Introduction

to

ASP.NET

Introduction to ASP.NET

- ASP.NET is part of the Microsoft .NET framework

- ASP.NET is an effective and flexible technology for creating **interactive and dynamic web pages**.

- It is a convergence of two major Microsoft technologies:
  - **Active Server Pages (ASP)**
    - Active Server Pages is Microsoft's server side scripting technology for building dynamic web pages.
  - **.NET Framework**
    - The .NET Framework is a suite of technologies designed by Microsoft where program development takes place.

Introduction to ASP.NET

- It is built on .NET Common Language Runtime

- ASP.NET :
  - Provides better user authentication
  - Has better language support.
  - Has a large set of new controls (web controls)
  - Uses compiled code, which increases the performance of the applications

- It is programmable using any of the .NET languages (VB.NET, C#, VJ# etc).

- The ASP.NET pages are saved with the `.aspx` extension.

Working of an ASP.NET Application

To execute an ASP.NET file, the following steps are followed:

1. A web browser sends a request for an ASP.NET file to the web server by using a URL.

2. The web server receives the request and retrieves the appropriate ASP.NET file from the disk or memory.

3. The web server forwards the file to the ASP.NET script engine for processing.

ASP.NET
Script
Engine

**WEB
SERVER**

CLIENT

4
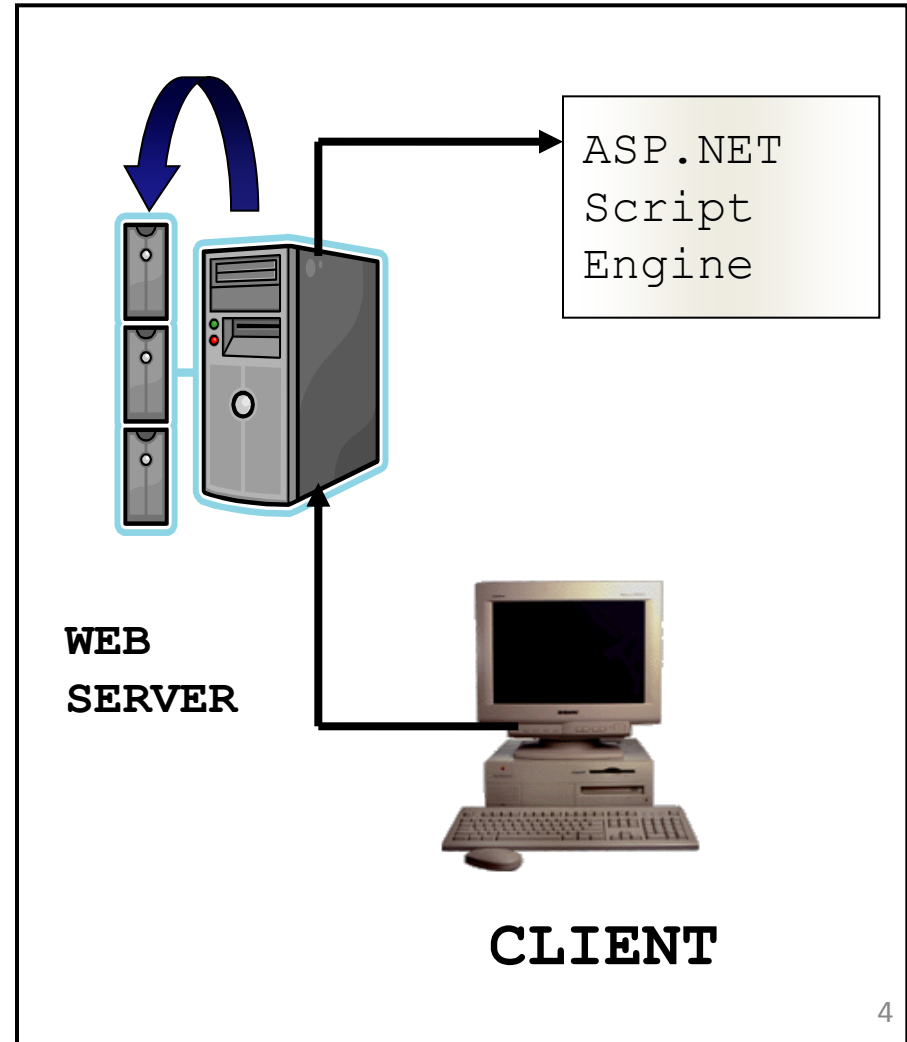
Working of an ASP.NET Application

4. The ASP.NET script engine reads the file from top to bottom and executes it.

5. The processed ASP.NET file is generated as an HTML document and the ASP.NET script engine sends the HTML page to the Web server.

