Control Basics and Interacting With Them

Kevin Dockx
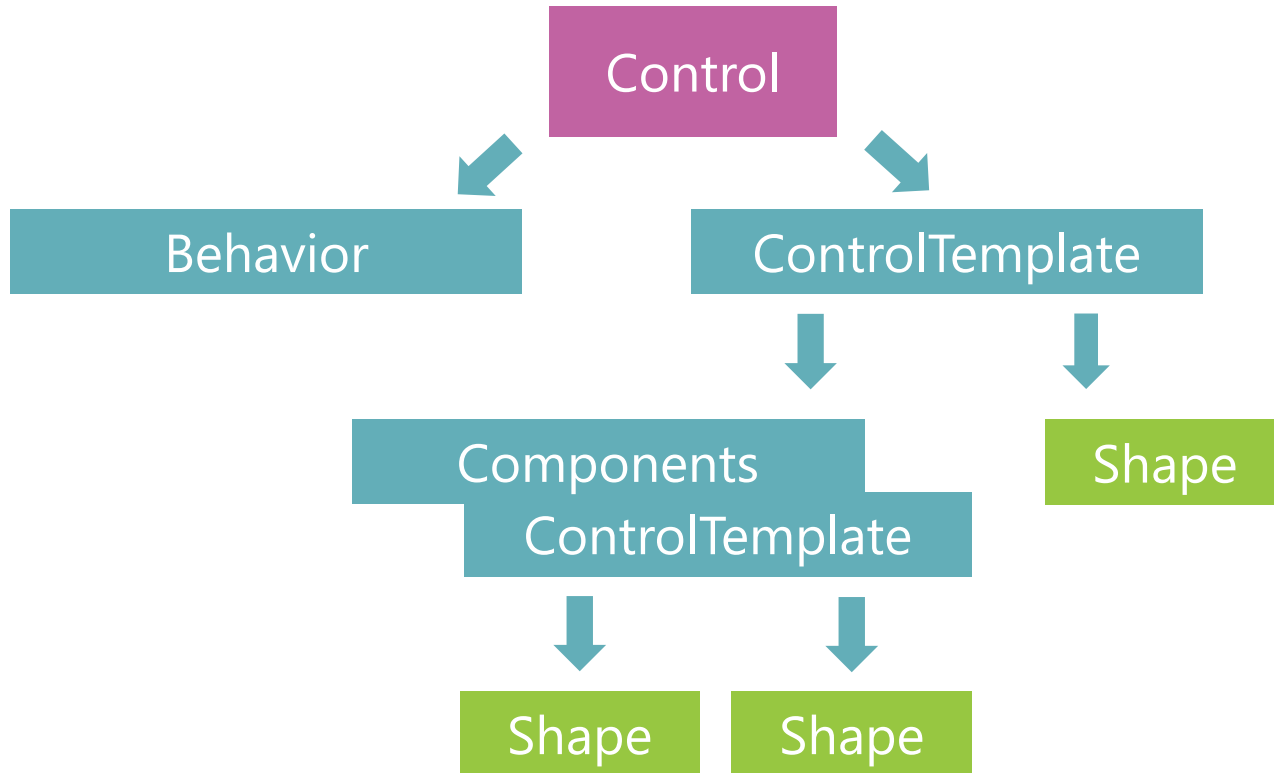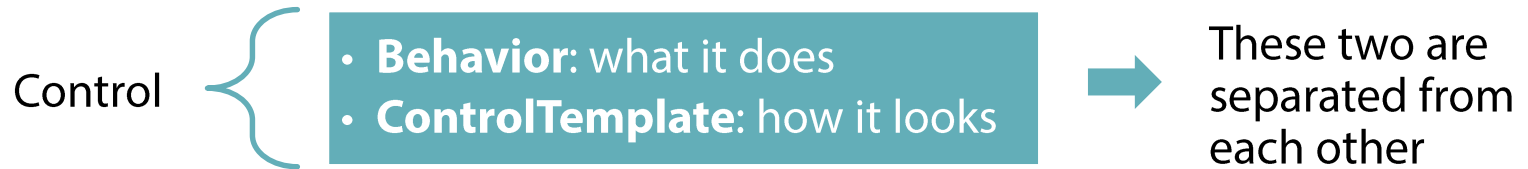http://blog.kevindockx.com/
@KevinDockx

pluralsight
hardcore dev and IT training

A Word on Controls

Control {
- **Behavior**: what it does
- **ControlTemplate**: how it looks

→ These two are separated from each other

Control

→ Behavior

→ ControlTemplate

→ Components ControlTemplate

→ Shape

→ Shape

→ Shape

On ContentControl and Relations

Appearance

- **Control class:** base class, defines Template

Content

- **ContentControl**: single item
- **HeaderedContentControl:** header + single item
- *ItemsControl:* collection of items
- *HeaderedItemsControl*: header + collection of items

Behavior

- **Optional common base class for behavior** (eg: ButtonBase)

- **Final class** (eg Button)
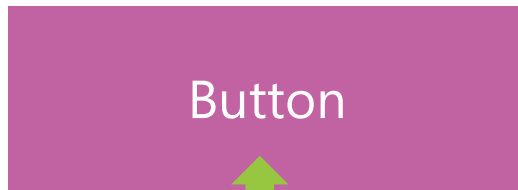
Template (ControlTemplate)

ContentPresenter

Content (object)
Header (object)

Interacting With Controls: Routed Events

A routed event is…

- A type of event that can invoke handlers on multiple listeners in an element tree, rather than just on the object that raised the event.

- A CLR event that is backed by an instance of the RoutedEvent class and is processed by the event system.

Interacting With Controls: Routed Events

Button

Image in Button

Click on Button

Click on Image in Button

A routed event follows a…

- Direct routing strategy
- Bubbling routing strategy
- Tunnelling routing strategy

Routed Events: Anatomy of a Button.Click

PreviewMouseDown

Tunnels from page root to image

MouseDown

Bubbles up from the image to the button

Button handles it, creates & fires a click event

Button.Click

Summary

- **Control**
  - Appearance
  - Behavior

- **ContentModel**
  - Content, Header
  - ContentPresenter in ControlTemplate

- **Routed Events**
  - Direct
  - Bubbling
  - Tunnelling