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Visual Programming

Lecture 1 – Introduction to Visual Basic .NET

Visual Basic 2012 – Introduction

Microsoft launched Visual Basic 2012 in the year 2012. It is a fully object-oriented programming language implemented on the .NET Framework. Similar to the earlier version of VB.NET programming languages, VB2012 is integrated with other Microsoft Programming languages in an IDE called Visual Studio Express 2012.

The reasons for implementing Visual Basic program are listed as follows:

- 1- It uses Integrated Development Environment (IDE) which is easier for the user to minimize code writing.
- 2- All visual programs follow the same concepts, therefore the user will become more familiar with visual approach for other visual languages.
- 3- It provides Input box and Output box as an interactive windows with user.
- 4- It is able to connect to Internet, and to call Explorer.

When you launch Visual Studio Express 2012, the start page will appear, as shown in Figure 1.1 below.

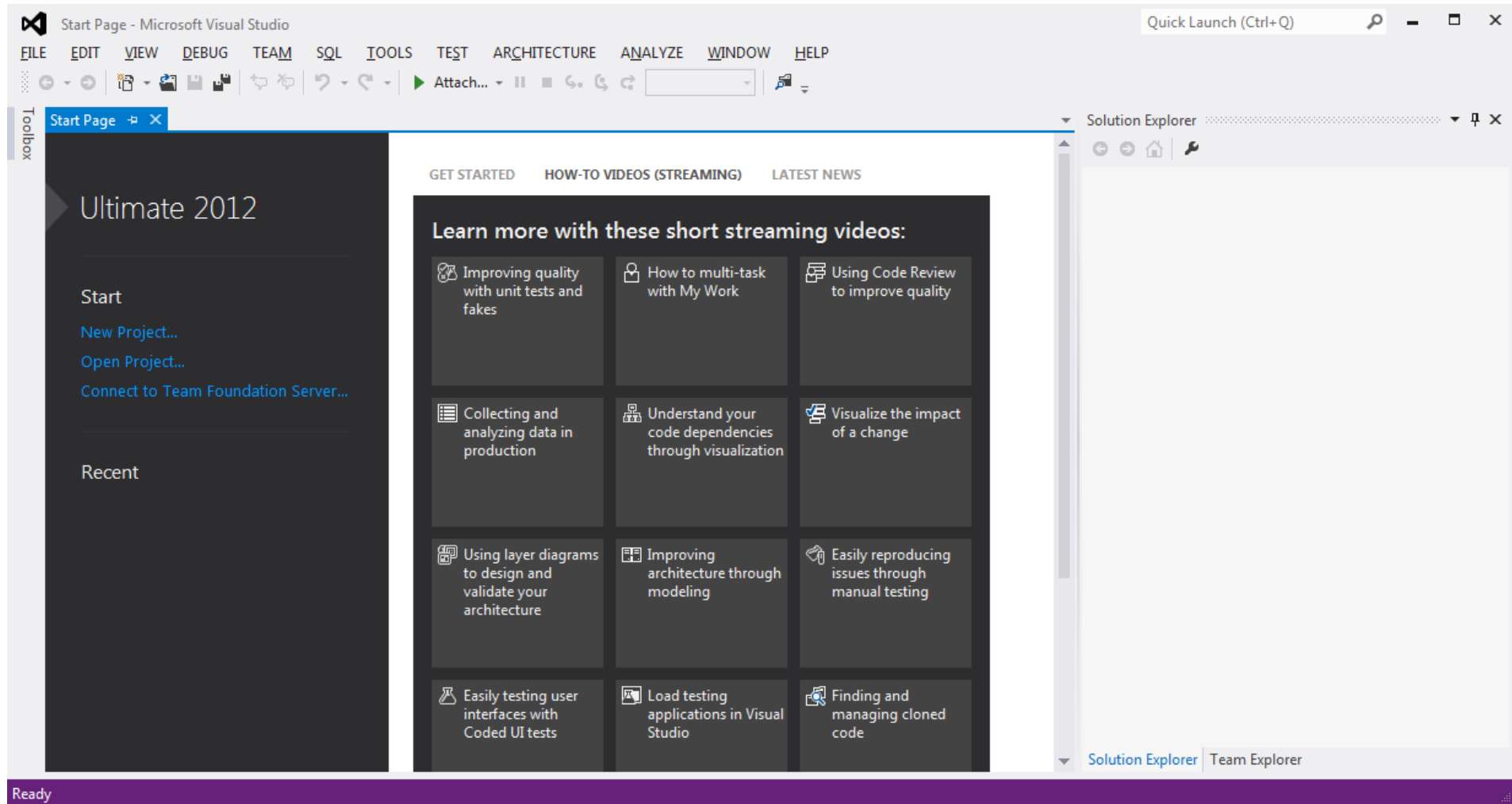


Figure 1.1: Visual Studio 2012 Start Page

To start a new Visual Studio Express 2012 project, simply click on New Project to launch the Visual Studio New Project page, as shown in Figure 1.2