6. The Web server then sends the HTML code to the client which interprets the output and displays it.

ASP.NET Script Engine

WEB SERVER

CLIENT

5
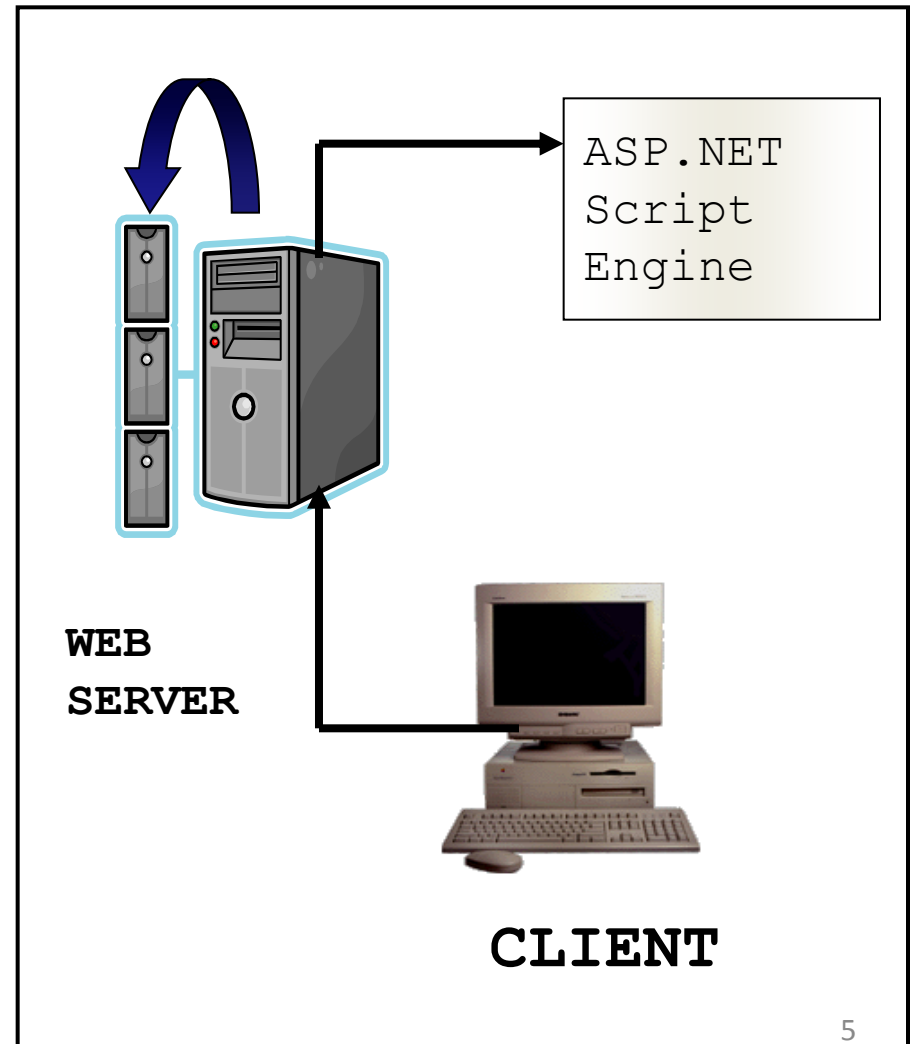
Advantages of ASP.NET

- Easy Programming Model
- Flexible Language Options
- Compiled Execution
- Rich Output Caching
- Web-Farm Session State
- Enhanced Reliability
- Master Pages
- Themes
- Improved Security
- Web Services
- Improved Performance and Scalability

