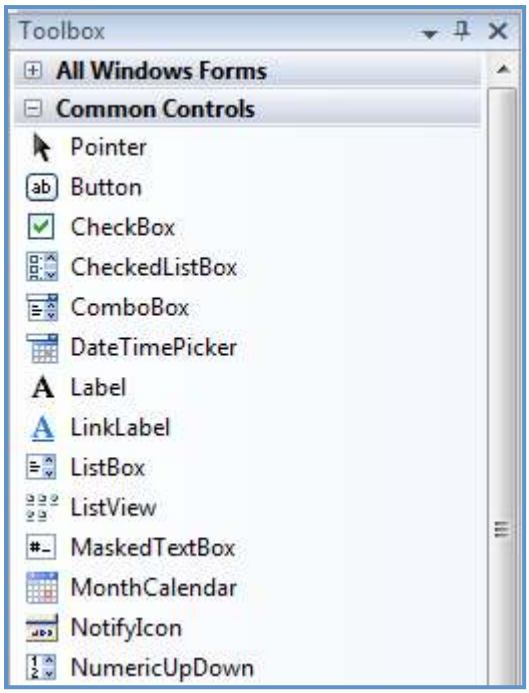
Step 1 – Creating the project

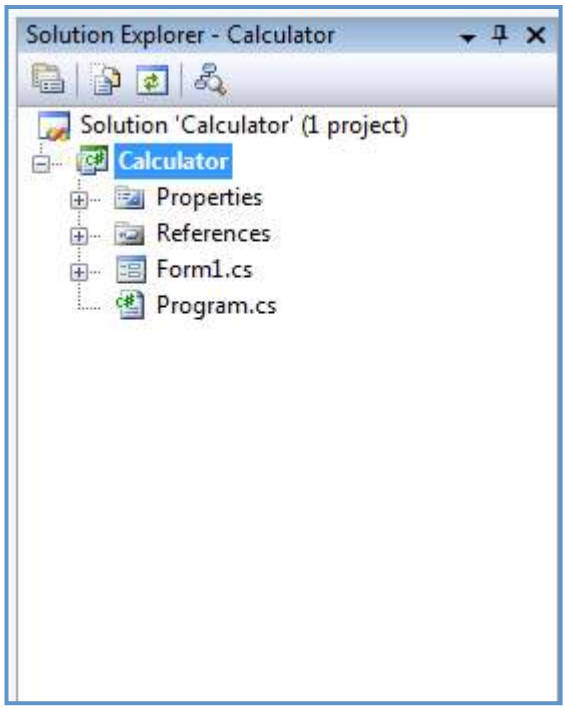
To start, open Visual C# Express or Visual Studio and create a new project by pressing on the "New Project" icon in the upper left corner.

In the window that opens you can select your project type, depending on what you want to program in C#. To make a simple Windows application, select "Windows Forms Application", name your project "Calculator" (because this is what we are going to do) and press "OK".



You now created a new project. You might get all scared by Visual C#'s interface because it is very crowded and you don't know what most of the controls do. Let's take a look at the interface for a bit: the first thing that pop's into your eyes is the form right in the middle. It is an empty form and what you have to do is to take controls from the "Toolbox", the panel from the left, and put them on it.





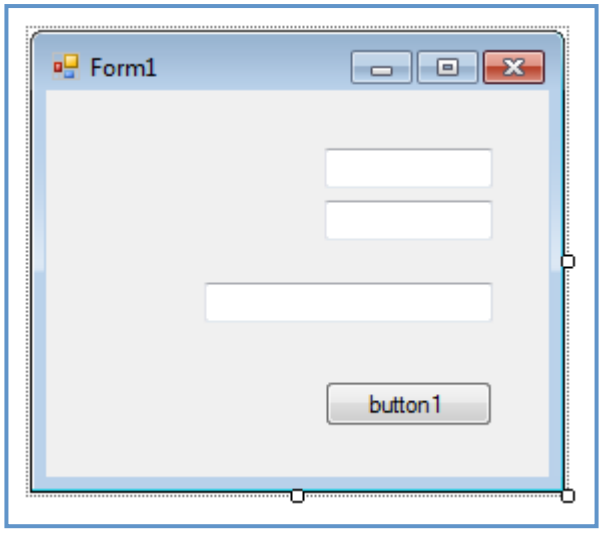
You can see different type of controls in the "Toolbox": buttons, textboxes, progress bars, and you can take all of them and place them on your form. Don't place anything on your form now, if you did, select them and delete them.

On the right you have your "Solution Explorer". When you create a new project, you automatically create a new solution. A solution is a collection of multiple projects, let's say we make an application called "Calculator" (cause this is what we actually do), and "Calculator" is an application project inside the "Calculator" solution. If we want to create a setup for "Calculator", we create the setup project inside the same solution. You will learn what everything in the solution explorer means later.

Step 2 – Designing the form

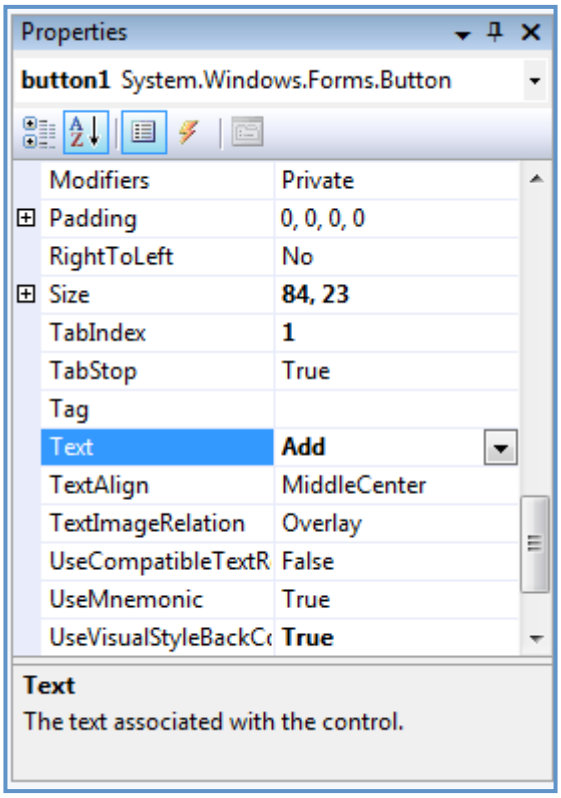
What we want to create is a simple calculator application. What it will do is to add two numbers inserted by the user. To start, we will need three text-boxes: Two for the two numbers that the user wants to add and the third for the result. We will also need a button so that the user can press it and receive he's result.

To do all this, click on the "Text Box" control in the toolbox, and then click on your form. As you can see, a text box appeared on your form. Repeat this step again and create two more text boxes. Align the text boxes the same way I did:



Now, select the button control from the toolbox and create a button on the form.

Good, we now created all the controls we need for our application. But, there is a problem, why is the button named "Button1"? Because this is how it is by default, to change that, we need to change its properties. By default, the properties window is not opened in Visual C#. To open it, go to "View" and click on "Properties".



The properties panel (obviously) shows the select controls properties, such as height, width, color, text, etc… In this case, we only need to change the text since the button can be resized with using the mouse. Click on the button (Make sure you don't double click it, or its code will open. If that happens, close the tab with the code from the top of the middle-panel). Once clicked, the button's properties will appear in the "Properties" window. Scroll down and go to "Text". To its right you will see "Button1". Change that to "Add", and press enter.