

Binding Core Concepts

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pluralsight 
hardcore developer training

Outline

Binding Sources

Property Paths

Mode and
Direction

Binding Sources

- The source object is determined by the binding
- Bindings use the element DataContext by default
- Can directly indicate the source object one of three other ways:
 - RelativeSource
 - Obtain object reference from a type / position in the element hierarchy relative to the current element
 - ElementName
 - Obtain object reference for some other named element within the visual tree
 - Source
 - Obtain object reference from a Resource object

Binding Property Paths

- The Path property on a Binding determines where on the source object to obtain the bound value
- Can pass Path to binding through parameterized constructor or property
 - {Binding Name} <==> {Binding Path=Name}
- **Simple path: property name on source object**
 - Path=Name
- **Complex path: walk object graph**
 - Path=Customer.Orders[1].OrderDetails[2].Product.Name
- **Whole source object**
 - {Binding} <==> {Binding Path=.}

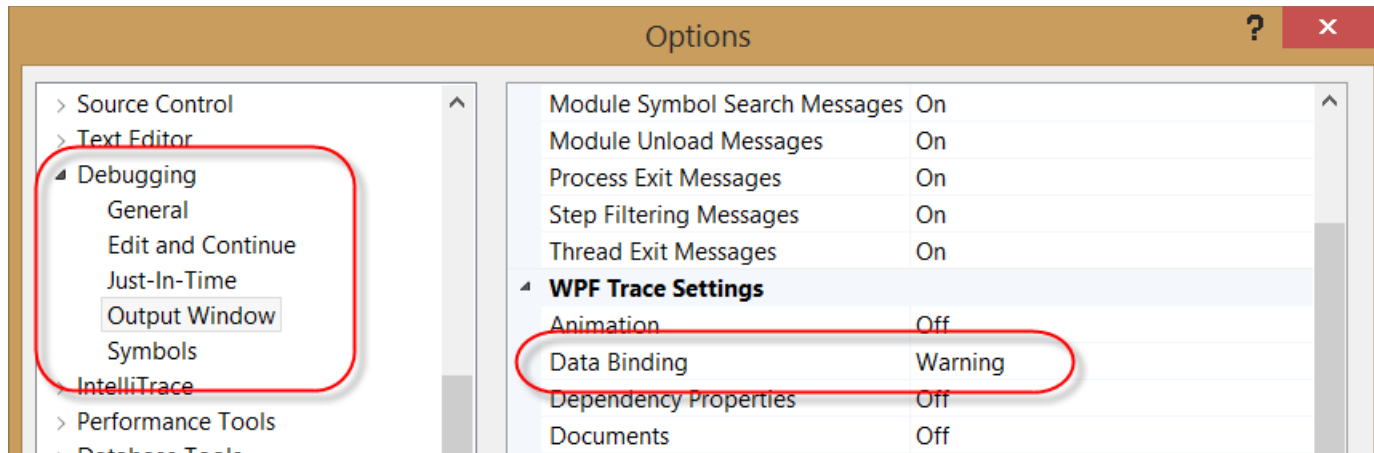
Debugging Bindings

- **Pay attention to the Output window!!!**
- **A failed attempt to bind will output details about what was attempted to the Output window**

System.Windows.Data Error: 40 : BindingExpression path error: 'Idx' property not found on 'object' 'Customer' (HashCode=65498431). BindingExpression:Path=Idx; DataItem='Customer' (HashCode=65498431); target element is 'TextBox' (Name='idTextBox'); target property is 'Text' (type 'String')

System.Windows.Data Warning: 40 : BindingExpression path error: 'Namex' property not found on 'object' 'Customer' (HashCode=65498431). BindingExpression:Path=Namex; DataItem='Customer' (HashCode=65498431); target element is 'TextBox' (Name='nameTextBox'); target property is 'Text' (type 'String')

- **Configurable through Tools> Options**



Binding Mode and Direction

- **Bindings can flow data in two directions**
 - Source to target
 - Target to source
- **Default is set by the DependencyProperty that is the target**
 - FrameworkPropertyMetadata
- **In WPF, primary properties of editable controls are two-way by default**
 - Read-only controls (i.e. Label) and other properties will be one-way by default
- **Set through Mode property on Binding**
 - OneWay
 - TwoWay
 - OneWayToSource
 - OneTime
 - Default

Summary

DataContext provides default data source for bindings

Bindings are one way by default (source -> target)

RelativeSource bindings allow you to reference other elements in the visual tree

Bindings on edit controls are two way by declaration

ElementName bindings allow explicit references to named elements in the view

Control default binding direction through DependencyProperty metadata

Paths on bindings can be simple or complex

Always keep an eye on Output window for binding errors