Visual Studio 2010 IDE

Title Bar

Menu Bar

Tool Box

Document window

Solution Explorer

Properties Window
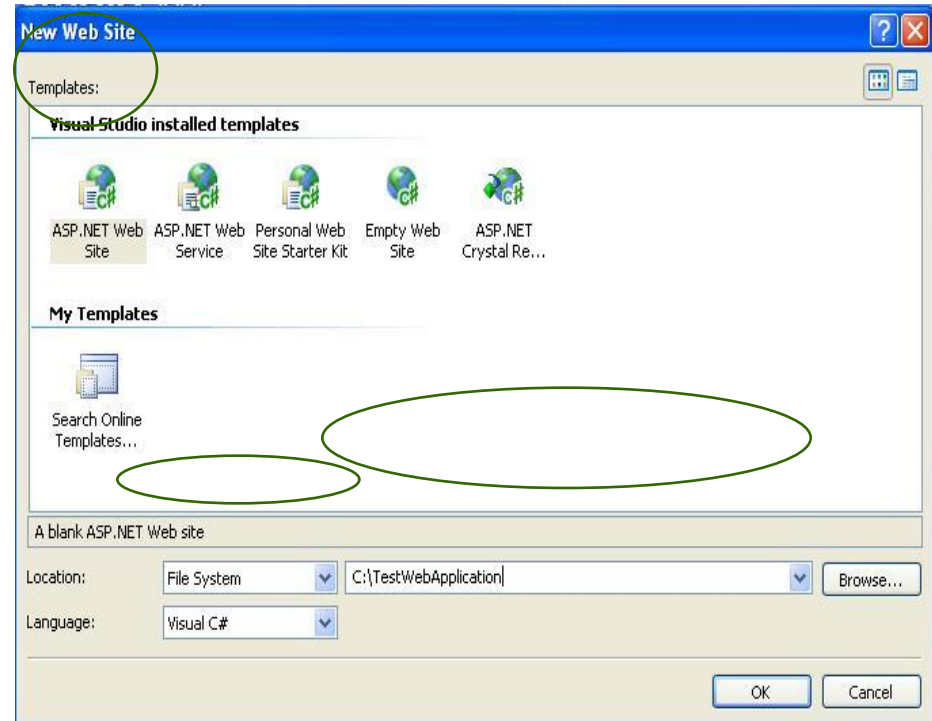
Status Bar
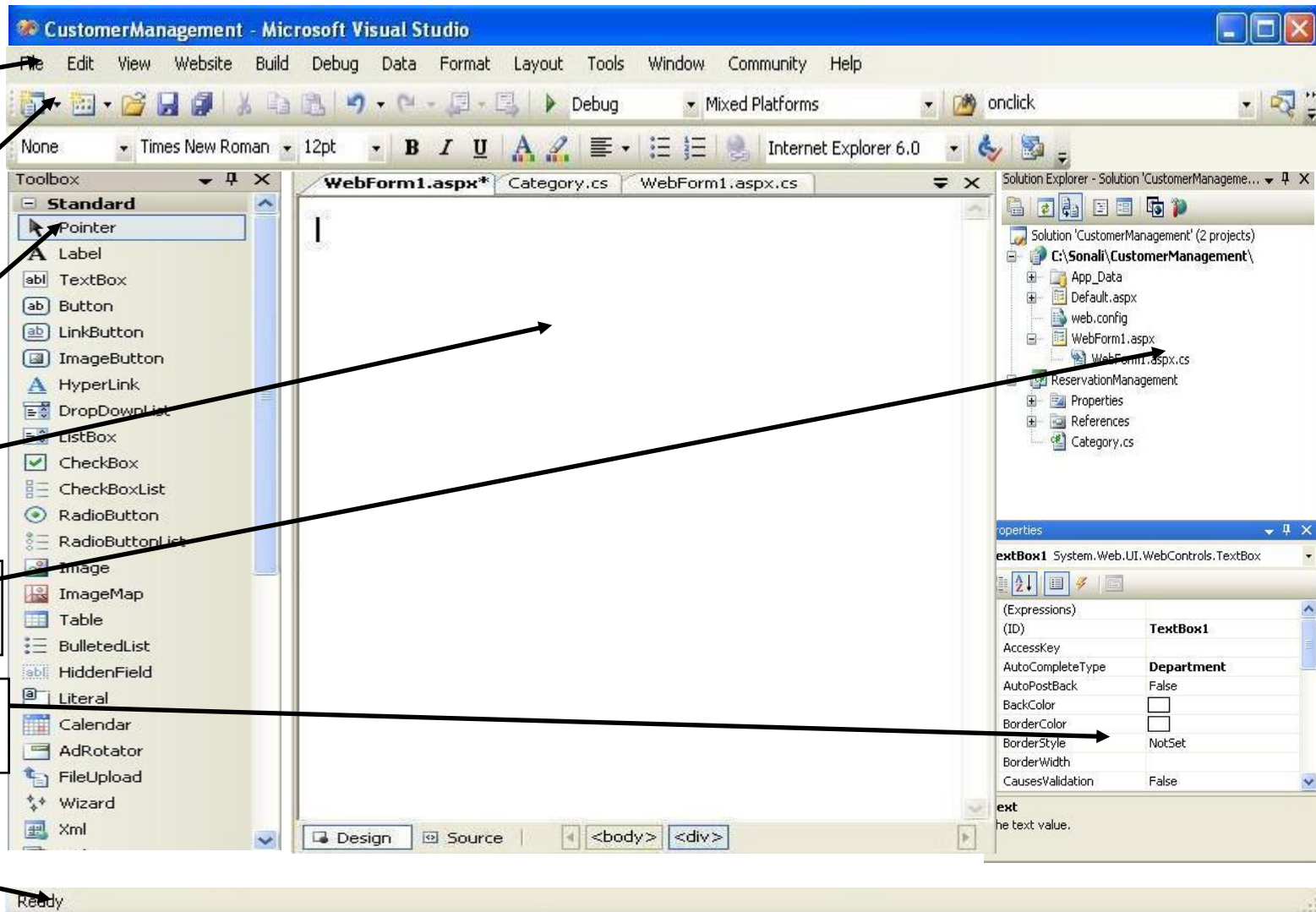
Creating a New Web Application

