

# Creating and Working with Objects

---



**Thomas Claudius Huber**

SOFTWARE DEVELOPER

@thomasclaudiush [www.thomasclaudiushuber.com](http://www.thomasclaudiushuber.com)



# Module Outline



**Create a new UWP project**

**Work with elements and attributes**

**Set properties in XAML:**

- Attribute Syntax
- Property Element Syntax
- Content Syntax

**Use the Collection Syntax**



“We need the Coffee Customers app to manage our top customers.”

**Anna - Wired Brain Coffee CEO**



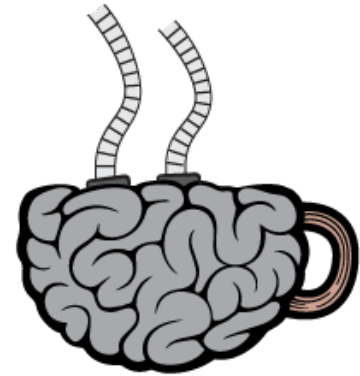


Do you have any requirements?



“We just want a prototype where we can add and remove customers.”

Anna - Wired Brain Coffee CEO



coffeeCup.png



# Demo



Create a new UWP project



# Work with Elements and Attributes

Element

Closing Element

<Button Content="Add customer"></Button>



# Work with Elements and Attributes

Element

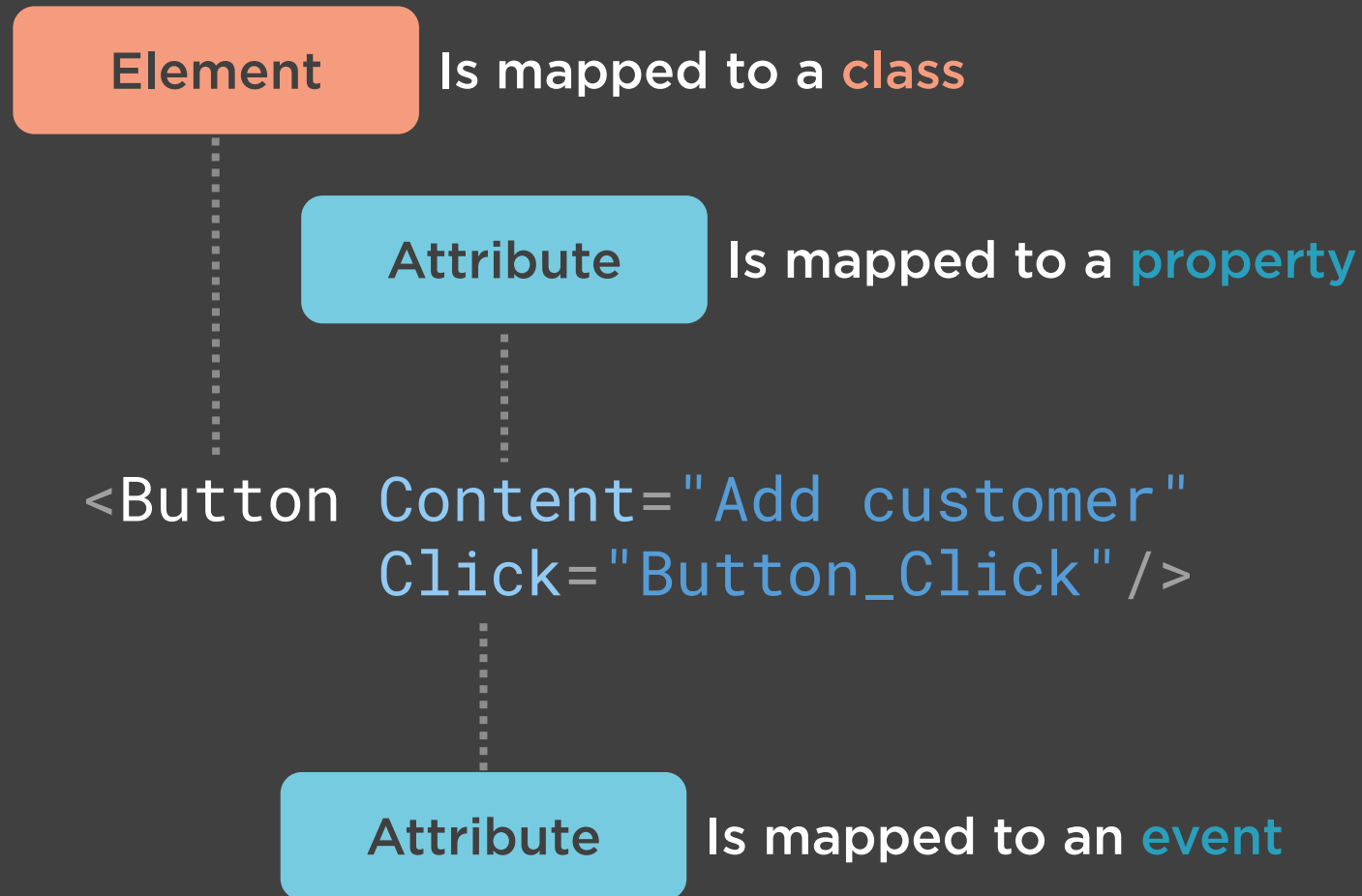
Self-closing

`<Button Content="Add customer" />`





# Work with Elements and Attributes



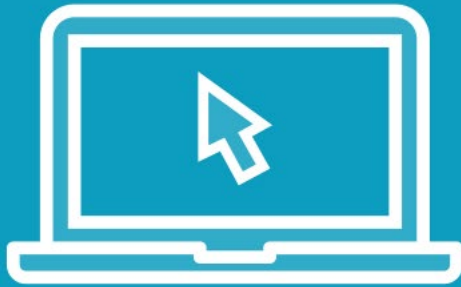
# Work with Elements and Attributes

```
<Button Content="Add customer"  
        Click="Button_Click" />
```

```
C# var btn = new Button  
    {  
        Content = "Add customer"  
    };  
  
    btn.Click += Button_Click;
```



# Demo



**Set properties on a Button**

**Create an event handler  
for the Click event**



# Demo



**Set properties with the  
Property Element Syntax**



# Set Properties with Content Syntax

## Attribute Syntax

```
<Button Content="Add customer" />
```

## Property Element Syntax

```
<Button>  
  <Button.Content>  
    Add customer  
  </Button.Content>  
</Button>
```

