



Bharat Shikshan Sanstha's
Shri Chhatrapati Shivaji College, Omerga

Tq. Omerga Dist. Osmanabad - 413606 (MS), India

(Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad) | NAAC Reaccredited 'B' Grade

Name of Subject : Computer Science(Gen.)

Class :B.Sc. Third Year

Paper Title :Visual Basic.NET

Course Code : CS016

Unit: I Event Driven Programming & the VB.NET IDE
Part-3

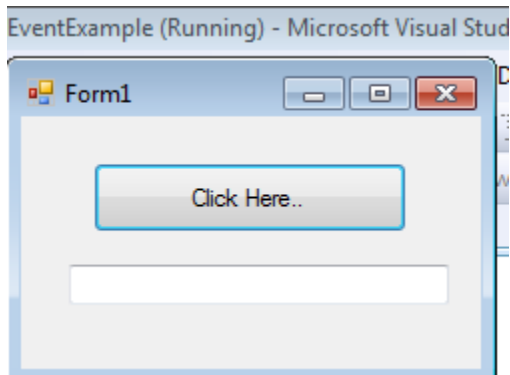
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Department of Computer Sci. & IT,

• Event Driven Programming

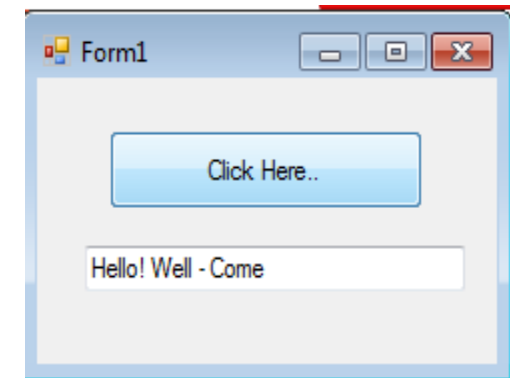
- An Event is an action performed by user, and applications that handles those events are called Event driven application. Modern applications are event-driven.
- In computer programming, event-driven programming is a programming in which the flow of the program is determined by events such as user actions (mouse clicks, key presses).
- Event-driven programming is the dominant paradigm used in graphical user interfaces and other applications.
- *Event driven* paradigms help us write code that will be run when certain *events* are fired.
- Events : Button clicks, Mouse movement, Key presses, Network packets arriving, Timers
- Example of event driven applications are MS-Word, MS-Excel etc.
- Some example of event driven programming languages; Visual Basic.NET, Visual C++,Java.

• Event Driven Programming example in VB.NET

- Program waits for events
- Whenever something happens the program responds and does something

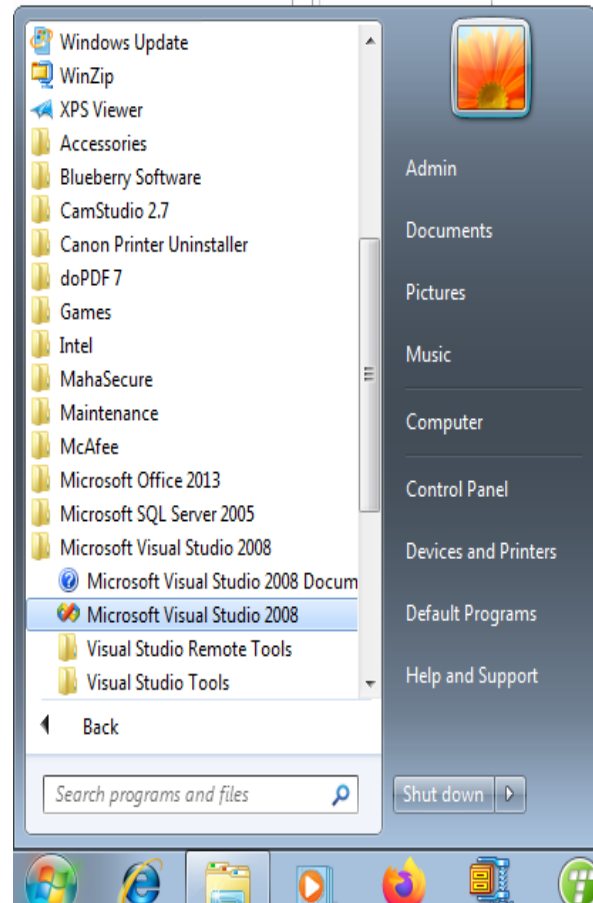


After Click event done by user on Button1, perform action as written in code .



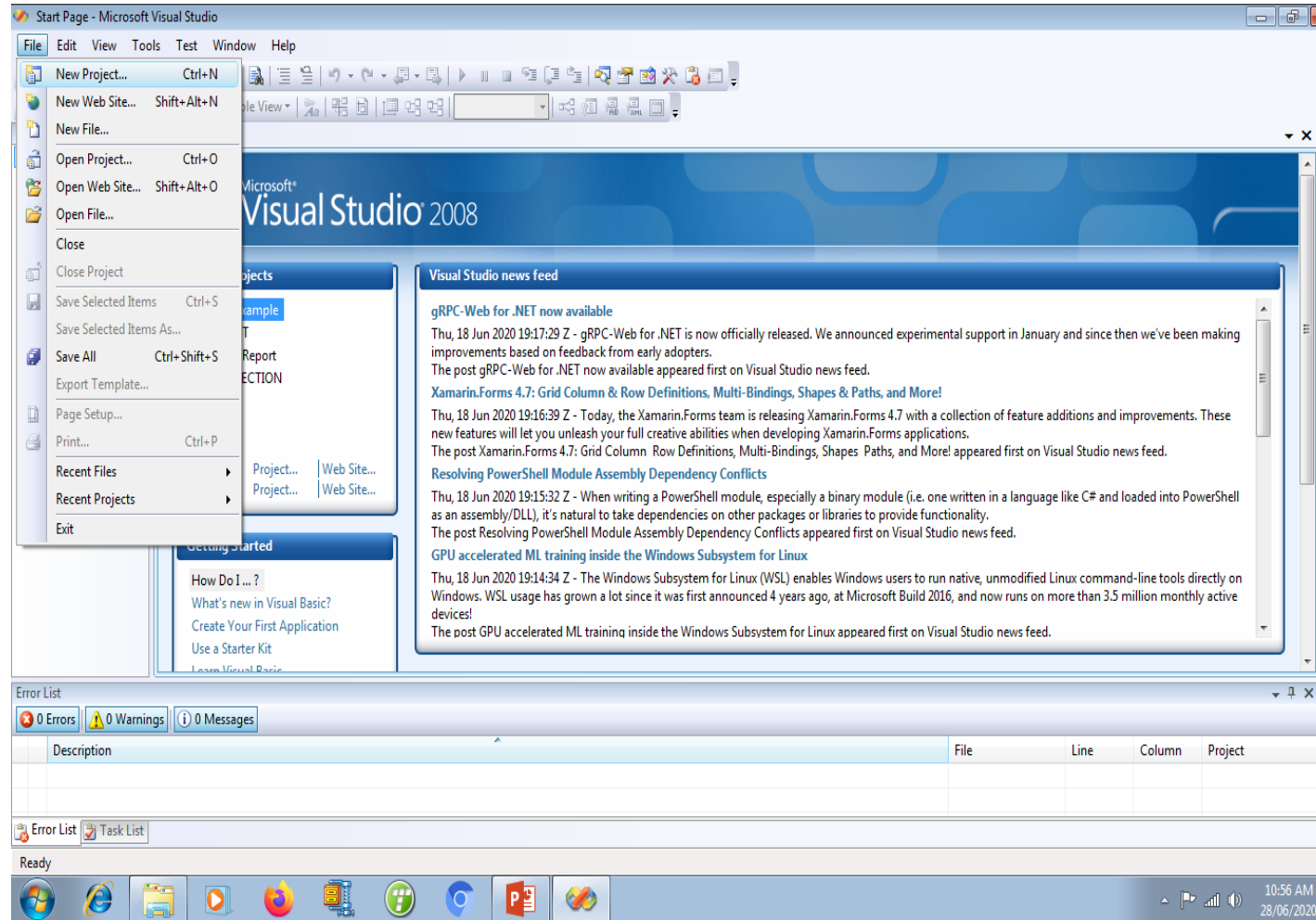
```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click  
    TextBox1.Text = "Hello! Well - Come "  
End Sub
```