- To start a new Web Application in VS 2008, Click the *Create Web Site* button on the Start page or Select File > New > Web Site

- The New Web Site allows you to choose:

  - Templates
  - Language for creating an application
  - Location where the application will be created

Creating a New Application (Continued)

- After you create a new Web Application, Default.aspx page is added to this Website. To Rename this page, *Select* the page from the Website node in the *Solution Explorer > Right Click > Rename*.

  - Files can be added to the Project, using Solution Explorer:
    - Right click on the project node, in the *Solution Explorer,* and select the option *Add New Item*.
    - The *Add New Item* window will popup.
    - Select the type of file (item) to be added and click on Add.
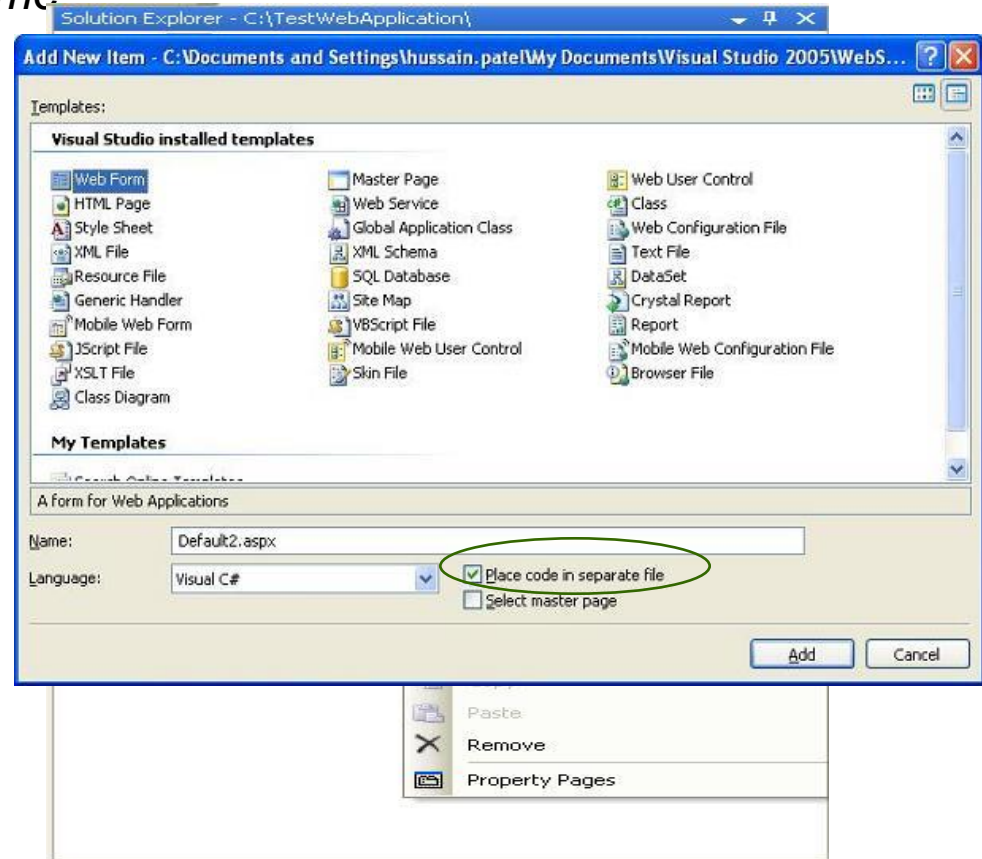
Solution Explorer

- Presents a *tree view structure* of files present in the project.
  - By default a New Website will contain:
    - An App_Data folder
    - A Default.aspx page (including Default.aspx.cs)

To view Solution Explorer:

- *Select View > Solution Explorer*

OR

- *Press buttons Ctrl+W,S*
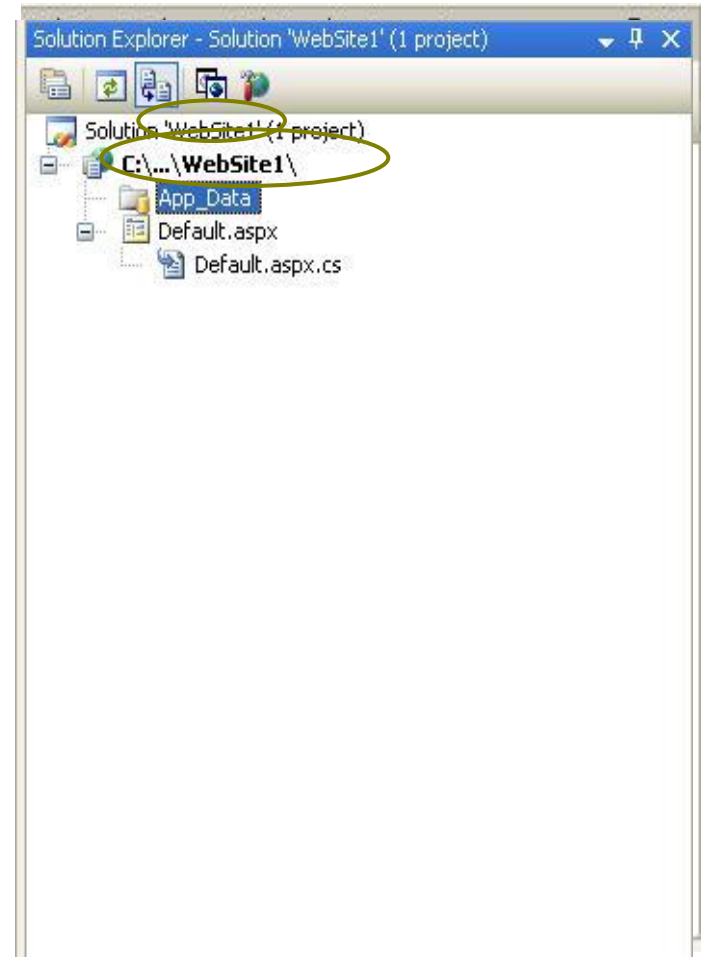
Solution Explorer (Continued)

- The Toolbar at the top of Solution Explorer enables various tasks.

Code

Refresh   **Copy Website**

Solution Explorer - Solution 'WebSite4' (1 p...