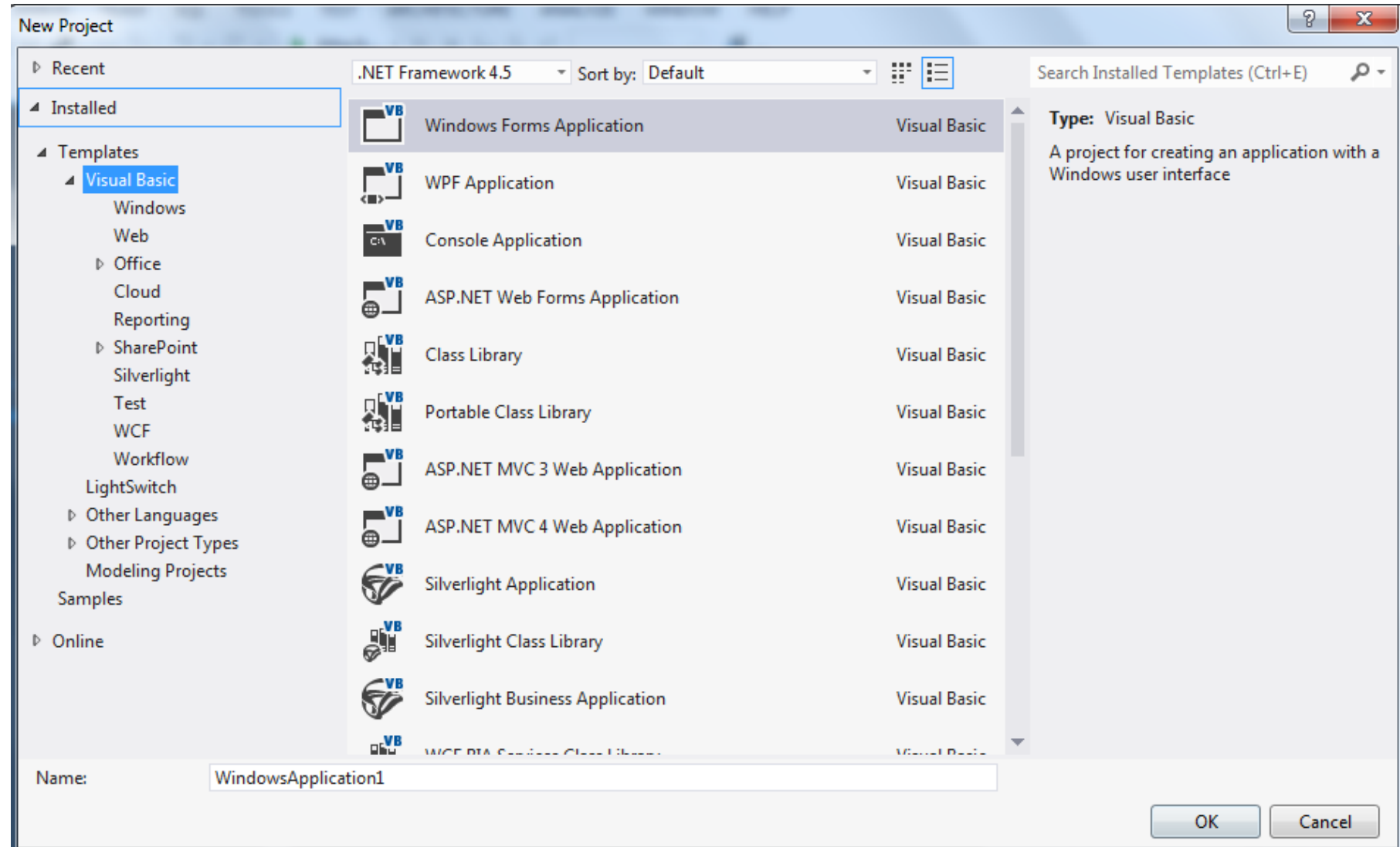


Figure 1.2: Visual Studio 2012 Project Page

- The New Project Page (Figure1.2) comprises three templates, Visual Basic, Visual C# and Visual C++. Since we are going to learn Visual Basic 2012, we shall select Visual Basic. Visual Basic 2012 offers you four types of projects that you can create. As we are going to learn to create Windows Applications, we will select Windows Forms Application.
- At the bottom of this dialog box, you can change the default project name WindowsApplication1 to some other name you like, for example, MyFirstProgram. After you have renamed the project, click OK to continue. The Toolbox is not shown until you click on the Toolbox tab. When you click on the Toolbox tab, the common controls Toolbox will appear.