- **Visual Basic.NET Integrated Development Environment(IDE)**
- How to start IDE
- Step -1 Click on Windows Start Button
- Step-2 Click All Program
- Step-3 Select Microsoft Visual Studio 2008 Folder and Click on Microsoft Visual Studio 2008 Program



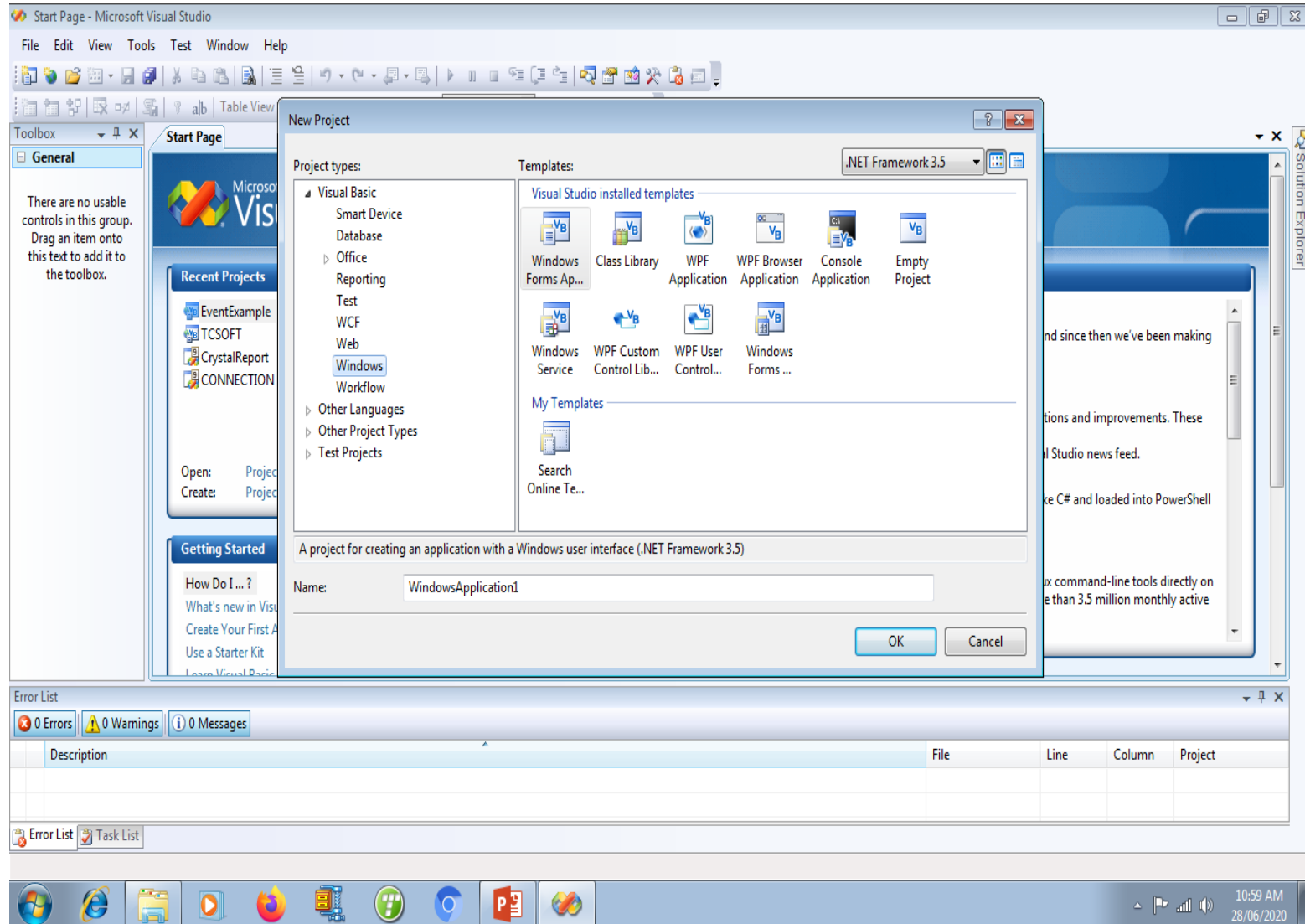
• Visual Basic.NET Integrated Development Environment(IDE)

