5AC# (ASP.NET 4)

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Plan of Topics

Session	Topics
1	Intro to Visual Studio IDE/ ASP.NET Projects and Simple controls
2	Validation Controls
3	Using Rich controls
4	Image Maps / Master Pages
5	Master Pages (contd.)/ Site Navigation
6	Data Access 1 – GridView control
7	Data Access 2 – DetailsView and FormView Controls / Data Caching
8	Topics Revision /Practice Test 1
9	**Test 1**
10	Security
11	MVC Part 1 - Controllers
12	MVC Part 2 - Models(POCO)/Views
13	MVC Part 3 - Entity Framework
14	MVC Part 4 - Models (ORM)/URL Routing
15	TBA
16	Revision of Sessions 10-15 /Practice Test 2
17	**Test 2**
18	Assignment Presentations

Assessments

- Test 1 – 2 merit points

- Test 2 – 3 Merit points

- Assignment (TBA) - 3 merit points

Session 1
Understanding ASP.NET Controls

- Overview of ASP.NET Controls

- Handling Control Events

- View State

- Page Events

Overview of ASP.NET Controls

- Standard Controls

- Validation Controls

- Rich Controls

- Data Controls

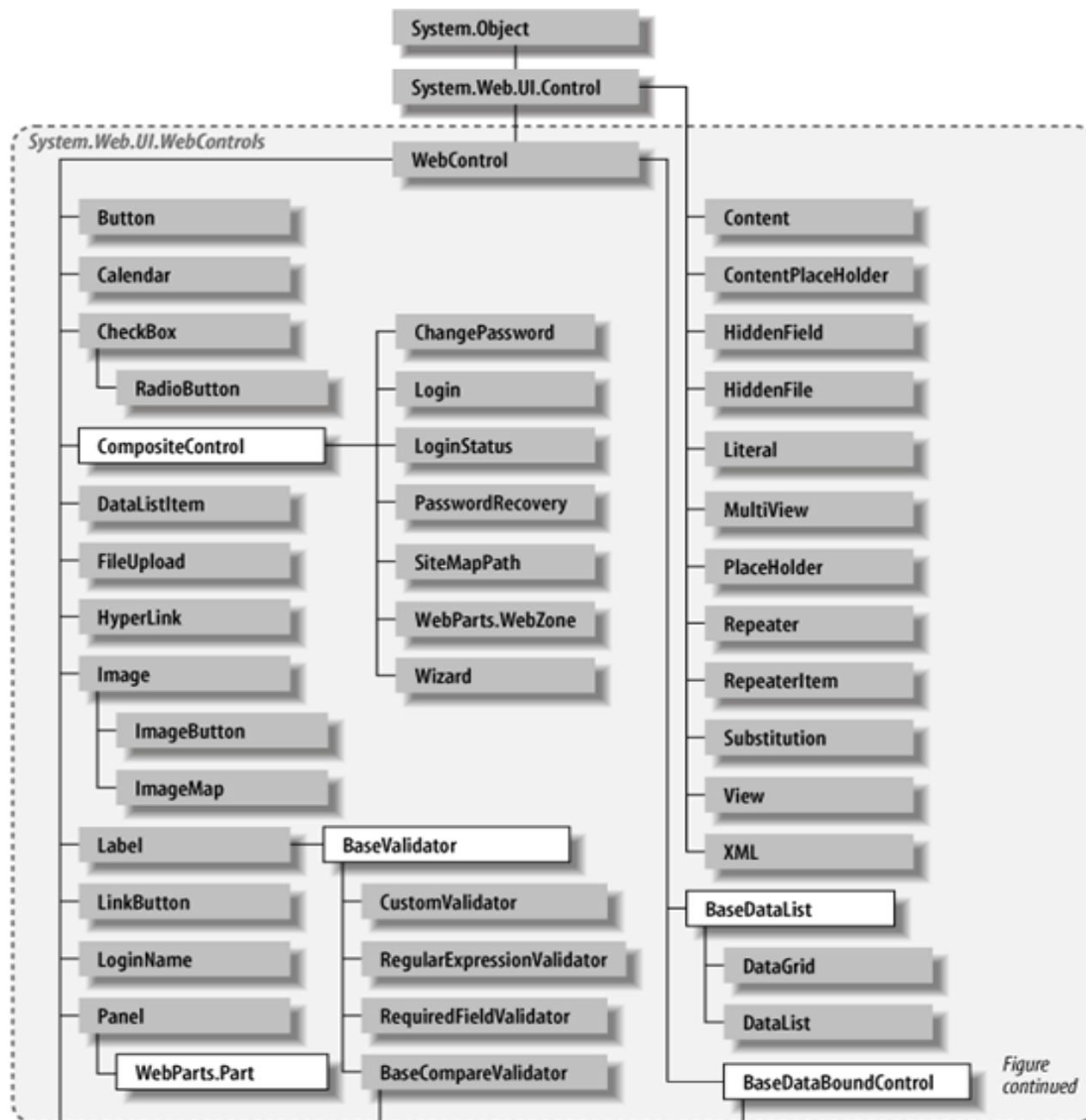- Login Controls

- Web Part Controls

ASP.NET Controls Definition

```
<asp:controlType
  id="ControlID"
  runat="server"
  thisProperty="this value"
  thatProperty="that value"/>
```
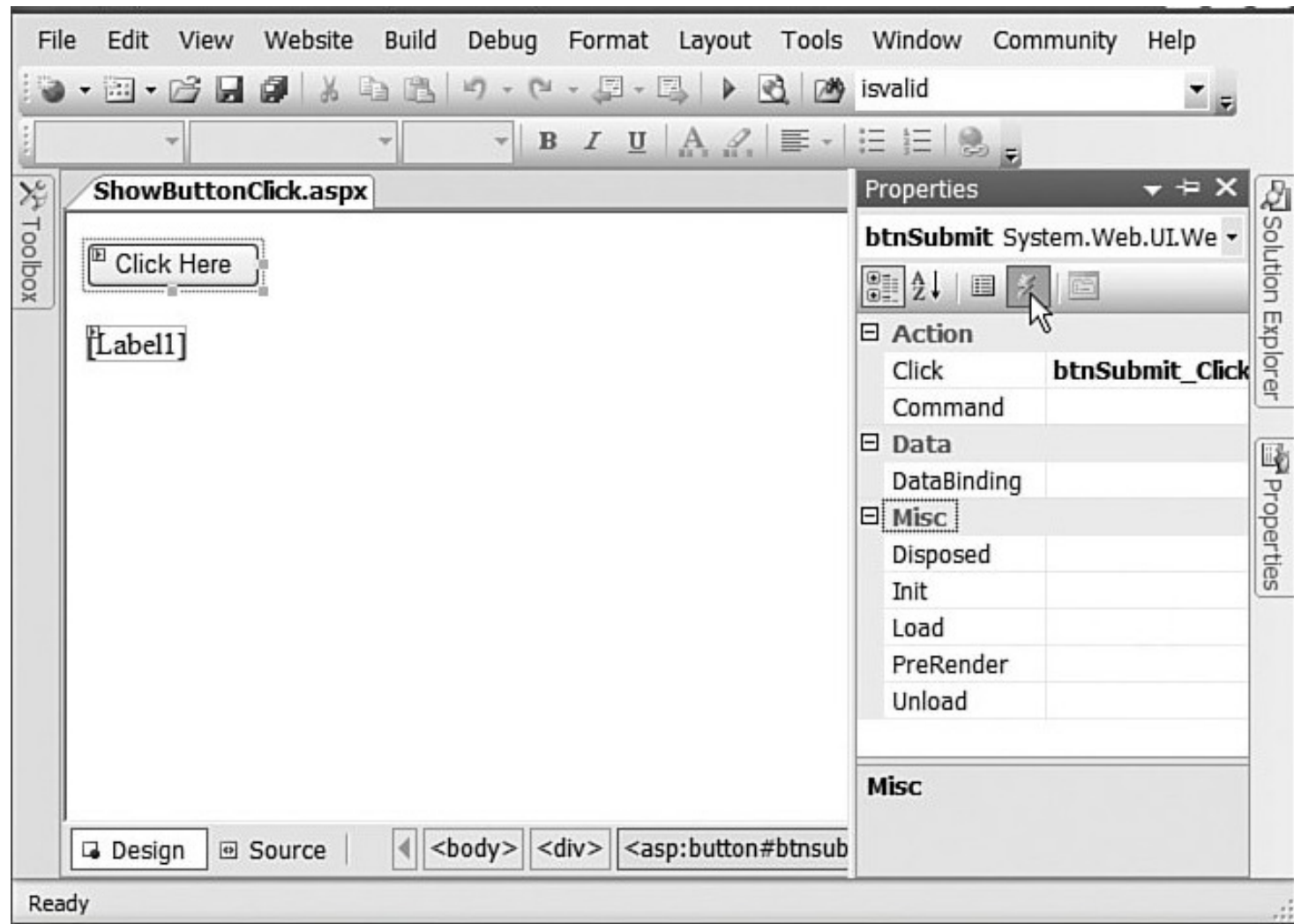
TextBox Control

```
<asp:TextBox
 ID="txtBookName"
 runat="server"
 Width="250px"
 Text="Enter a book name."/>
```

