Telerik Academy

Windows Universal Controls

Apps for Windows Phone & Windows Store

Telerik Software Academy

http://academy.telerik.com

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Table of Contents

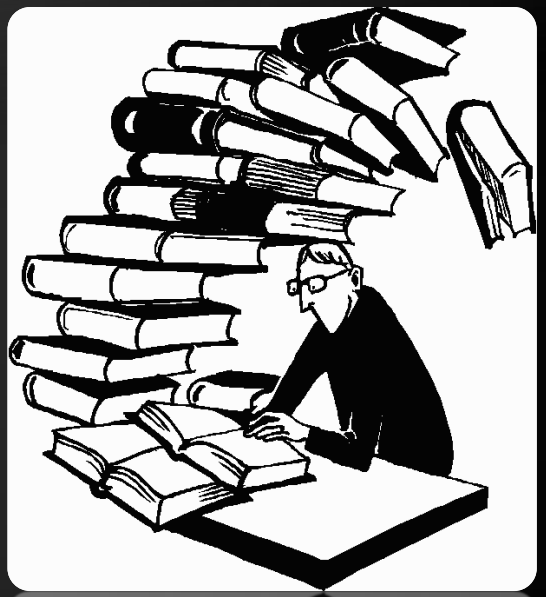

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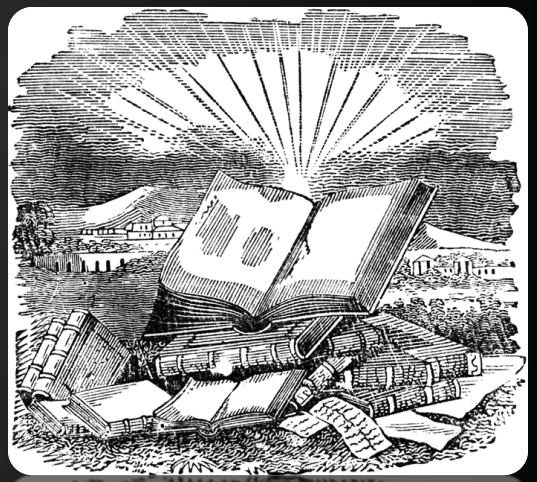
Table of Contents

8. Other controls
   - `Slider` and `Scroll` controls
   - `ProgressBar`
   - `ToolTip`
   - Custom User Controls



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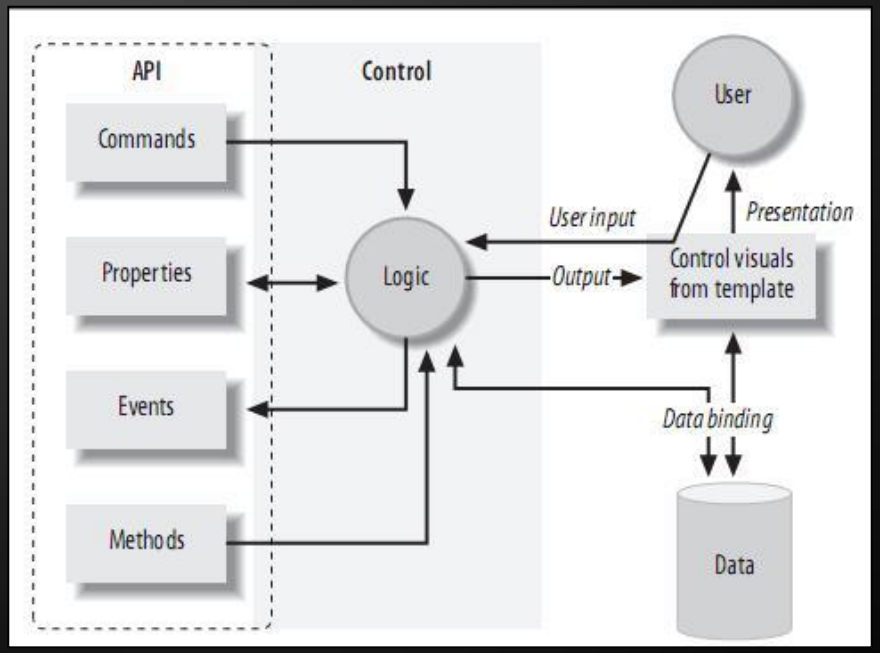
XAML Controls