- Step-4 Click File menu and Click on New Project



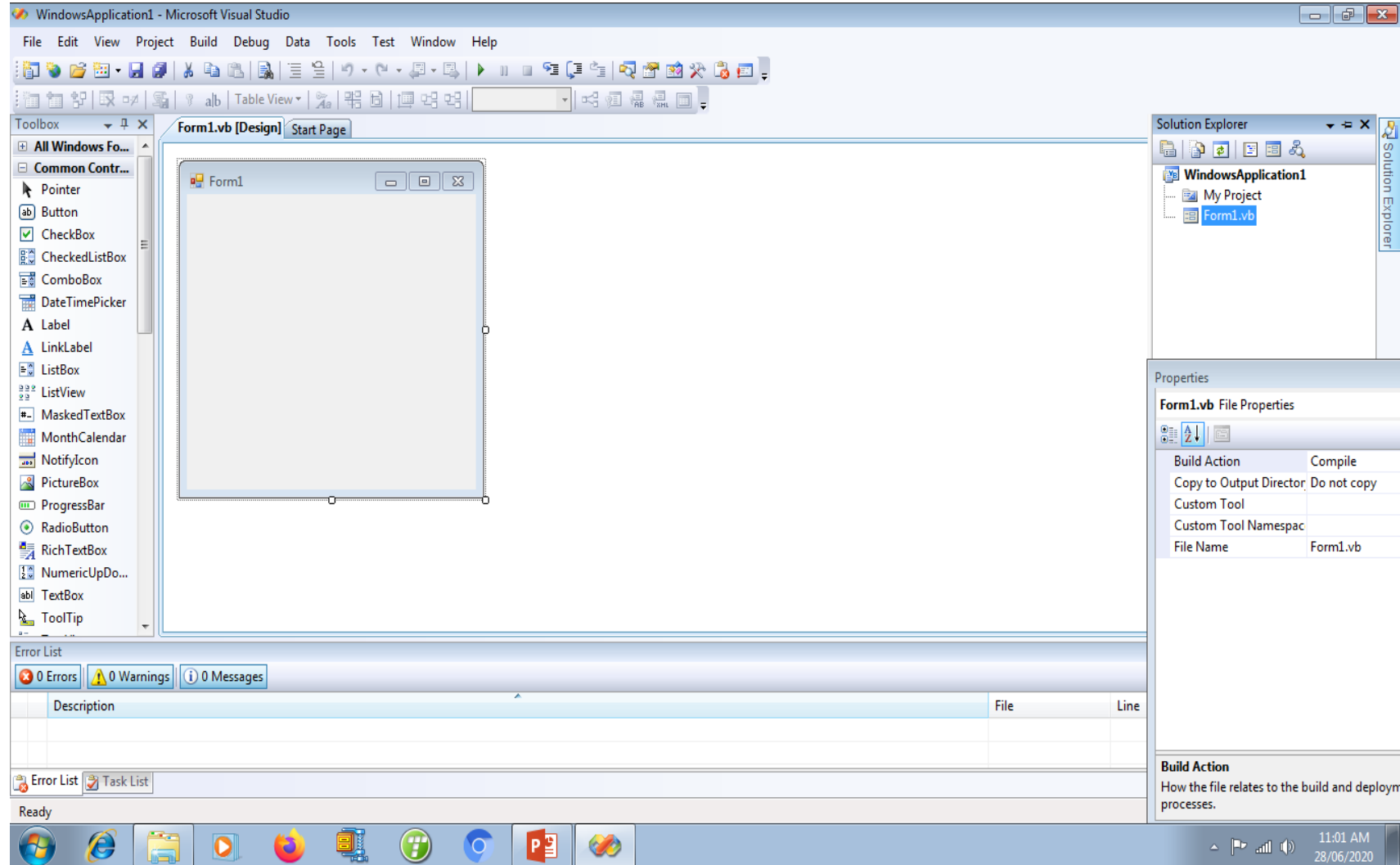
• Visual Basic.NET Integrated Development Environment(IDE)

- Step-5 Click on Visual Basic and select Windows then click ok button



• Visual Basic.NET Integrated Development Environment(IDE)

• Step-6 Visual Basic IDE started to Design Application



Visual Basic.NET Integrated Development Environment(IDE)

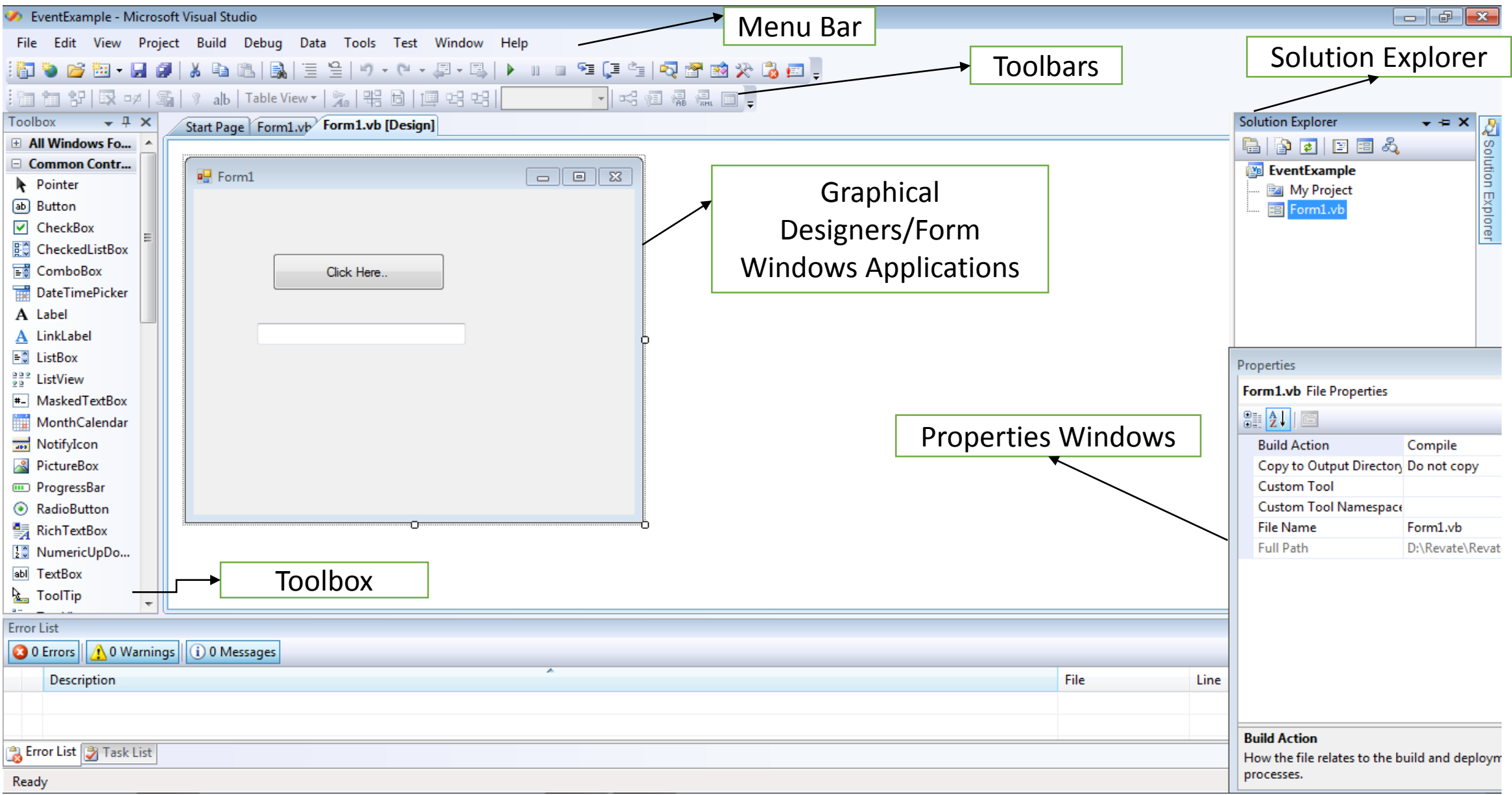


Figure : Visual Basic.NET Integrated Development Environment(IDE)