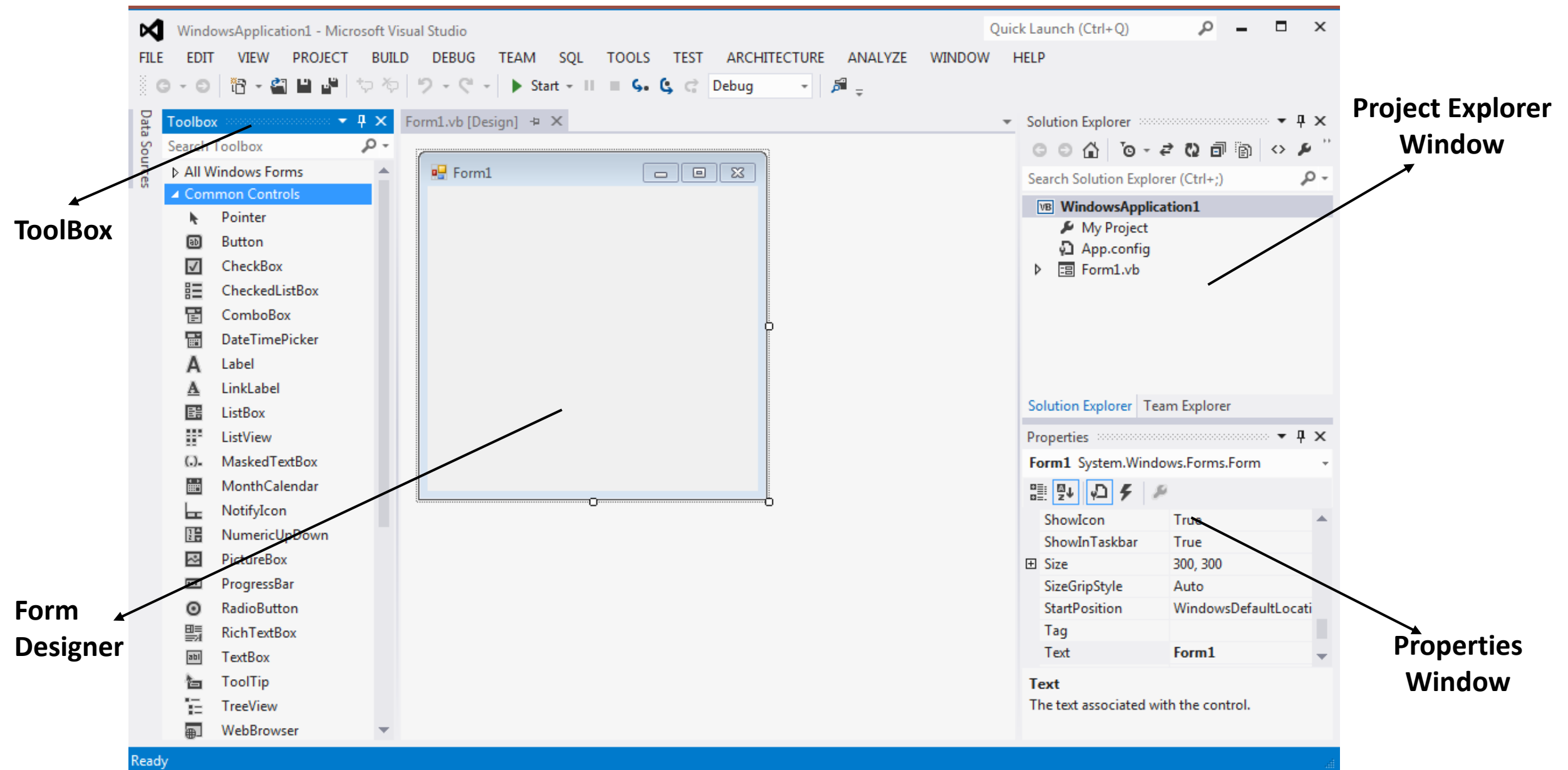


Figure 1.3: Visual Basic 2012 IDE

- Visual Basic Express 2012 IDE (Figure 1.3) comprises a few windows, the Form window, the Solution Explorer window and the Properties window. It also consists of a toolbox which contains many useful controls that allow a programmer to develop his or her VB programs.
- **Form Designer:** it is a window for each form to customize the designed interface of the application. Using the form designer, the user can add controls, graphics, and text to create the desired form appearance.
- **Project Explorer Window:** it is a list of the forms and modules for the current projects. It is a hierarchical tree- branch structure, where the project at top of tree and other parts like forms ,modules descend from this tree.
- **Properties Window:** it is a List of properties settings for a selected form or a control. These properties are characteristics (such as size, visible, or color) of the selected object it provides an easy way to set properties.