ASP.NET Server Control Class Hierarchy

System.Object

System.Web.UI.Control

System.Web.UI.WebControls

WebControl

- Button
- Calendar
- CheckBox
  - RadioButton
- CompositeControl
  - ChangePassword
  - Login
  - LoginStatus
  - PasswordRecovery
  - SiteMapPath
  - WebParts.WebZone
  - Wizard
- DataListItem
- FileUpload
- HyperLink
- Image
  - ImageButton
  - ImageMap
- Label
  - BaseValidator
    - CustomValidator
    - RegularExpressionValidator
    - RequiredFieldValidator
    - BaseCompareValidator
- LinkButton
- LoginName
- Panel
  - WebParts.Part

- Content
- ContentPlaceHolder
- HiddenField
- HiddenFile
- Literal
- MultiView
- PlaceHolder
- Repeater
- RepeaterItem
- Substitution
- View
- XML
- BaseDataList
  - DataGrid
  - DataList
- BaseDataBoundControl

Figure continued

Handling Control Events

Understanding View State

- **What is it?**

- **Why is it required?**

- **What does it look like**

```
<input type="hidden" name="__VIEWSTATE" id="__
  VIEWSTATE" value="/wEPDwUKLTc2ODE1OTYxNw9kFgICBA9kFgIC
  Aw8PFgIeBFR1eHQFATFkZGT3tMnThg9KZpGak55p367vfInj1w==" />
```

- **View State Demo**

Page Events

- PreInit -> Init ->InitComplete

- PreLoad -> Load -> LoadComplete

- PreRender ->PreRenderComplete

- SaveStateComplete

- Unload

Standard Controls

- Label
- Literal
- TextBox
- CheckBox
- RadioButton
- Button
- Link Button
- Image Button

Label Control

- Use Text property to assign viewable content

- By default, a Label control renders its contents in an HTML <span> tag

- Always use a Label control with an AssociatedControlID property when labeling form fields – Why??

- If AssociatedControlID is used the control is rendered as a <label> tag instead of a <apan> tag

Literal Control

- Similar to a Label control

- Does not render as a <span> tag

- Has a unique property called 'Mode'

- Mode property has 3 values:
  – PassThrough
  – Encode
  – Transform

TextBox Control

- AccessKey.
- AutoCompleteType
- AutoPostBack
- Columns
- Enabled.
- MaxLength (except when TextMode = Multiline)
- ReadOnly
- Rows
- TabIndex
- Wrap (When TextMode = Multiline)

CheckBox Control

- AccessKey
- AutoPostBack
- Checked
- Enabled
- TabIndex
- Text
- TextAlign (Left OR Right)

Framework also includes the CheckBoxList control that enables you to display a list of check boxes automatically.

RadioButton Control

- AccessKey
- AutoPostBack
- Checked
- Enabled
- TabIndex
- Text
- TextAlign (Left OR Right)

The ASP.NET Framework also includes the RadioButtonList control, which enables you to display a list of radio buttons automatically.

Button Control Properties

- AccessKey

- Enable

- OnClientClick

- PostBackUrl

- Text

-

LinkButton Control

- Enables posting of a Form to the server
- Renders a link instead of a push button
- Uses JAvaScript to pst back to the server

  ```
  <a id="lnkSubmit"
      href="javascript:__doPostBack('lnkSubmit','')">Submit</a>
  ```

- When the form is posted, all form fields in the page are also posted to the server.
- Common Properties
  - Enable
  - PostBackUrl
  - TabIndex
  - Text

ImageButton Control

- Like a Button and LinkButton
- Always displays an image
- Always include an alternate text for any image (required by accessibility guidelines)
- Common Properties
  - AccessKey
  - AlternateText
  - DescriptionUrl
  - Enabled
  - ImageUrl
  - PostBackUrl
  - TabIndex

Specifying a DefaultButton

Use the Form control DefaultButton property to specify which button is activated when pressing the <Enter> key.

Labs

- Download Session 1Labs from Moodle
- Follow Lab instructions and do <u>all</u> Labs