## Content Syntax

```
<Button>  
  Add customer  
</Button>
```



# Set Properties with Content Syntax

```
<Button>  
    Add customer  
</Button>
```

## XAML processor

1. Content without property element

2. Looks for the `ContentPropertyAttribute`

3. `[ContentProperty(Name="Content")]`  
`public class ContentControl { ... }`

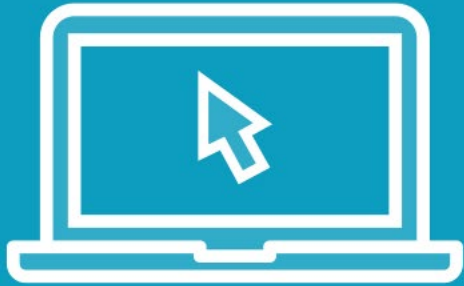
4. Uses the property specified in the attribute



Content Syntax is always  
used when you put content  
in an object element  
without property element



# Demo



**Set properties with  
the Content Syntax**





# Use Collection Syntax

**Attribute Syntax**

**Property Element Syntax**

**Content Syntax**



# Use Collection Syntax

```
<StackPanel>  
    <StackPanel.Children>  
        <TextBlock/>  
        <Button/>  
    </StackPanel.Children>  
</StackPanel>
```

**XAML  
processor**

```
var stackPanel = new StackPanel();  
stackPanel.Children.Add(new TextBlock());  
stackPanel.Children.Add(new Button());
```



# Use Collection Syntax

```
<StackPanel>  
  <StackPanel.Children>  
    <TextBlock/>  
    <Button/>  
  </StackPanel.Children>  
</StackPanel>
```

```
[ContentProperty(Name = "Children")]  
public class Panel : FrameworkElement  
{  
    public UIElementCollection Children { get; }  
    ...  
}
```



# Use Collection Syntax

```
<StackPanel>
```

```
    <TextBlock/>
```

```
    <Button/>
```

```
</StackPanel>
```



# Summary



**Elements are mapped to classes**

- Except Property Elements

**Attributes are mapped to properties or events**

**Set properties in XAML:**

- Attribute Syntax
- Property Element Syntax
- Content Syntax

**Use the Collection Syntax**