- **Visual Basic .NET provides a complete environment to assist developers in creating their applications.**
- **Microsoft Visual Studio shared share IDE by all languages.**
- **This environment may vary slightly from Microsoft Visual Studio version to version.**
- **The majority of the key items are essentially the same.**
- **The first step in creating an application with Visual Basic .NET is to familiarize yourself with the main components of the new integrated development environment as in figure.**
- **There are so many windows in the IDE that it's easy to misplace or rearrange them.**
- **The IDE windows are docking windows, means you can mouse to move them.**

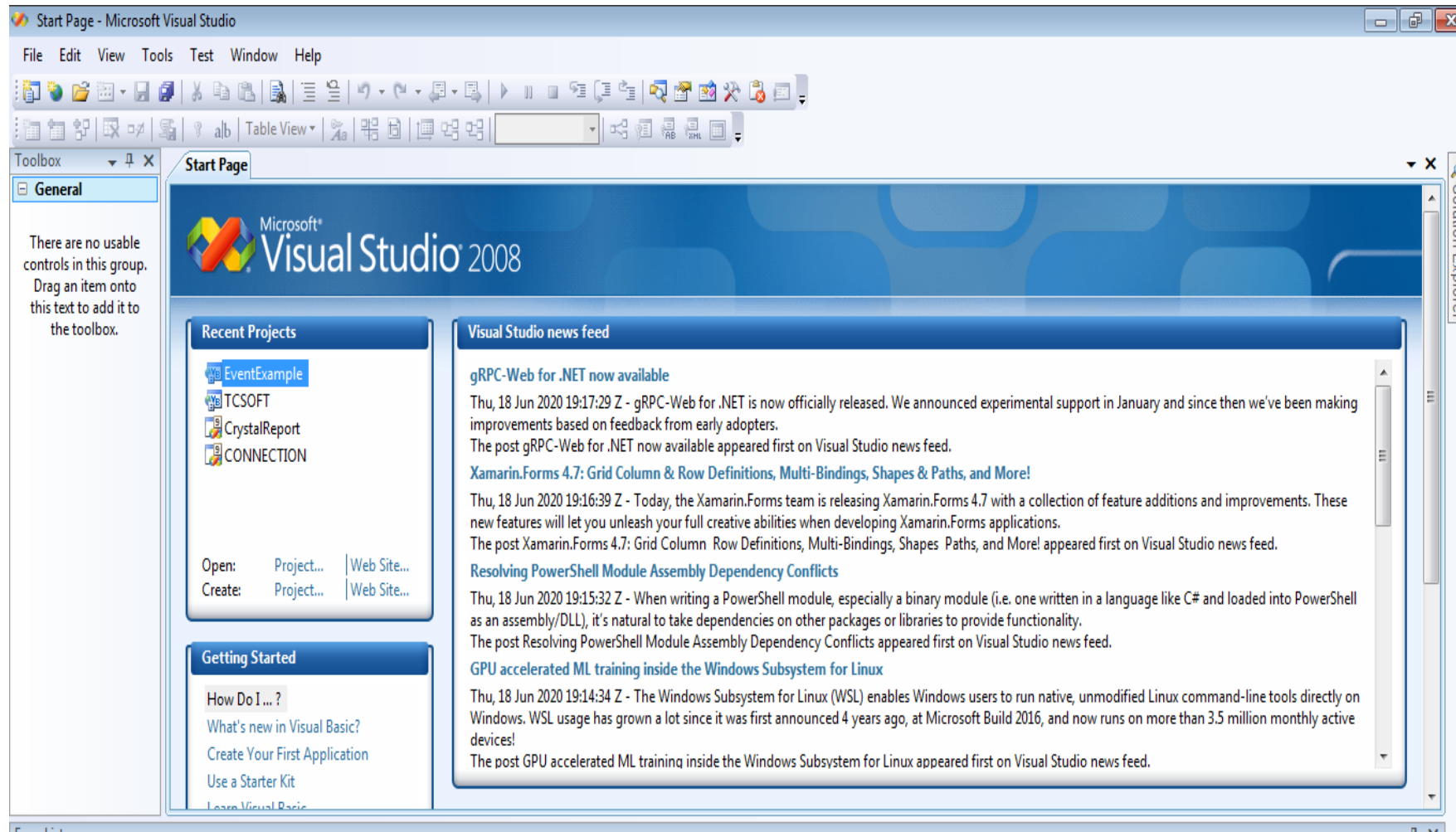
- **IDE Components**

- **The Start Page**
- **The Menu system**
- **Toolbars**
- **Graphical Designers**
- **Code Designers**
- **The Toolbox**
- **The Solution Explorer**
- **The properties Windows**
- **The Class view**
- **The Dynamic Help Windows**
- **Component Trays**
- **The Server Explorer**
- **The output Window**
- **The Task list**
- **The Object Browser**
- **The New Project Dialog box**

The Start Page :

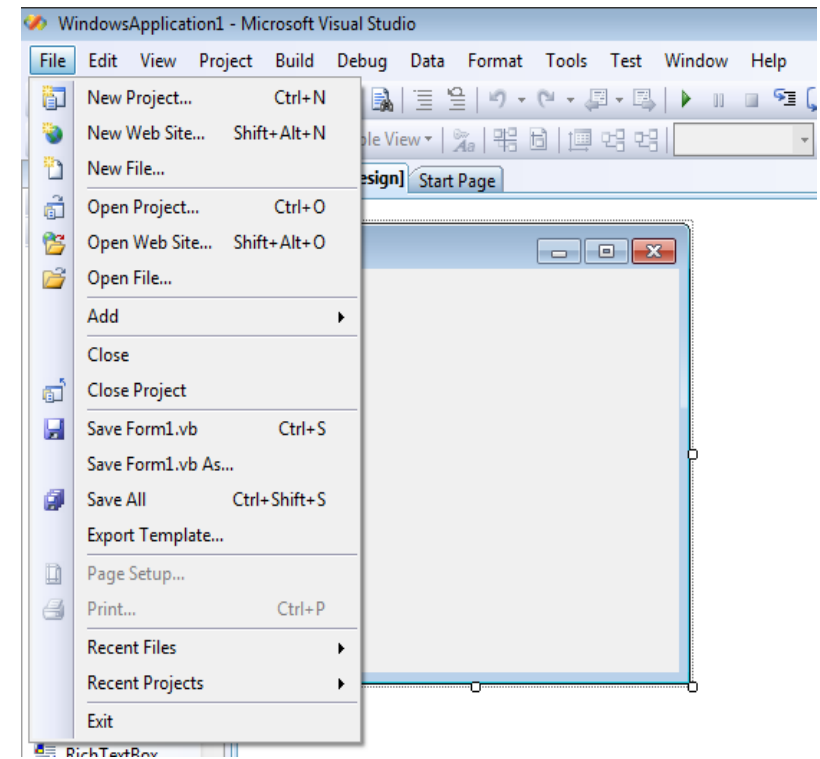
When Visual Basic .NET is started, the “Get Started” window for Visual Studio .NET, similar to a home page of a Web site on the Internet, appears. This page gives you access to the following:

- Recently used projects
- The ability to open projects not listed in the recent projects
- An option to create new projects



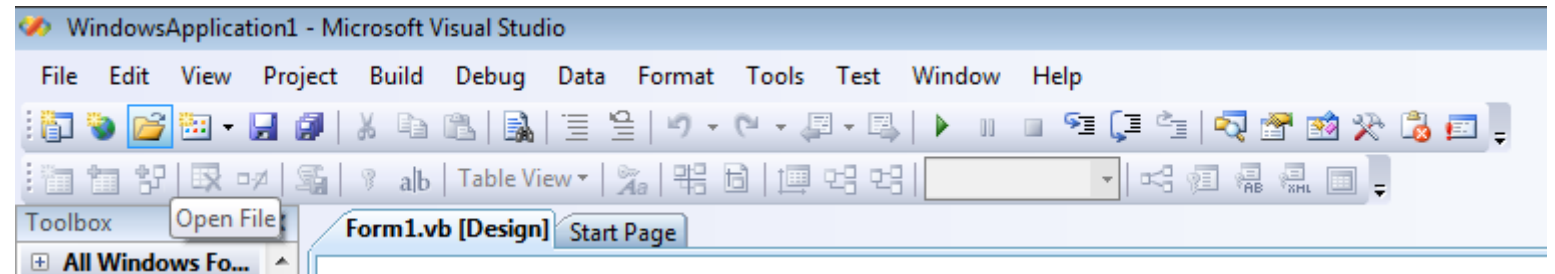
The Menu system :

- The programmer can access menu commands from the Menu Systems like in File menu –New Project, New Web Site, New File, Open project etc. can command accessed.
- As File Menu ,Edit, View, Project, Build, Debug etc. menu are available with related commands..

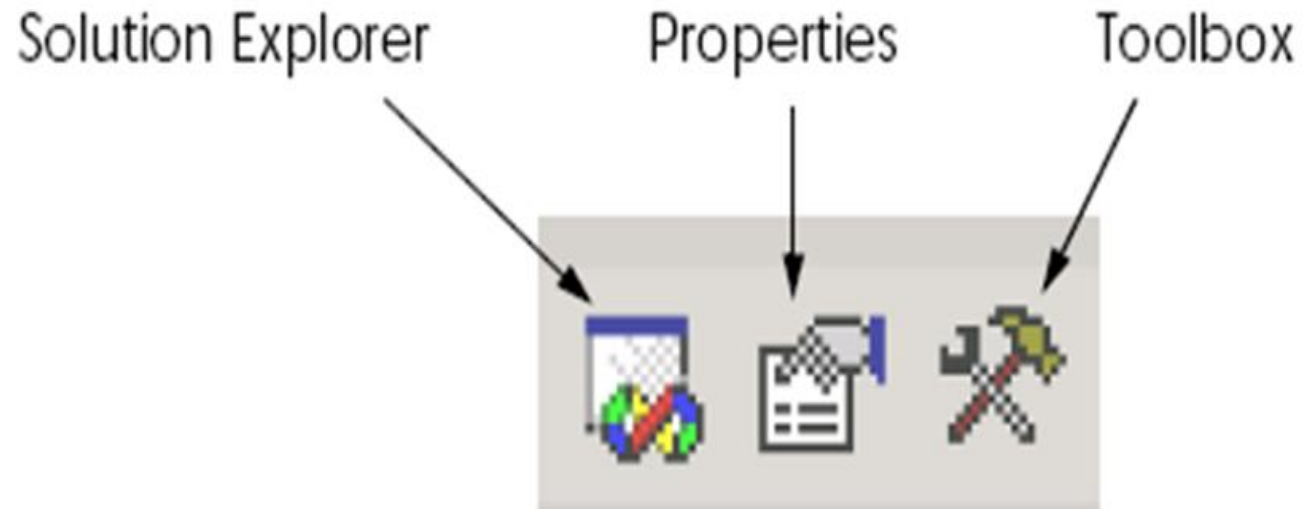


The Toolbar :

- The programmer can access menu commands from the toolbar, which contains pictures, called **icons**, that **graphically represent commands**.
- Positioning the mouse pointer over an icon displays a description called **a tool tip**.
- Eg. Open File Tool command.

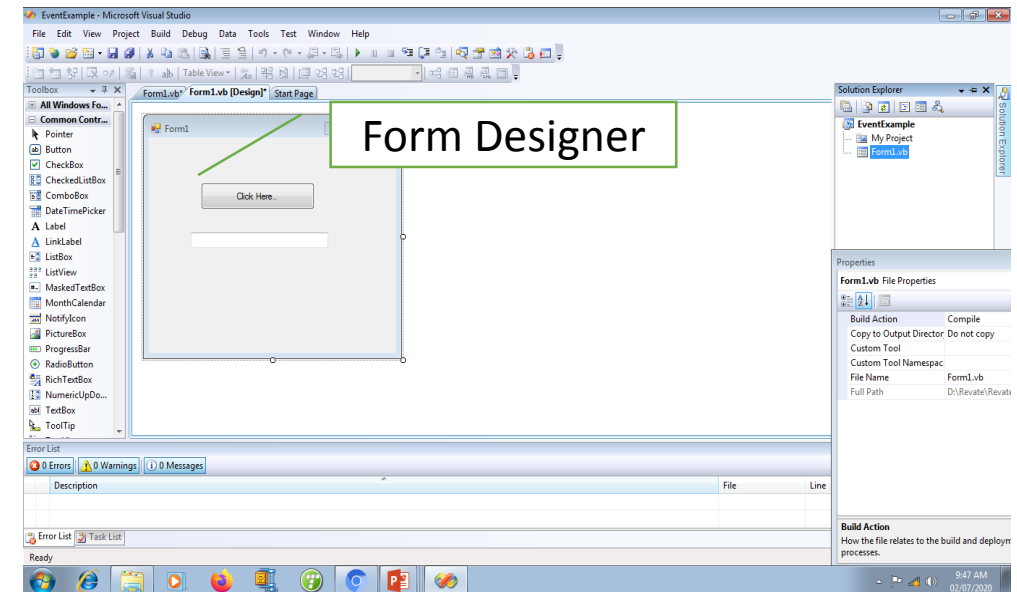


- The IDE provides windows for accessing project files and customizing controls.
- These windows can be accessed via the toolbar icons or by selecting the name of the desired window in the **View** menu.