Properties

Nest Related Files

View Designer

ASP.NET Configuration

Toolbox

- To add controls in the *Design Window* use *Toolbox.*

- There are various *tool tabs* available in the Toolbox.
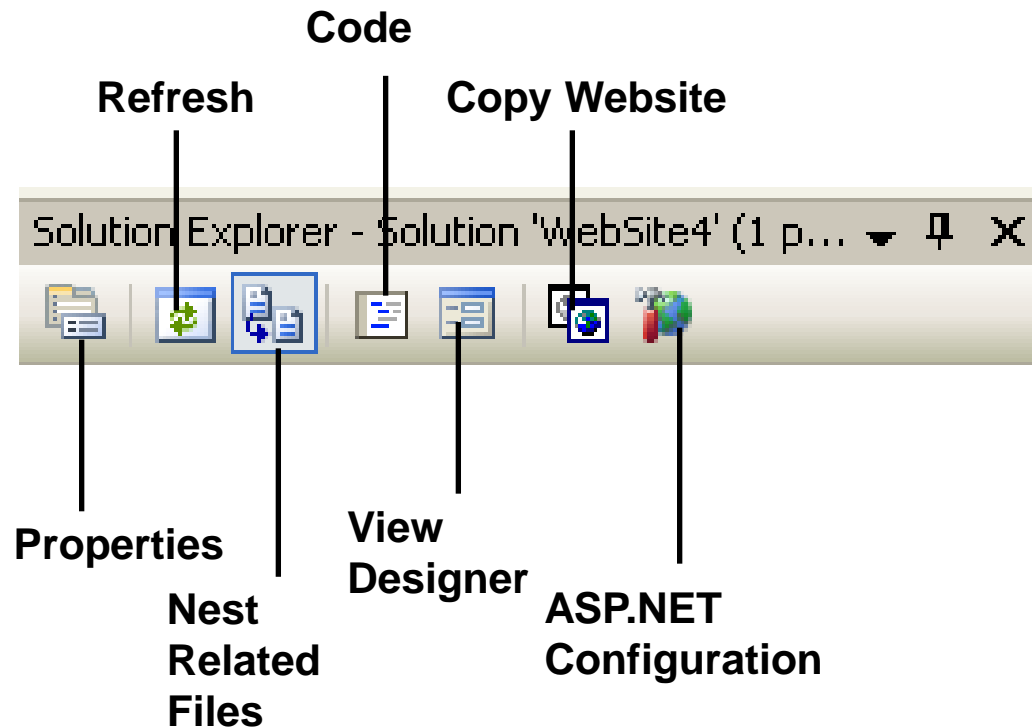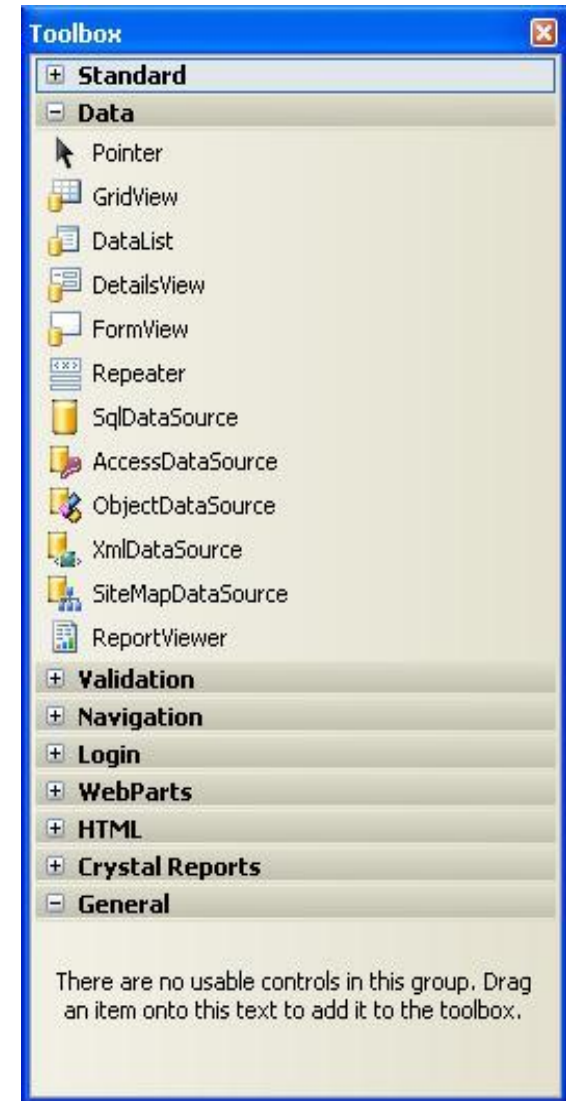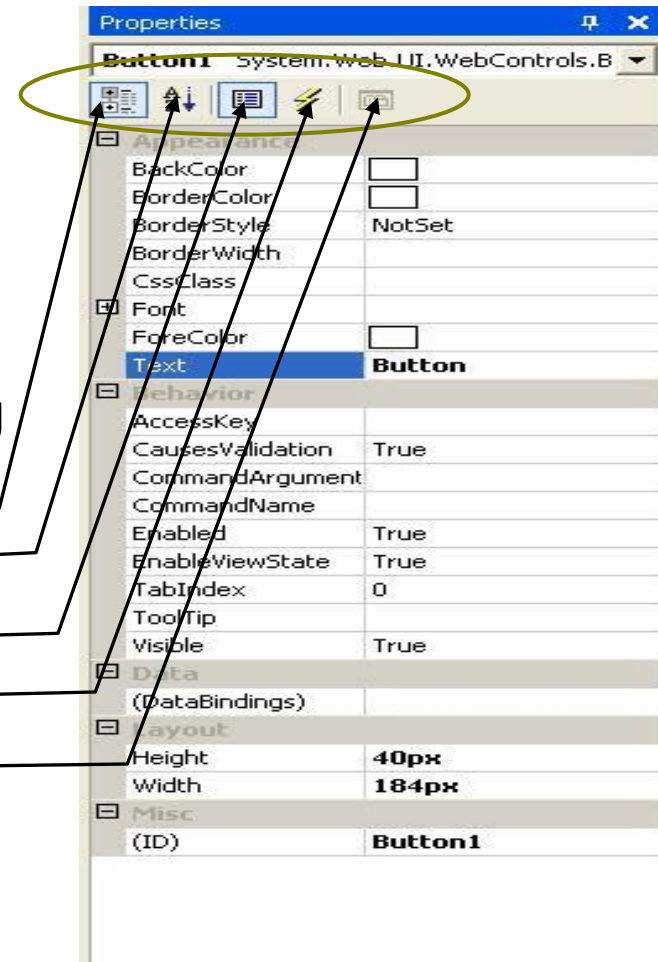 - The controls in the IDE are presented in a hierarchical manner (e.g., Standard Tab, Data Tab, Validation, Navigation, WebParts etc.).
  - Depending on the type of project (application) the *toolbox tabs will vary.*

- To view the tool box:
  - *Select* menu *View > Toolbox*

  OR
  - Press buttons *Ctrl+Alt+X or Ctrl+W, X*

- You can also view the controls as icons by right-clicking on the toolbox you want to change and deselecting the List View.