- **ToolBox:** it contains a collection of tools that are needed for project design.

What are Controls

Controls in Visual Basic 2012 are objects that can be placed on the form to perform various tasks. Figure 1.4 shows the toolbox that contains the controls. They are categorized into Common Controls, Containers, Menus, Toolbars, Data, Components, Printings and Dialogs. At the moment, we will focus on the common controls. Some frequently used common controls are Button, Label, ComboBox, ListBox, PictureBox, and TextBox. To insert a control into your form in Visual Basic 2012 IDE, drag the control from the toolbox and drop it onto the form. You can reposition and resize it as you like.

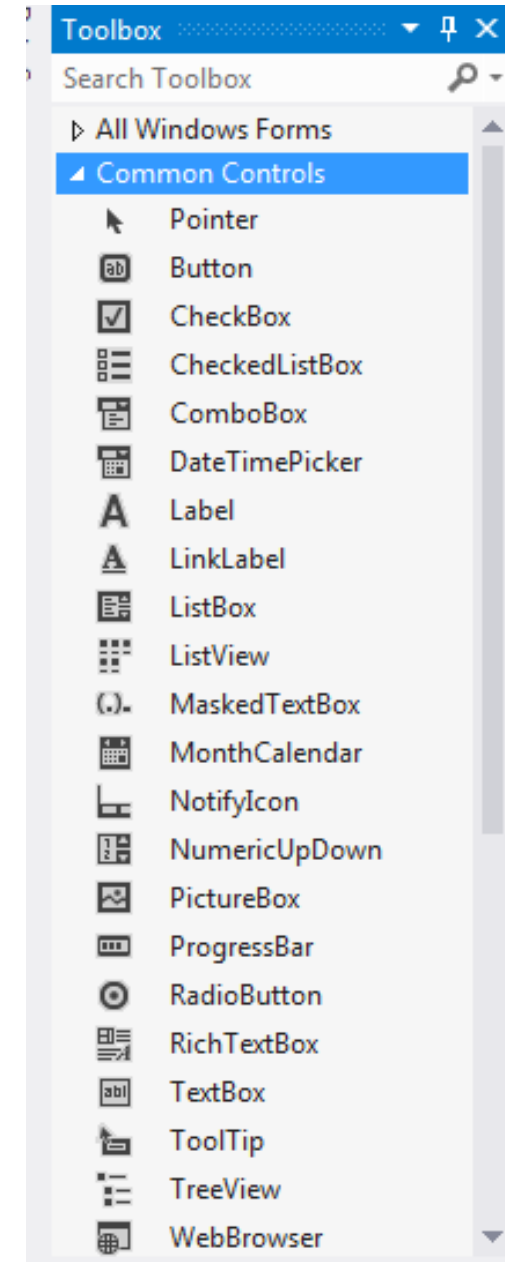


Figure 1.4: Visual Basic 2012 Toolbox

Now, we shall proceed to show you how to create your first program. First, change the text of the form to My First Program in the properties window, it will appear as the title of the program. Next, insert a button and change its text to OK. The design interface is shown in Figure 1.5.