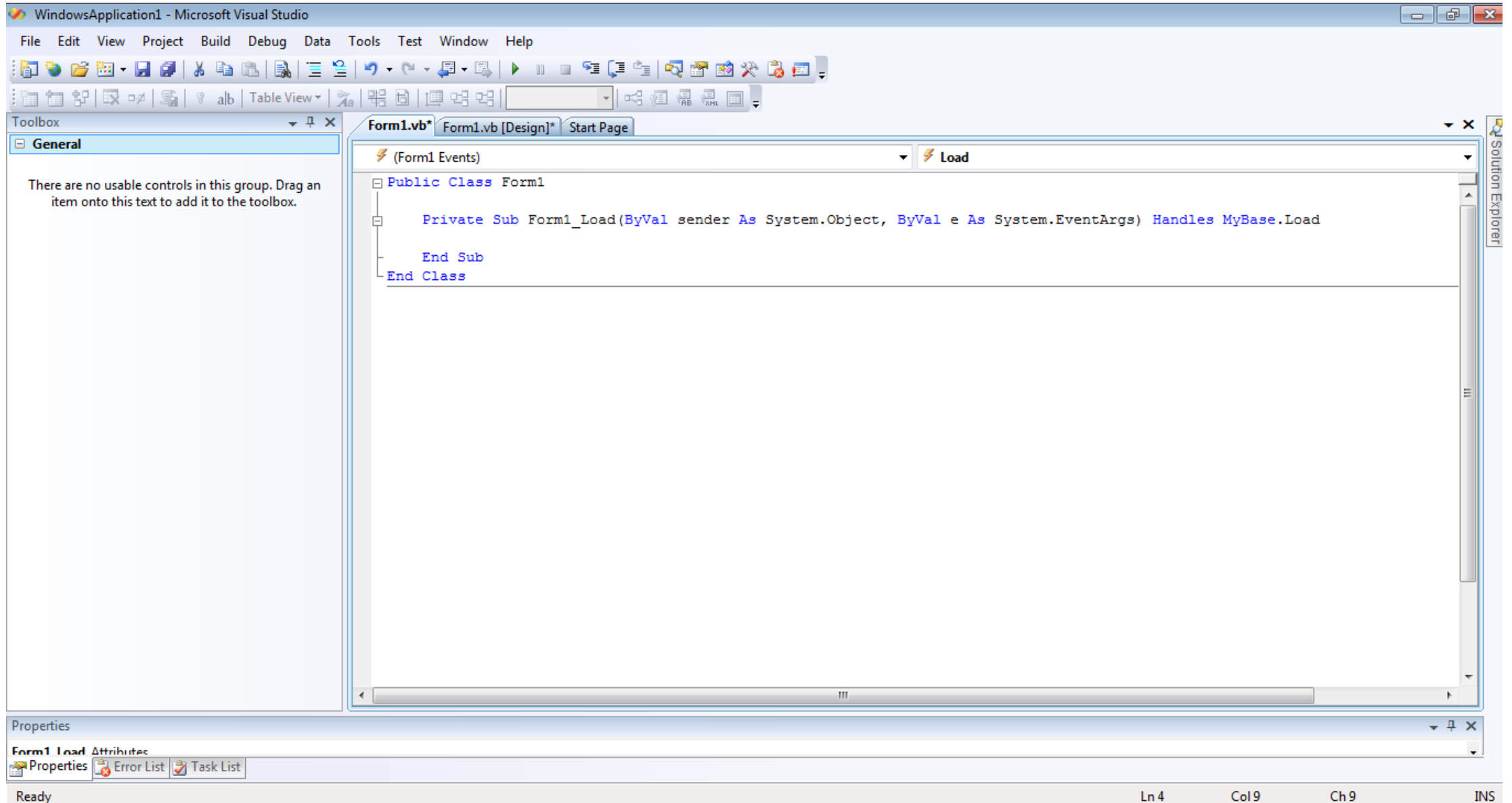


Graphical Designers (The Form Window)

- The **Form Window** has user interface element, VB.NET can display what those elements will look like at run time that make your application Visual.
- The Form Designer as see in fig. ,you can manipulate the form ,as well as add controls to it.
- It is where you will lay out the design of a form for your application and the interface for placing the code associated with the components.
- There are several different types of graphical user interface
 - Windows form designers
 - Web form designers
 - Component designers
 - XML Designers
- You can set displaying possible option from Tools|Options menu item.



Code Designers



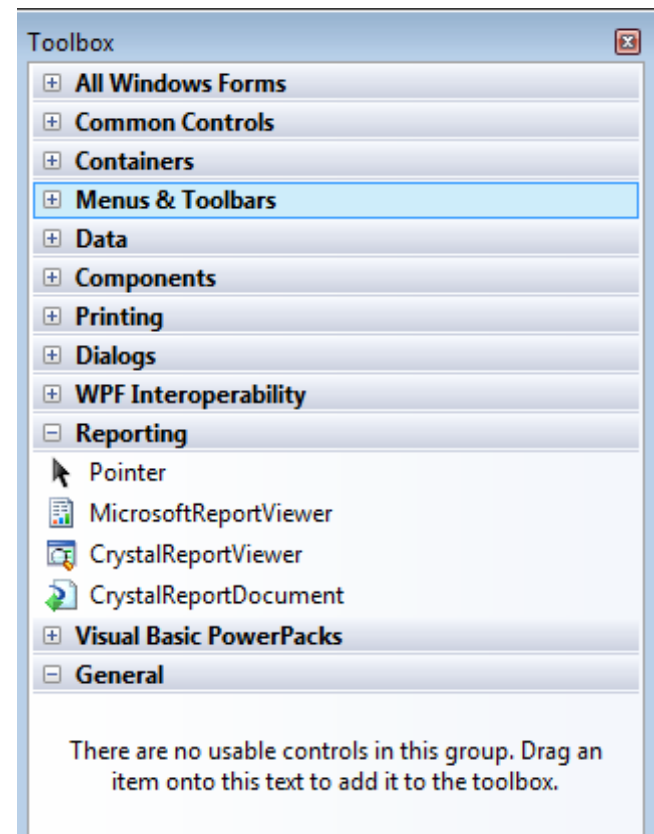
- **Figure :Code Designers**

Code Designers :

- **Code Designers let you edit the code for a component .**
- **Click on tabs Form1.vb[Design] ,which displays graphical designer and the Form1.vb tab ,which display the corresponding code designer.**
- **You switch between graphical and code designer using the designer and code items in the View menu and also in solution Explorer.**
- **The two drop-down list boxes at the top of the code designer.**
- **Left drop-down box ,you select what object's code you are working.**
- **Right drop-down box select part of the code that you want to work on, letting you select between the declarations area, functions, sub procedures and methods.**

Toolbox

- Toolbox window contains objects called controls that assist in creating applications.
- The toolbox uses tabs to divide its contents into categories like Data, Component, Windows forms and general.