Toolbox

- **Standard**
- **Data**
  - Pointer
  - GridView
  - DataList
  - DetailsView
  - FormView
  - Repeater
  - SqlDataSource
  - AccessDataSource
  - ObjectDataSource
  - XmlDataSource
  - SiteMapDataSource
  - ReportViewer
- **Validation**
- **Navigation**
- **Login**
- **WebParts**
- **HTML**
- **Crystal Reports**
- **General**

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

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Properties Window

- To *view or change* the *properties* and *events* of a selected control during design use the *Properties Window*

- To configure a control:
    - Click once to select it
    - *Press F4* or Select *menu View* **>** *Properties window*
    - Modify the appropriate properties in the window

- There are various options provided for viewing the properties of the selected control, such as:
    - *Categorized view*
    - *Alphabetical view*
    - *Properties view* (*default*)
    - *Events View*
    - *Property pages*

Properties

Button1 System.Web.UI.WebControls.B

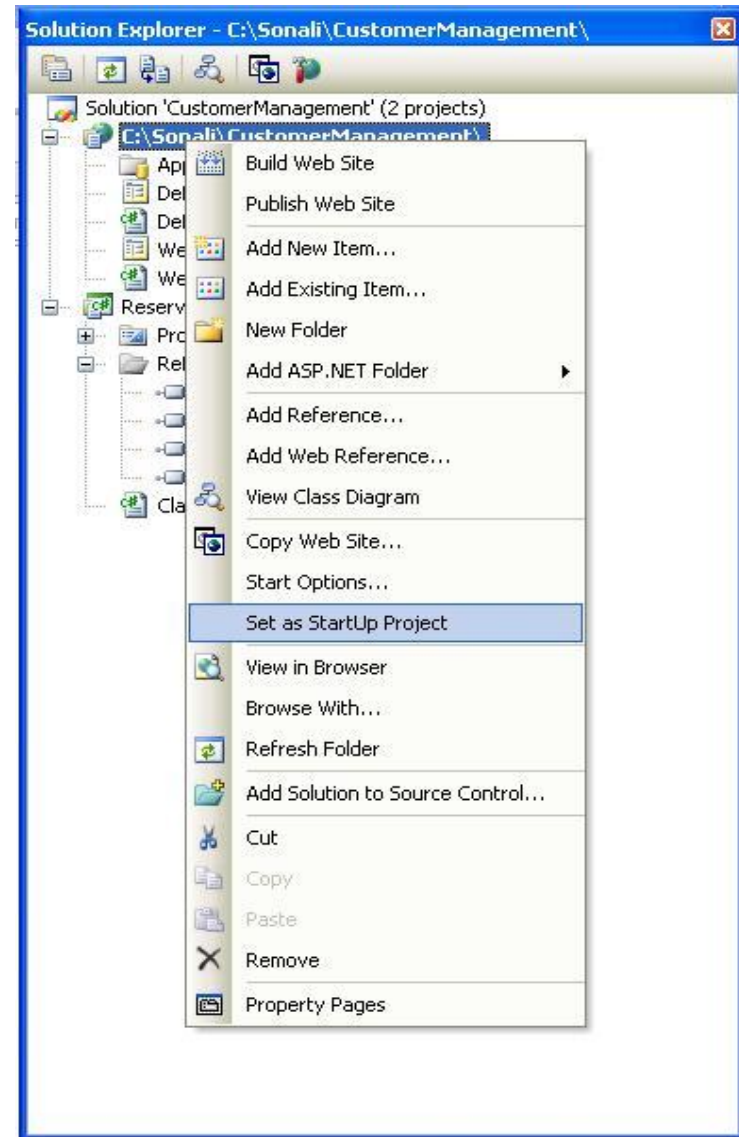| Appearance	
BackColor	
BorderColor	
BorderStyle	NotSet
BorderWidth	
CssClass	
Font	
ForeColor	
Text	**Button**
Behavior	
AccessKey	
CausesValidation	True
CommandArgument	
CommandName	
Enabled	True
EnableViewState	True
TabIndex	0
ToolTip	
Visible	True
Data	
(DataBindings)	
Layout	
Height	40px
Width	184px
Misc	
(ID)	**Button1**

Adding an Event

- Events can be added to the code in one of three ways:

  1. *Double clicking* a *control* in design view

  2. *Typing* the code manually

  3. Selecting the Events Icon and double clicking the required event from the Properties Window
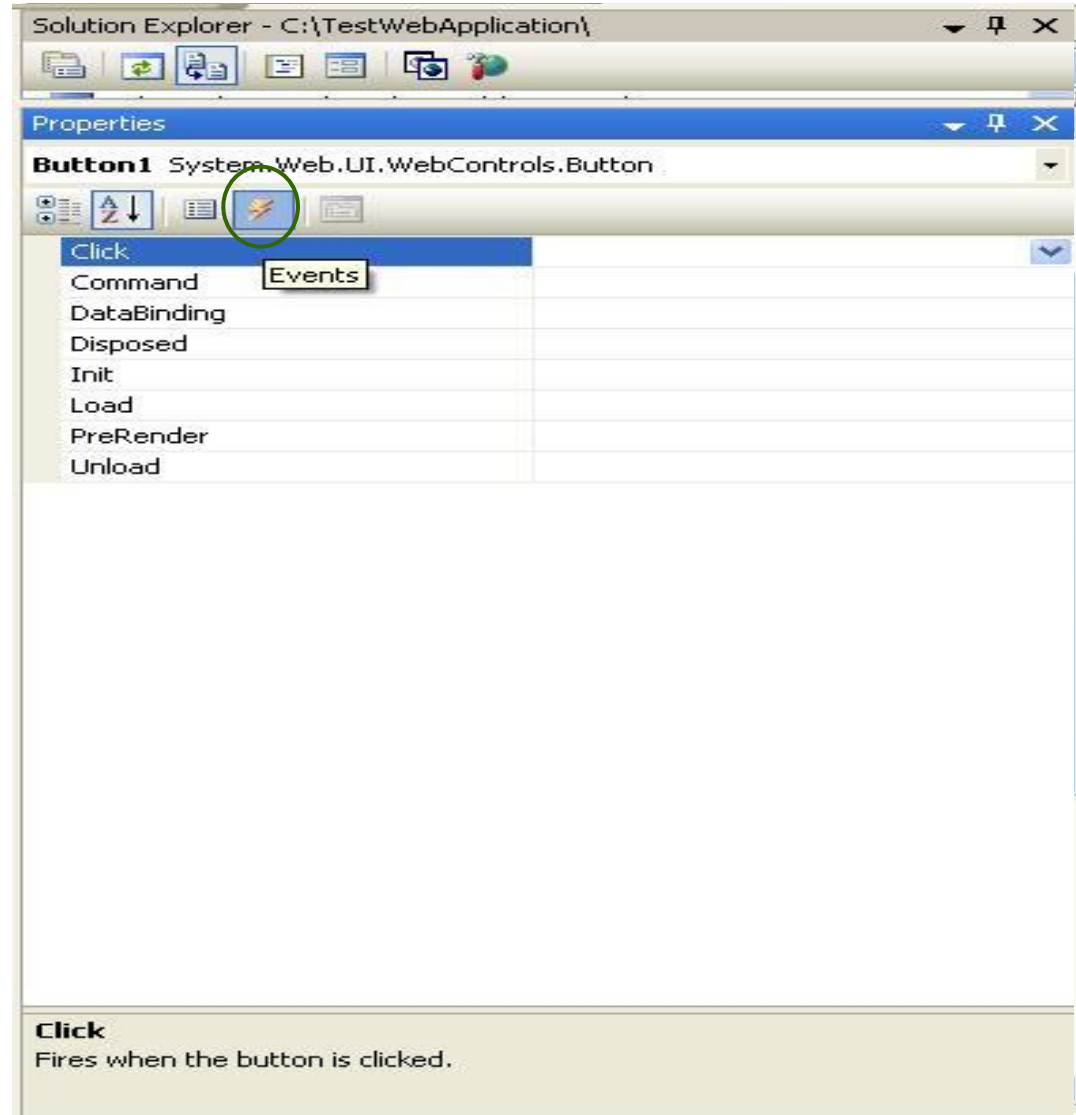
Project Settings

- *Project Settings* can be adjusted using various options in the *Project Properties* menu or by using the *Solution Explorer window.*
  - *These settings change based on the type of application developed.*

- Setting *Startup Page:*
  - *Right Click on the form* you want set as the startup page in the *Solution Explorer.*
  - Select option *Set As Start Page.*

- *Startup Project* (In case of multiple projects):
  - *Right Click on Project* to set as startup project in the *Solution Explorer.*
  - Select Option *Set As StartUp Project.*

Solution Explorer - C:\Sonali\CustomerManagement\

Solution 'CustomerManagement' (2 projects)
C:\Sonali\CustomerManagement\

- Build Web Site
- Publish Web Site
- Add New Item...
- Add Existing Item...
- New Folder
- Add ASP.NET Folder ▶
- Add Reference...
- Add Web Reference...
- View Class Diagram
- Copy Web Site...
- Start Options...
- Set as StartUp Project
- View in Browser
- Browse With...
- Refresh Folder
- Add Solution to Source Control...
- Cut
- Copy
- Paste
- Remove
- Property Pages

Resources

- Visual Studio 2008 Website

  http://msdn.microsoft.com/vstudio/

PowerPoint Presentation
by
Mr. ALEEM KHAN
[Department of Computer Science]

Thank You...