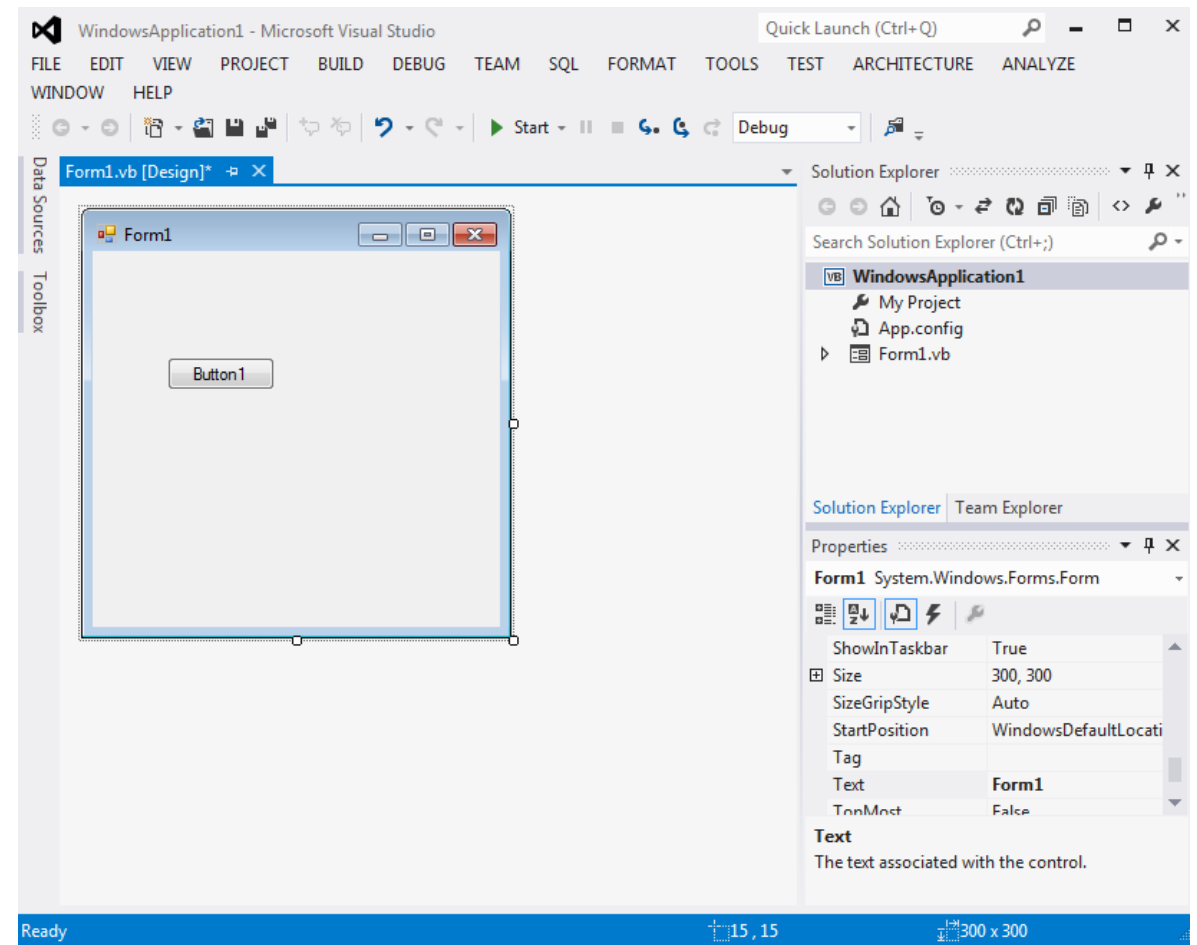


Figure 1.5: The Design Interface

Now click on the OK button to bring up the code window and enter the following statement between Private Sub and End Sub procedure, as shown in Figure 1.6.

```
MsgBox("My First Visual Basic  
2012 Program")
```

