



7. Microsoft Training

7.7 Silverlight

Prerequisites:

1. HTML, CSS and JavaScript
2. C/C++/C#

Duration: 60 Lectures

Course Content:

1. Introduction

- 1.1. Understand the Silverlight / .NET / WPF relationship
- 1.2. Overview the services provided by Silverlight
- 1.3. Examine the Silverlight architecture
- 1.4. Examine the core assemblies and namespaces
- 1.5. Learn the syntax of XAML
- 1.6. Understand the XAML / code relationship
- 1.7. Learn to process XAML at runtime
- 1.8. Build Silverlight applications using Visual Studio 2010 / Expression Blend

2. Silverlight Controls

- 2.1. Survey the Silverlight control toolkit
- 2.2. Learn the control content model
- 2.3. Learn to position controls using layout managers
- 2.4. Work with the Silverlight DataGrid and data binding templates
- 2.5. Construct tab-based UIs
- 2.6. Design navigationally based Silverlight applications

3. Graphical Rendering Services and Transformations

- 3.1. Understand the scope of graphical rendering services
- 3.2. Work with the shape types



- 3.3. Work with Brushes and Pens
- 3.4. Apply graphical transformations
- 3.5. Understand the role of geometries
- 3.6. Use Blend to generate graphical data

4. Resource Management and Styles

- 4.1. Learn to manage binary resources
- 4.2. Understand the role of logical resources
- 4.3. Work with resources in XAML and procedural code
- 4.4. Understand the resource lookup mechanism
- 4.5. Learn how to define and apply styles
- 4.6. Build new styles based on existing styles
- 4.7. Animation and Media Support
- 4.8. Understand the scope of animation services
- 4.9. Define animations in code and XAML
- 4.10. Work with key-frame animations
- 4.11. Control animation timelines
- 4.12. Video feed integration
- 4.13. Generate animations using Expression Blend

5. Templates and User Controls

- 5.1. Learn to build custom control templates
- 5.2. Work with the VisualStateManager class
- 5.3. Know your choices for control customization
- 5.4. Examine options for building custom controls
- 5.5. Understand the role of dependency properties
- 5.6. Generate custom controls using Expression Blend

6. Core Silverlight APIs

- 6.1. Incorporate LINQ programming techniques
- 6.2. Communicate with remote services using WCF
- 6.3. Persist data using the isolated storage API



- 6.4. Interacting with the hosting browser
- 6.5. Packaging, versioning and deployment of XAP files
- 6.6. Running Silverlight out of browser (OOB)

7. Data Binding

- 7.1. Understand the data binding mechanism
- 7.2. Understand control-to-control data binding
- 7.3. Learn to work with data bindings in XAML and code
- 7.4. Learn the role of the IValueConverter interface
- 7.5. Learn to bind to custom collections of objects
- 7.6. Define and make use of data templates
- 7.7. Create data validation logic
- 7.8. Examine the data binding support within Expression Blend

8. Introduction to the MVVM Design Pattern

- 8.1. Understand the motivation behind the MVVM design pattern
- 8.2. Know the responsibilities of the Model
- 8.3. Know the responsibilities of the ViewModel
- 8.4. Know the responsibilities of the View
- 8.5. Inject MVVM into an existing WPF application
- 8.6. Blend Silverlight MVVP project
- 8.7. Data binding, Behaviors and Commands