

Module 2

"Data Binding Properties [Foundation]"



TEKNOLOGISK
INSTITUT

Agenda

- ▶ Introduction to Data Binding
- ▶ Change Notification

The **Binding** Class

▶ Binding

- ElementName, Source, RelativeSource
- Path
- XPath XML sources
- Mode
- Delay
- NotifyOnSourceUpdated SourceUpdated event
- NotifyOnTargetUpdated TargetUpdated event
- FallbackValue + TargetNullValue

▶ Binding can be set

- Declaratively in XAML
 - Full syntax or markup extension syntax "{}"
- Programmatically in code

▶ Bindings can be cleared (in code) via **BindingOperations.ClearBinding()**

RelativeSource

- ▶ You can bind to another element in the visual tree relative to the element being bound
 - use the **RelativeSource** property

- ▶ **RelativeSource**
 - Mode
 - FindAncestor
 - AncestorType
 - AncestorLevel
 - Self
 - PreviousData
 - TemplatedParent

Data Context

- ▶ It is possible to bind to CLR objects by
 - Referencing the namespace and assembly
 - Setting the **Binding.Source** property
- ▶ The can be shared among all child elements by setting the **FrameworkElement.DataContext** property
 - Can be set in XAML
 - Can be set in code
 - Bindings then implicitly refer to the data in **DataContext**
 - **ElementName** or **Source** can then be omitted

Agenda

- ▶ Introduction to Data Binding
- ▶ **Change Notification**

INotifyPropertyChanged

- ▶ Implement **INotifyPropertyChanged** to propagate modifications to a single element through data binding
 - **PropertyChanged** event
 - Raise event with CLR property name whenever it is changed

Caller Info Attributes

- ▶ C# 5.0 introduced three types of caller info attributes
 - [CallerMemberName]
 - [CallerFilePath]
 - [CallerLineNumber]

```
static void Log(  
    [CallerMemberName] string callerName = null,  
    [CallerFilePath] string callerFilePath = null,  
    [CallerLineNumber] int callerLine = -1 )  
{  
    ...  
}
```

- ▶ Applicable to default parameters
 - Compiler replaces values at compilation time
 - In **System.Runtime.CompilerServices**
- ▶ Perfect for **INotifyPropertyChanged**...! ☺

Summary

- ▶ Introduction to Data Binding
- ▶ Change Notification



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