Developing Rich Internet Applications Using Microsoft Silverlight 4
Course Summary

Description

This course covers intermediate and advanced topics required to develop professional Silverlight 4 applications that can be deployed to the Web, Windows desktops, and Windows Phone 7 devices. The course will include hands-on labs that comprise approximately 50% of the classroom time and enable the student to learn Silverlight 4 programming within a variety of real-world scenarios.

Objectives
At the end of this course, students will be able to:

- Build data-driven Silverlight applications
- Create advanced user interfaces
- Implement advanced media techniques in Silverlight
- Work with Silverlight Media Framework
- Access hardware in Silverlight applications
- Create application that can be Globalized & Localized

- Implement Network Communications
- Deploy Silverlight applications
- Understand the basics of developing Silverlight applications for Windows Phone 7
- Implement advanced Silverlight techniques for Windows Phone 7 Development

Topics

- Introduction to Building Silverlight Business Applications
- Building Data-Driven Applications
- Advanced Data Management
- Implementing User Controls and Navigation
- Creating Advanced User Interfaces
- Using Local Assets
- Implementing Advanced Media Techniques in Silverlight

- Developing Silverlight Media Framework Solutions
- Accessing Hardware in Silverlight Applications
- Globalization and Localization
- Implementing Network Communications
- Deploying Silverlight Applications
- Application Guidance
- Windows Phone Development–First Look

Audience

The target audience for this training course is professional developers who have experience with XAML (either through WPF or Silverlight), a limited amount of Silverlight development experience, and experience working in Visual Studio 2010. This audience is interested in learning to develop advanced Silverlight 4 applications using Visual Studio 2010.

Prerequisites

In addition to the technical knowledge, students who attend this training should have hands-on experience in the following areas:
- Professional programming experience with Visual Studio 2010.
- Some professional experience with XAML and Expression Blend.
- Some experience developing Web applications.

Duration

Five days

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Course Outline

I.   Introduction to Building Silverlight Business Applications
This module an overview of Silverlight for building business application and describes how to build out-of-browser applications.
   A.   Overview of Silverlight 4.0
   B.   Silverlight Architecture
   C.   Developing Out-of-Browser Applications with Silverlight

II.   Building Data-Driven Applications
This module discusses various data access techniques in Silverlight, and focuses on how to use ADO.NET entity data models in Silverlight applications.

III.   Advanced Data Management
This module explains how to modify data using domain services, implement data binding, and format data for display.
   A.   Manipulating Data by Using Domain Services
   B.   Binding and Validating Data

IV.   Implementing User Controls and Navigation
This module describes how you can create user controls that allow you to group various controls in a single unit and customize both the display and functionality to suit your needs. Depending on how generic you create your user controls, they can easily be reused across your Silverlight applications.
   A.   Working With Controls
   B.   Threading
   C.   Implementing Navigation

V.   Creating Advanced User Interfaces
This module explains how you can create your own presenter objects to contain other objects, and define collections and templates for sub-objects, all in a flexible way.
   A.   Creating Content Presenter Classes
   B.   Creating Item Templates for Presentation
   C.   Developing Classes as Item Instances

VI.   Using Local Assets
This module discusses how you can add features that allows users to use local resources, e.g., print data from your solutions. Additionally, it explains how you can persist settings across sessions, and enable users to open and save files to the local computer's file system.
   A.   Printing in Silverlight Applications
   B.   Accessing Local Storage in Silverlight Applications
   C.   Accessing Local File Systems in Silverlight Applications

VII.   Implementing Advanced Media Techniques in Silverlight
This module explain how you can implement deep zoom and play media files.
   A.   Implementing Deep Zoom in Silverlight
   B.   Playing Media Files

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Course Outline (cont'd)

VIII. Developing Silverlight Media Framework Solutions
This module explains how you can use Silverlight Media Framework to implement many enhancements over the built-in media elements of Silverlight, and simplify your job of developing rich media-based solution.
A. Introduction to the Silverlight Media Framework
B. Developing Silverlight Media Framework Solutions

IX. Accessing Hardware in Silverlight Applications
This module focuses on how you can use Silverlight to develop solutions that interact with hardware devices, such as webcams, audio equipment, mouse wheels, and keyboards. Adding interaction with such hardware and implementing features such as video capture and image creation from video sources enables you to add a high degree of rich interactivity to your solutions
A. Interacting with Mice and Keyboards
B. Interacting with Audio and Video Hardware

X. Globalization and Localization
This module explains how you can develop solutions that can be globalized to work across cultures, and localized to a specific culture.
A. Globalization
B. Localization

XI. Implementing Network Communications
This module, describes some common techniques for providing configuration data to Silverlight applications, such as providing initiation parameters that identify external XML configuration files or services, and consume such external XML configuration files or services by using various approaches. Also it explains how to implement communication between Silverlight applications by using sockets and local TCP connections.
A. Configuring Applications for Network Communications
B. Implementing Web Calls
C. Implementing Low-Level Communications

XII. Deploying Silverlight Applications
This module covers how to host a Silverlight application and thus make it available to end users, as well as which features you can make use of after your application has been deployed.
A. Application Features and Hosting
B. Managing Application Resources Dynamically

XIII. Application Guidance
This module focuses on the MVVM design pattern and the Prism guidance.
A. Getting Started with the MVVM Design Pattern
B. Getting to Know Prism

XIV. Windows Phone Development--First Look
This module explains the basics of Windows Phone Application Development.
A. Introduction to Windows Phone
B. Beginning Windows Phone Development
C. Creating a Windows Phone Application