After Click on +
Common Control

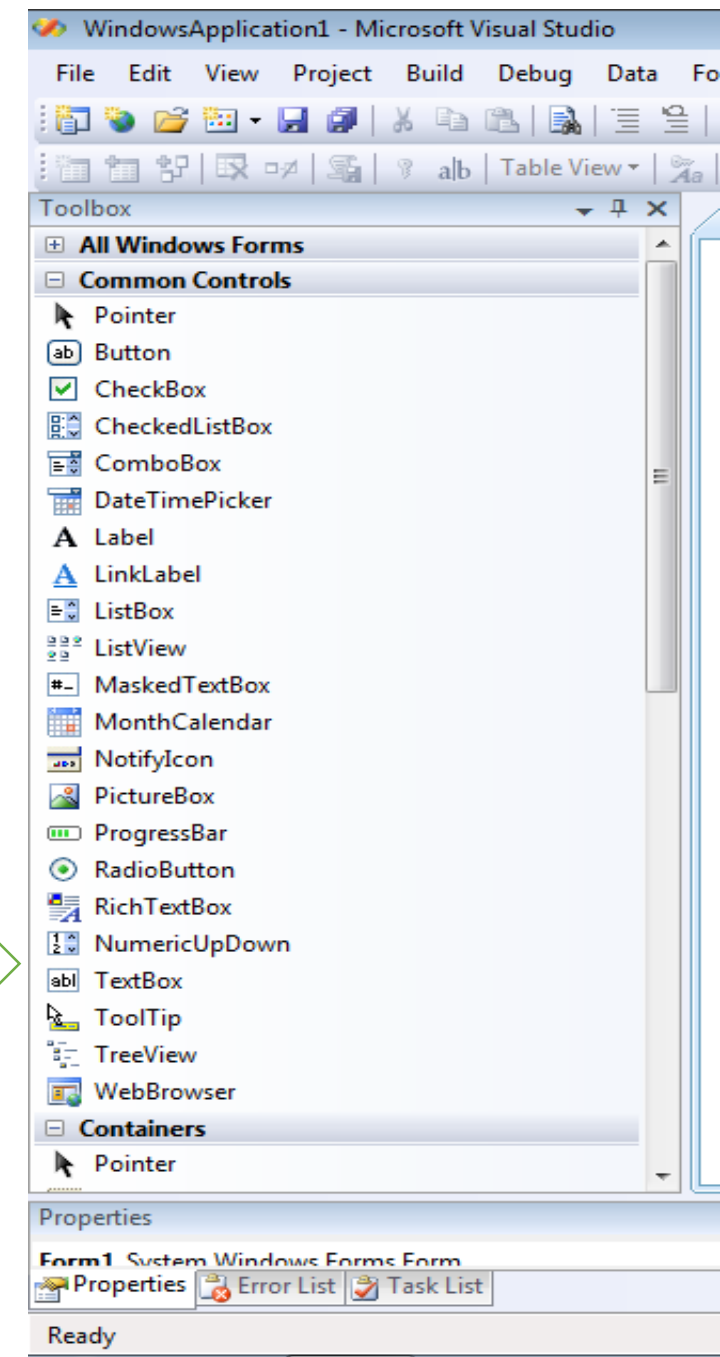


Figure: Toolbox

- **Toolbox..**
- The Data, Components, Windows Forms and General tabs are appear when you're working with a Windows form in a windows designer ,when you switch code designer in the same project , appear the General tab in the Toolbox.
- The data tab displays tools for creating dataset and making data connections.
- Window forms tab displays tools for adding control to windows forms.
- The Web forms tab display tools for adding server controls to web forms and so on.

- **The Solution Explorer :**

- The **solution explorer window** wraps all of the components of an application into one interface.
- It provides access to all the files in the solution. Here you can access all of the forms, projects, and other modules that are combined to build your application.

