WPF (Windows Presentation Foundation) Syllabus

Introduction
• What is WPF?
• Goals, Benefits & Drawback
• First WPF Application
• Types of WPF Applications (Windows Based and Browser Based)
• XAML – Extensible Application Markup Language
• Content Models
• Brief Introduction to Expression Blend

Controls, Menus
• Content Controls
  Label, Button, CheckBox, RadioButton, RepeatButton, ToggleButton, ToolTip, Expander, Group
• Text Controls
  TextBox, TextBlock, RichTextBox,
• List Controls
  ComboBox, ListBox, Menu, StatusBar, TabControl, Toolbar, TreeView, ListView.
• General Controls
  ProgressBar, Image, Slider, ScrollBar, Rectangle, Ellipse, Separator, GridSplitter, MediaElement.
• Windows Forms Host
  NotifyIcon, DateTimePicker, FolderBrowserDialog, DataGridView.
• Menus & Toolbar.

Layout
• Border
• Canvas
• DockPanel
• Grid
• StackPanel
• UniformGrid
• WrapPanel
• Viewbox
• ScrollViewer
• Common Layout Properties

Input
• Mouse Events
• Keyboard Input
• Routed Events

Styles
• Inline Styles
• Named Styles
• Element Typed Styles
• Triggers
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- Logical and Visual Trees

Resources & Themes

- Creating and Using Resources
- Resources and Styles
- Pens
- Brush
- Fonts
- Windows Level and Application Level

Data Binding

- Simple Data Binding
- Binding to List Data
- Data Source Providers
- Master Details Binding

Control Templates

- Logical and Visual trees
- Data Driven UI

Documents

- Fixed Documents
- Flow Documents

Navigation-Based Applications

- Page
- Hyperlink Navigation
- Navigation Service
- Frame

Animation and Media

- Animation Fundamentals
- Timelines
- Keyframe Animation
- Storyboard
- Animation without storyboard
- Transformation and Effects
- Three Dimensional Drawing
Silverlight Syllabus

Silverlight Introduction
- What is Silverlight?
- Tools for Creating Silverlight Apps
- Difference in versions
- Different Types of Applications in Silverlight

Silverlight Concepts
- Silverlight Architecture
- Silverlight and XAML
- Developing First Silverlight application
- XAML Names copes
- Silverlight namespace extensions
- Content Models
- Type Converters
- Property Elements
- Mapping Libraries
- Dependency Properties Intro
- Attached properties

Silverlight User Interface controls
- Layout Management and Grouping Controls
- Forms Controls
- Data Integration and Data Manipulation Controls
- Functional Controls
- Navigation

Transformation and Animation
4. Transformations
5. Exploring Transformations
6. Animation
7. Creating an Animation
8. Understanding Key Frames
9. Animation Easing
10. Defining Animation with Expression Blend (Need to explain directly)

Silverlight Graphics, Media
- Graphics & Text
- Audio and Video (inc DRM overview)
- Understanding Controls
  • Creating and Using User Controls
- Resources, Style & Templates
  • Creating Resources
  • Resource Dictionaries
  • Loading resources dynamically
  • Application Resources
  • Creating & Using Styles
  • Creating, Modifying & Using Templates
UI Interaction
- Keyboard input
- Mouse Input
- Drag and Drop
- Full Screen Mode
- File Open and Save Dialogs
- Isolated Storage
- Clipboard Access
- Globalization and Localization of Silverlight Applications
- Printing Capabilities
- Mouse-Wheel Support
- Background Worker & Threads

Data Binding
- Understanding DataBinding in Silverlight
- DataBinding Modes
- DataBinding Syntax
- DataContext
- Change Notification
- DataTemplates

Creating Custom Controls
- The Silverlight Toolkit
- Motivation for creating custom controls
- Creating custom controls
- Understanding Generic XAML
- Using custom controls

Silverlight Navigation Applications
- Overview
- Creating Navigation Applications
- Creating clean URLs
- Understanding Deep Linking
- Applying other styles and assets
- Using navigation in standard Silverlight applications
- Out-of-Browser Functionality
- Commanding Support
- Cross-Silverlight Application Communication

Working with Services
- Creating Services for Silverlight
  - Silverlight enabled WCF services
  - Binary XML
  - ADO.NET Data Services
- Consuming Services
  - WCF, ASMX
  - ADO.NET Data Services

Integrating with the Browser
- Bridging Silverlight and HTML
- Open the Browser Bridge
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- Using the Browser Bridge to Control the Silverlight Application
- Calling Browser Functions from Silverlight
- Control the JavaScript API from Silverlight
- Understanding the Silverlight Object
- Standard Object Tag Attributes
- Custom Silverlight Parameters