XAML Control

- XAML Controls are typically not directly responsible for their own appearance
  - XAML Controls are all about behavior
  - They refer to templates to provide their visuals



XAML Controls (2)

- Controls may use commands to represent supported operations
- Controls offer properties to provide a means of modifying either behavior
- Controls raise events when something important happens
- XAML provides a range of built-in controls
  - Most of these correspond to standard Windows control types

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Text Controls

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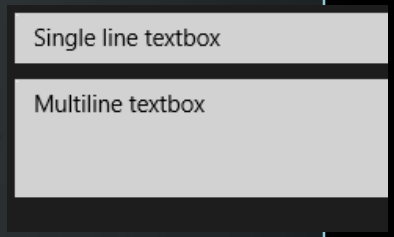
TextBoxes

TextBox

- TextBox a control that can be used to display single-format, multi-line text
  - By setting AcceptsReturn to true, it can edit multiple lines
  - ScrollViewer.VerticalScrollBarVisibility – attached property that gets/sets scrollbar visibility

```
<TextBox Margin="5" VerticalAlignment="Center"
  Text="Single line textbox" />
<TextBox VerticalAlignment="Center“ Margin="5“
  Height="120“ AcceptsReturn="True“
  ScrollViewer.VerticalScrollBarVisibility="Visible"
  Text="Multiline textbox" />
```

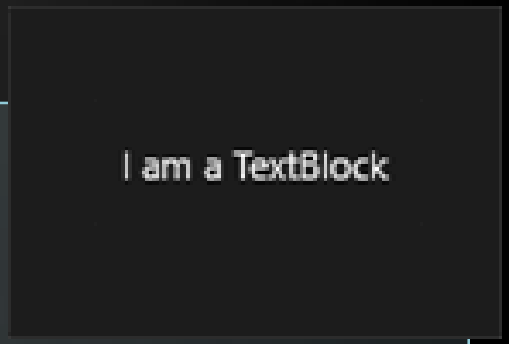


- PasswordBox
  - The users sees only the "*" symbol

TextBlock

- TextBlock a lightweight control for displaying small amounts of text
  - Name - identifying name of the object
  - TextWrapping

```
<TextBlock Name="TextBlock"
           VerticalAlignment="Center"
           HorizontalAlignment="Center"
           FontSize="35"
           FontWeight="Bold"
           TextWrapping="Wrap"
           Text="I am a TextBlock" />
```



RichEditBox

- `RichEditBox` supports all of the commands defined by the `EditingCommands` class
- Recognize the RTF format
  - Paste formatted text from Internet Explorer and Word
- Both `TextBox` and `RichTextBox` offer built-in spellchecking
  - `IsSpellCheckEnabled` property

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Text Boxes

Live Demo

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Buttons

Regular Button

- Windows 8 Store supports many types of buttons
  - Button – the regular button
    - Click event handler
    - Content property
    - Command property for command binding

```
<Button Content="Click me"
        Click="OnButtonClick" />
<Button Content="Click me with command"
        Command={Binding Click}" />
```

ToggleButton

- Holds its state when it is clicked
  - `IsChecked` property
- `IsThreeState` property
  - Gives `IsChecked` three possible values `true`, `false`, or `null`
- `ToggleButton` defines a separate event for each value of `IsChecked`
  - `Checked` for `true`
  - `Unchecked` for `false`
  - `Indeterminate` for `null`

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ToggleButton

Live Demo

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CheckButton and RadioButton

- They derive from `ButtonBase` indirectly via the `ToggleButton` class
- `IsChecked` property, indicating whether the user has checked the button

- `CheckBox` is nothing more than a `ToggleButton` with a different appearance
- Radio buttons are normally used in groups in which only one button may be selected at a time

RadioButton - Example

- Grouping radio buttons by name

```
<StackPanel>
  <RadioButton GroupName="Fuel"
      Margin="3">Petrol</RadioButton>
  <RadioButton GroupName="Fuel"
      Margin="3">Diesel</RadioButton>
  <RadioButton GroupName="Induction"
      Margin="3">Unforced</RadioButton>
  <RadioButton GroupName="Induction"
      Margin="3">Mechanical supercharger</RadioButton>
  <RadioButton GroupName="Induction"
      Margin="3">Turbocharger</RadioButton>
</StackPanel>
```

