Knockout for the XAML developer

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pluralsight
hardcore developer training

How can my skills transfer?

- XAML does MVVM and so does Knockout w/ HTML
- Knockout has an underlying data context just like XAML
- Knockout uses binding in almost the same as XAML
- Knockout allows for style binding the same as XAML

Agenda

- Learn about Knockout.js
- Learn about Typescript
- Introduction to Context Binding
- Introduction to Observable Properties
- Introduction to Observable Arrays
- Introduction to Computed Observables

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What is Knockout?

- **An MVVM framework built in JavaScript**
- **Its features Include:**
  - Dependency tracking (Automatic UI Updates)
  - Declarative bindings
  - Simple Extensibility
- **How to acquire knockout?**
  - NuGet
  - Download directly
- **Further Information and documentation @ knockoutjs.com**

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What is Typescript?

- A JavaScript Superset
- All JavaScript is Typescript
- Attempts to add Static typing to JavaScript
- Has great tooling support in Visual Studio
- Implements proposed ECMAScript 6 features NOW
- Further Information and documentation @ Typescriptlang.org

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Creating the Data Context -- Xaml Way

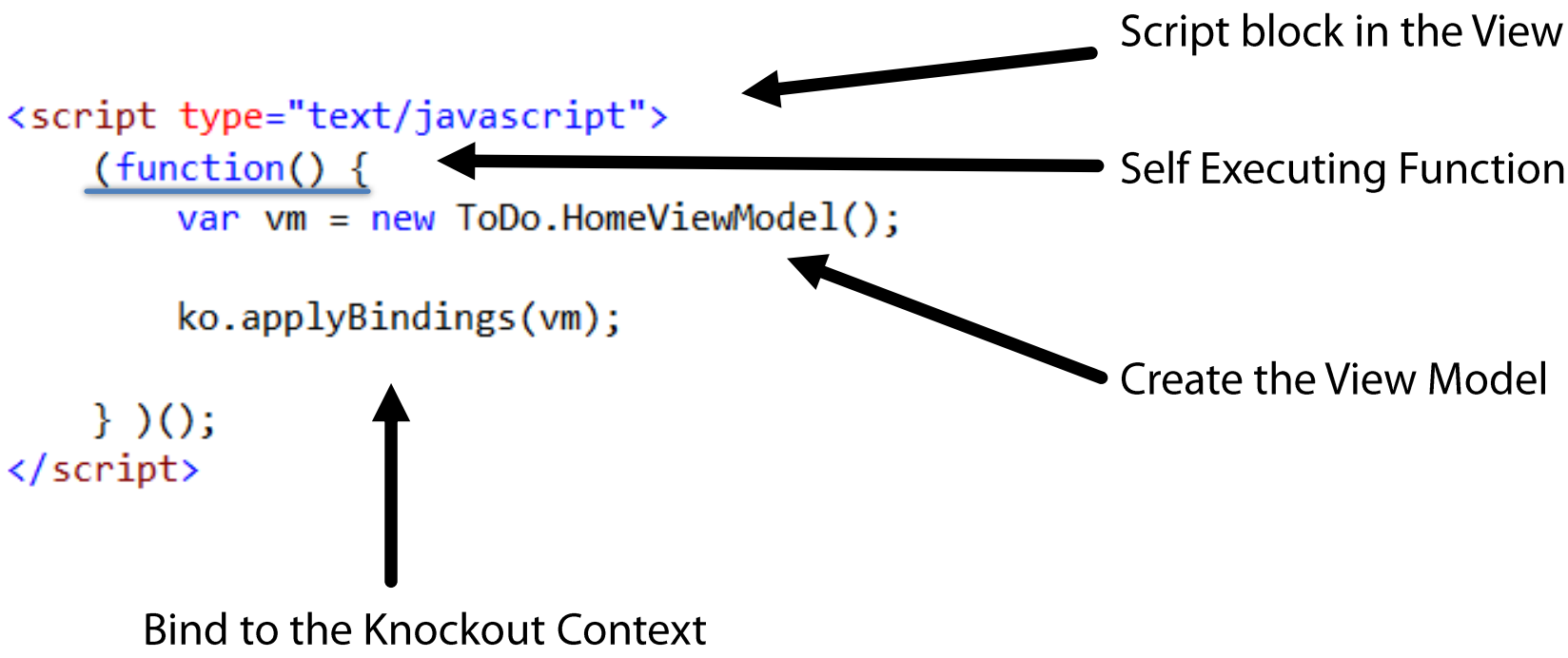
```
public Home()
{
    InitializeComponent();

    DataContext = new HomeViewModel();
}
```

Constructor of the View

Create an instance of the View Model

Push it to the view's Data Context

Creating the Data Context -- Knockout Way



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Observable Properties -- Xaml Way

```
private string _task;
public string Task
{
    get { return _task; }
    set
    {
        _task = value;
        RaisePropertyChanged(() => Task);
    }
}
```

Create our backing field to Store the value

Create Get & Set actions

Raise Change Notification to update the UI

Observable Properties -- Knockout Way

```
public DisplayMessage: KnockoutObservableString = ko.observable("Hello XAML Developers");
```

Declare our Property

Initialize it as an observable

Did you notice there is no direct need to raise notification?

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Observable Arrays -- Xaml Way

```
private ObservableCollection<Models.ToDo> _toDoItems;
public ObservableCollection<Models.ToDo> ToDoItems
{
    get { return _toDoItems; }
    set
    {
        _toDoItems = value;
        RaisePropertyChanged(() => ToDoItems);
    }
}
```

Create our backing field to Store the value

Raise Change Notification to update the UI

Observable Arrays -- Knockout Way

```
public DisplayMessages: KnockoutObservableArray = ko.observableArray([]);
```

Declare our Property

See the observable w/
an empty array

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Computed Observables

```
public FirstName: KnockoutObservableString = ko.observable("");
public LastName: KnockoutObservableString = ko.observable("");
```

Observables we are going to monitor

```
public FullName: KnockoutComputed;

constructor() {
    this.FullName = ko.computed(() => {
        return this.FirstName() + " " + this.LastName();
    });
}
```

Stub out our computed

Implement the computed observable

Summary

- Learned about Knockout.js
- Learned about Typescript
- Introduced to Context Binding in Knockout
- Introduced to Observable Properties in Knockout
- Introduced to Observable Arrays in Knockout
- Introduced to Computed Observable in Knockout