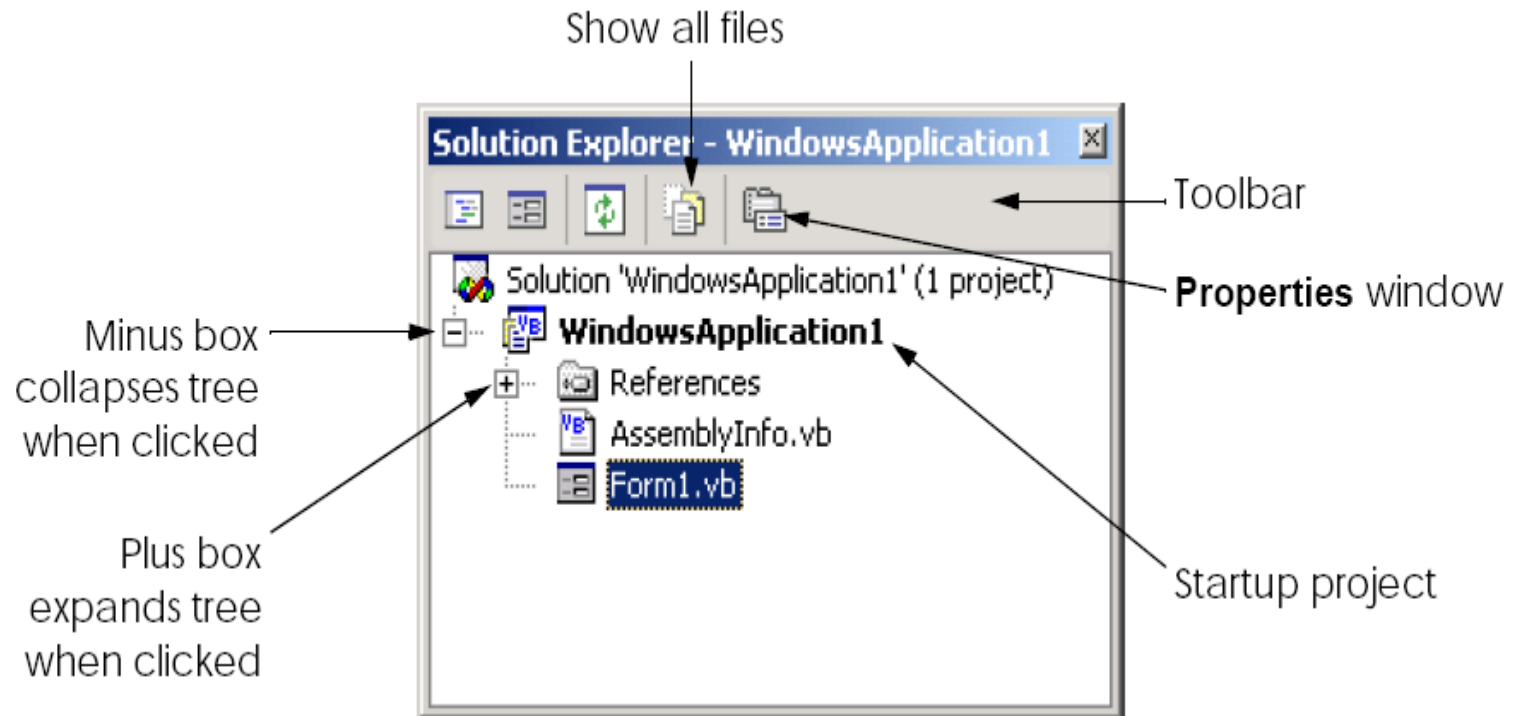
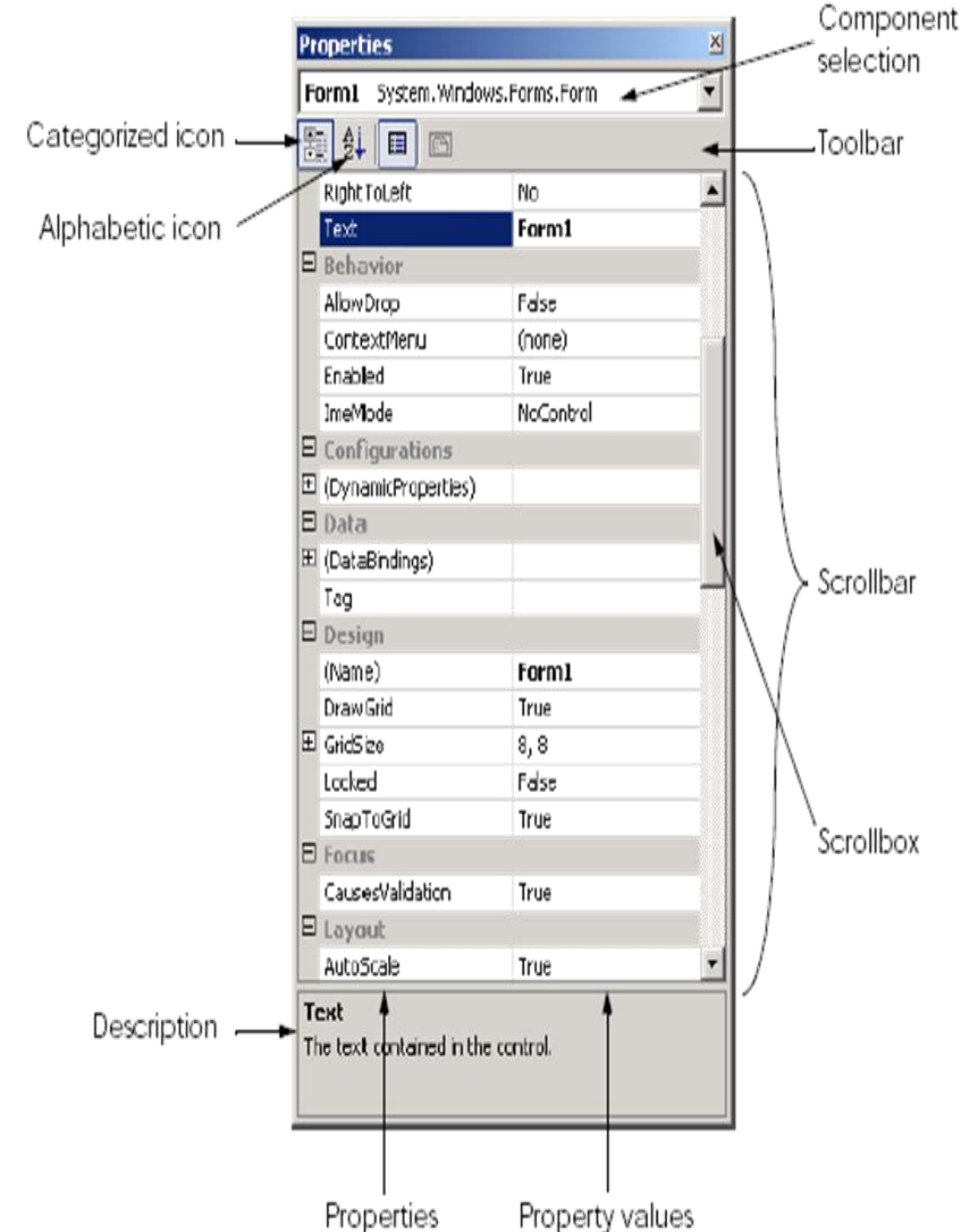


Fig.: The Solution Explorer

The properties Windows

- A property is a way of customizing the appearance and behavior of a control in Visual Basic .NET.
- To set properties of object in Visual Basic to customize them.
- To set an object's properties when you're designing your program in VB called design time.
- As opposed to run time.
- You select that object (like control, form, project or a solution) ,and then set the new property values in the Properties Window.
- The Properties window is divided into two columns of text,
- Left side Properties and Right side its properties value
- The object you're setting properties for appears in the drop down list box at the top of Properties Window.
- The current property selected is highlighted, and additional information explaining the purpose of that property is displayed at the bottom of the window.
- Properties are sometimes grouped together.



Unit No.	Contents	Rem.
I	Introduction: Introduction to .NET and .NET Framework, Difference between CUI & GUI, Event Driven Programming, the VB IDE, Operators, Conditional statements and looping statements. Sub Procedure, functions and exception handling	
II	Windows Forms : General Properties, Events handling events like mouse, keyboard, Types of forms MDI, adding removing controls at run time. Controls : The control class, Text Box, Rich Text Box, Label, Buttons, Checkbox, Radio Button, Panels, Group Boxes, List Box, Combo Box, Picture Box, Scroll Bars, Splitters, Track Bars, Pickers, Timer.	
III	Object-Oriented Programming : Class and Object, Class Vs. Object Members, Creating Classes, Objects, Structures, Modules, Constructors, Data Members, Methods, Properties, Event	
BOOKS	1) Visual Basic .NET Programming Black Book” by Steven Holzner,Dreamtech Press 2) “Mastering in Visual Basic .NET” by Evangelos Petroustos, Sybex Publication.	

Thank you !