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RadioButton

Live Demo

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Other Buttons

- HyperLinkButton
  - Navigates to a given URL through NavigateUri property
  - Click event handler

```
<HyperlinkButton Content="Go to http://minkov.it"
                 NavigateUri="http://minkov.it"/>
```

- RepeatButton
  - Like the regular Button, but the mouse/finger can keep pressing
  - Click event handler – fires while the button is pressed

```
<RepeatButton Content="Click repeatedly"
              Click="OnRepeatButtonClick"/>
```

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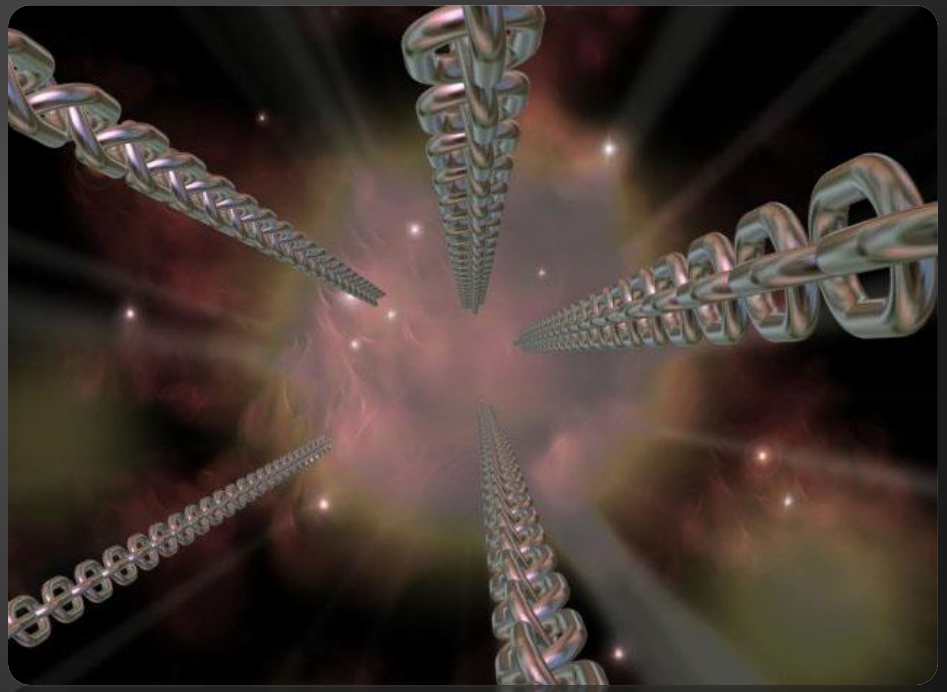
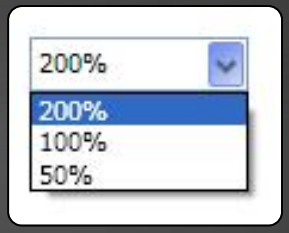


List Controls

ComboBox

- Enables users to select one item from a list



- ComboBox defines two events
  - DropDownOpened
  - DropDownClosed
- ComboBox can contain complex items