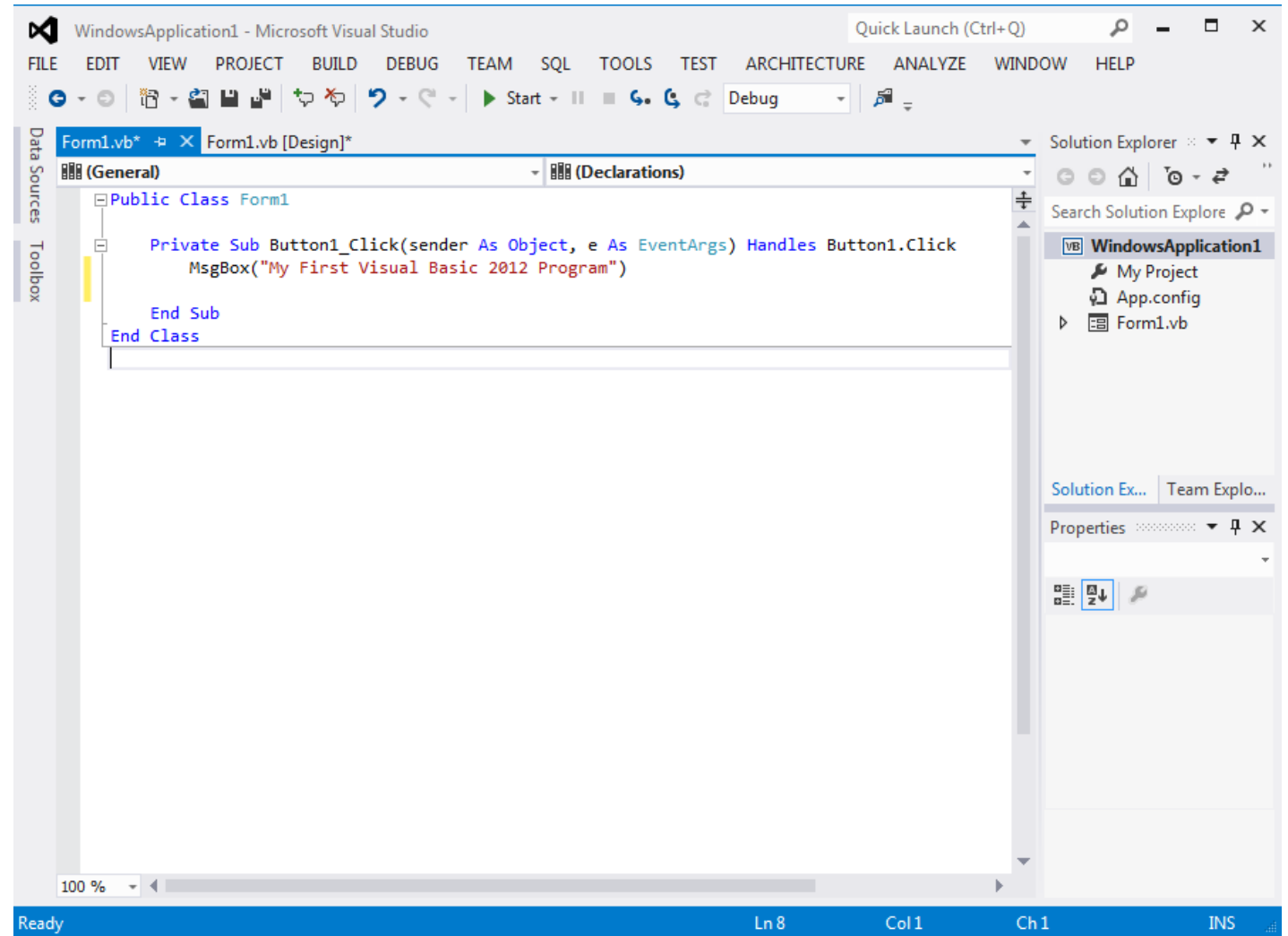


Figure 1.6: The Code Window

Now click on the Start on the toolbar to run the program then click on the OK button, a dialog box that displays the “My First Visual Basic 2012 Program” message will appear, as shown in Figure 1.7.

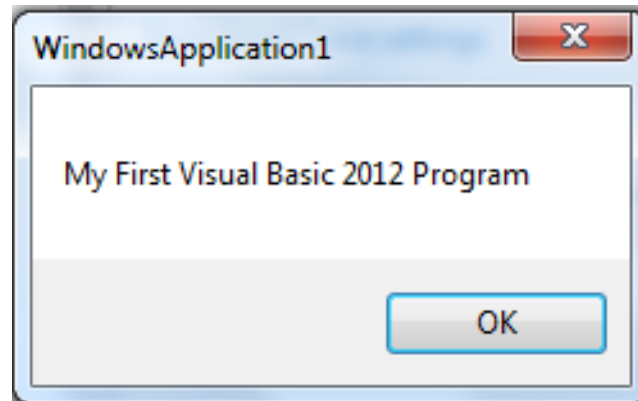


Figure 1.7: The Message Box

The function `MsgBox` is a built-in function of Visual Basic 2012 and it will display the text enclosed within the brackets.