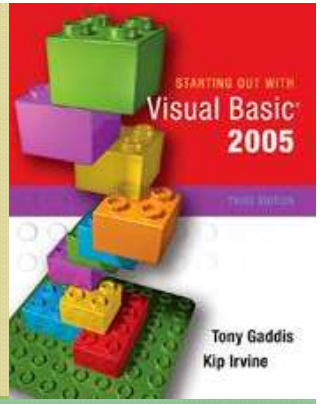
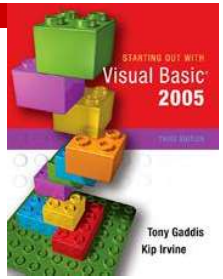


11.3 Web Server Controls

Web Server controls are similar to form controls in Windows applications.

Web Server controls make Web applications interactive.

Web Server Controls Overview

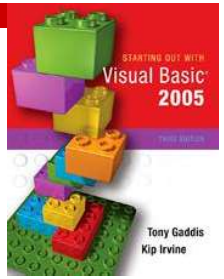


- Make ASP.NET dynamic and interactive
- Work like HTML controls but far more flexible
  - Class based with properties, methods, events
  - Similar to Windows form controls, making it easy for VB programmers to learn
- Frequently used Web controls

Button	ImageButton	LinkButton
Label	RadioButton	RadioButtonList*
CheckBox	CheckBoxList*	ListBox
DropDownList	Image	Calendar

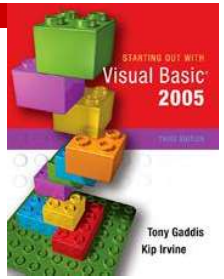
* Those noted with asterisk have a Windows form equivalent

Web vs. Windows Controls



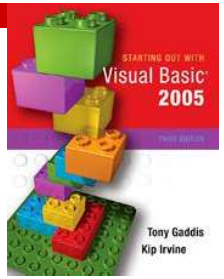
- Web control properties similar to those of Windows form controls including
  - Text, Enabled, Visible, Font, ReadOnly, etc.
- There are some important differences
  - Windows control Name property same as the ID property for Web controls
  - Web conrols have an AutoPostBack property
  - Web controls lose runtime properties when the user moves away from that page
  - Must *save state* to retain runtime properties

Processing of Web Controls



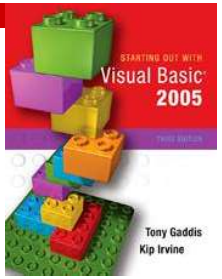
- ASP.NET functions differently from HTML
- The Web server executes the VB code found behind the ASP.NET Web page
- When a browser requests an .aspx Web page
  - Server reads/interprets Web controls on page
  - VB statements in *codebehind file* executed
  - Web page of standard HTML tags and controls built using .aspx Web controls and VB code
  - HTML Web page sent back to browser

Event Handling in Web Forms



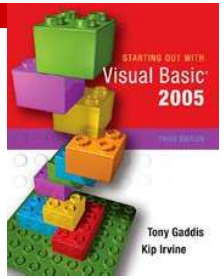
- Events fire differently in Web forms
  - *Page_Load* event fires each time a page is displayed instead of just the first time
  - *Page_Load* fires before other events such as *TextChanged*
- Mouse click on a control with *AutoPostBack* property set to true sends form back to server
  - Useful if server should react to a mouse click such as selecting an item from a list box
  - Occurs automatically for Button, LinkButton, and ImageButton controls
  - Not available for Textbox control

Label and TextBox Controls



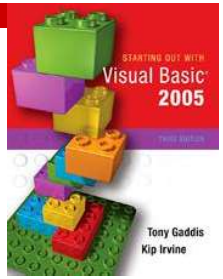
- Label control displays data from program
  - Use only if label text will change at runtime
  - If text does not change, set up as *static text*
- TextBox control holds text input by user
  - TextMode property can be:
    - SingleLine: permits a single line of input
    - MultiLine: permits multiple lines of input
    - Password: characters typed appear as asterisks
  - Deal with browser compatibility issues using:
    - Columns property to control TextBox width
    - Rows property to specify entry of multiple lines
- Tutorial 11-2 creates a simple input form

HyperLink Control



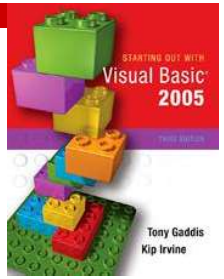
- Provides a link to navigate to another page
  - *Text* property specifies text shown for link
  - *NavigateURL* property holds destination URL
  - *Target* property determines if a new browser window is opened to display the new page

More Web Controls



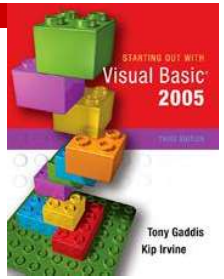
- *ImageButton* provides a clickable image
  - Generates a click event
  - *ImageURL* property specifies path to image
- *LinkButton* behaves like a hyperlink but generates a click event
- *RadioButtonList* is a group of radio buttons
  - Functions similar to a ListBox
  - Has *SelectedIndex* & *SelectedValue* properties

ListBox Control



- Very similar to the Windows ListBox control
  - Has an Items collection
  - Has the ListBox properties *SelectedIndex*, *SelectedItem*, and *SelectedValue*
  - *SelectionMode* property specifies whether multiple list items may be selected
- *SelectedIndexChanged* event handling
  - Must set *AutoPostBack* to true if this event should fire immediately upon a user selection
  - If not, event fires only after another control causes form to be posted back to the server

CheckBoxList and DropDownList



- *CheckBoxList* control looks like group of check boxes but works like a ListBox
  - Has an Items collection
  - Has the ListBox properties *SelectedIndex*, *SelectedItem*, and *SelectedValue*
  - Each item has a boolean *Selected* property
- *DropDownList* similar to ComboBox except:
  - Initial value of *SelectedIndex* always zero so the first item is always displayed
  - Must select item from list, cannot key entry