

Developing Windows Applications with Microsoft Visual Studio 2010



Overview

In this course, experienced developers who know the basics of Windows Forms development gain more advanced Windows Client design and development skills. WinForms and WPF programming models, as well as relative strengths and when to use each technology, are covered.

Prerequisites

Before attending this course, students must have:

- An understanding of the problem-solving techniques that apply to software development, including the following principles of software development
- A general understanding of the purpose, function, and features of following .NET Framework topics
- Experience using Visual Studio 2008 in the following task areas
- Experience in object oriented design and development as follows
- Experience in N-Tier application design and development as follows

Course outline

Module 1: Windows Client Application Design

- Windows Client Technologies
- Architectural Patterns
- Interoperability between Windows Forms and WPF

Module 2: Introduction to Visual Studio 2010 and WPF Version 4

- What's New in Visual Studio 2010?
- What's New in WPF Version 4

Module 3: Designing and Developing a User Interface

- Defining Page Layout
- Using Content Controls
- Using Item Controls
- Sharing Logical Resources in a Window

Module 4: Taking Control of the User Interface

- Sharing Logical Resources in an Application
- Creating Consistent User Interfaces by Using Styles
- Changing the Appearance of Controls by Using Templates
- Handling Events and Commands

Module 5: Testing, Unit Testing, and Debugging

- WPF Testing Strategies
- Debugging XAML
- Providing User Feedback for Unhandled Exceptions
- Understanding Security Features

Module 6: Simple Data Binding and Validation

- Overview of Data Binding
- Creating a Data Binding
- Implementing Property Change Notification
- Converting Data
- Validating Data
- Presenting Data at Design Time

Module 7: Data Binding to Collections

- Binding to Collections of Objects
- Using Collection Views
- Creating Master-Detail User Interfaces
- Using Data Templates
- Presenting Design Time Data Collection

Module 8: Enhancing UI Responsiveness

- Implementing Asynchronous Processes
- Implementing Responsive User Interface.

Module 9: Integrating Localization and User Assistance Features

- Localization and Globalization
- Implementing User Assistance Features
- Providing User Accessibility Features

Module 10: WPF 2D Graphics, Multimedia, and Printing

- Displaying 2D Graphics
- Displaying Images
- Adding Multimedia to WPF Applications
- Creating and Printing Documents

Module 11: Control Customization

- Overview of Control Authoring
- Creating User Controls
- Creating Custom Controls
- Managing Control Appearance by Using Visual States
- Integrating WPF and Windows Forms

Module 12: Attached Properties and Behaviors in WPF

- Implementing Attached Properties
- Implementing Drag-and-Drop User Interfaces
- Implementing Expression Blend Behaviors, Triggers and Actions

Module 13: Animations in WPF

- Using Animations
- Using Triggers
- Implementing Data Visualizations

Module 14: Application State, Settings, and Lifecycle

- Creating Application Settings
- Consuming Application Settings
- Creating Custom Configuration Sections

Module 15: Configure and Deploy Windows Client Applications

- Deployment Options
- Deploying a Standalone WPF Application
- Deploying an XBAP Application
- Configuring Security Settings