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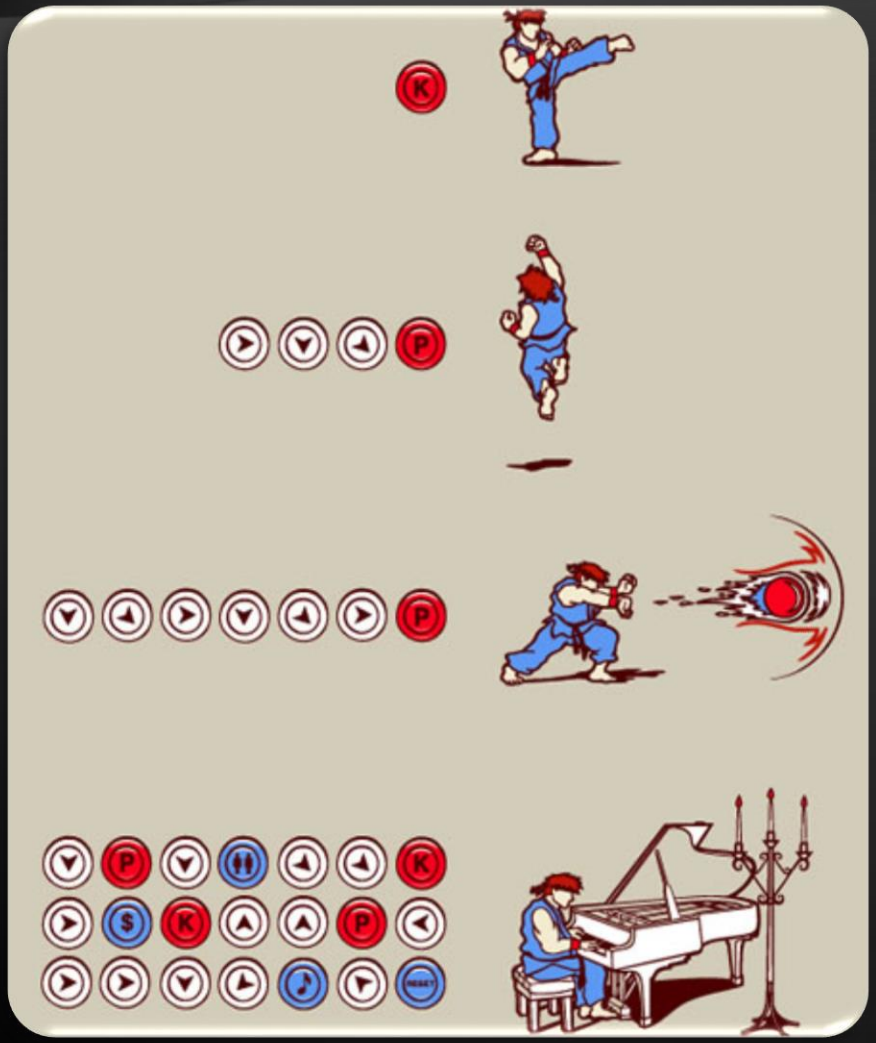

ComboBox

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ListView & GridView

- `ListView` - Control that displays a vertical list of data items
- `GridView` - Control that displays a horizontal grid of data items
- Both are `ItemsControl`, so they can contain a collection of items of any type
- To populate:
  - add items to the `Items` collection
  - or set the `ItemsSource` property to a data source

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ListView and GridView

Live Demo

The AppBar

- The AppBar is just a toolbar for displaying application specific commands
  - Like settings and shortcut commands
  - Can be either TopAppbar or BottomAppBar

```
<Page.BottomAppBar>
  <AppBar>
    <StackPanel Orientation="Horizontal">
      <Button Name="AddButton" Content="Add" />
      <Button Name="EditButton" Content="Edit" />
      <Button Name="RemoveButton" Content="Remove" />
    </StackPanel>
  </AppBar>
</Page.BottomAppBar>
```

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AppBars

Live Demo

ContextMenu

- Context Menu is actually a PopupMenu
  - It's a simple container designed to hold Commands
- Must be attached to a control using code behind
- When a user right-taps on the control the context menu is displayed

```
PopupMenu popupMenu = new PopupMenu();
popupMenu.Commands.Add(new UICommand(…));

IUICommand chosenCommand = await popupMenu
  .ShowForSelectionAsync(
     GetElementRect((FrameworkElement)sender));
```

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ContextMenu

Live Demo

Progress bars

- Progress bars are used to show the user that the applications is doing something
  - The application has not hanged
- Two types of Progress bars
  - ProgressBar and ProgressRing

```
<ProgressBar IsIndeterminate="True" Width="100"/>
<ProgressRing IsActive="True"/>
```

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Progress Bars

Live Demo

XAML Overview

Questions?

Exercises

1. Write a program that show the simple window with one `TextBox`. Add text to the `TextBox`. If you select some text in the `TextBox` – display the current selection information.
2. Write a program with a `Button` and a `TextBlock`. The `TextBlock` should show the number of clicks on the button.
3. Write a program that shows a `ComboBox` with various elements added to its Items. For example – add text, ellipse and picture.