Windows Presentation Foundation Programming for Experienced C# Programmers

Duration: 21 hours

Prerequisites: Prior experience with C# is required.

Course Description: This course provides students with hands on experience using Visual Studio to create Windows Presentation Foundation (WPF) applications using C#. Students should already have a working knowledge of C#.

This course teaches students how to leverage the power of the .NET Framework to build WPF applications. Students learn the basics of XAML and how to use it to describe the appearance and behavior of WPF user interfaces.

Students also learn how to use XAML resources to manage styles, triggers and control templates.

Students learn how use with a variety of WPF controls to interact with users and manage data in multi-form applications. Students explore how to leverage the power of XAML data binding to build Students also learn the basics of working with audio and images, as well as performing simple animations.

Other topics include: building menus, toolbars and status bars; using the ribbon control; reading and writing files; and deploying WPF applications. Comprehensive labs and exercises provide the students with extensive experience creating and debugging WPF applications.

Students Will Learn

- Introduction to WPF Programming
- Working with Extensible Application Markup Language (XAML)
- Working with Controls
- Working with UI Controls
- Working with Resources, Styles, and Triggers
- Working with Graphics
- Working with Dialogs and Windows
- Data Binding
- Menus, Toolbars, and Status Bars
- Using Commands
- Working with Audio, Video and Still Images
- Deployment WPF Applications

Overview

WPF Applications

- WPF Applications
- Types of WPF Applications
- Structure of WPF Applications
- Using the WPF Designer
- Setting Properties

Working with XAML

- XAML vs. BAML
- Understanding XAML Markup
- XAML Elements
- XAML Namespaces
- Creating Objects using XAML

- Handling Events
- Using the MessageBox Class
- Passing Command-Line Arguments
- Handling Application Lifetime Events

WPF User Interface Basics

- WPF Control Hierarchy
- Common Properties, Methods and Events
- Dependency Properties
- Configuring a Window's Properties
- Adding Controls
- Controlling the UI's Appearance
  - Managing Size
  - Managing Position
  - Managing Alignment
  - Managing Visibility
  - Using Fonts
- Working with Transformations
  - Scale Transformations
  - Rotation Transformations
  - Skew Transformations

Using WPF Controls

- Working with WPF Controls
- Using `Text` Controls
- Using `Button` Controls
- Using `Selection` Controls
- Using `List` Controls
- Using `Container` Controls
- Working with Routed Events

Working with WPF Windows

- Understanding Modal vs Modeless
- Displaying a Window Modally
- Retrieving Data from Modal Windows
- Creating Owned Windows
- Displaying a Window Modelessly
- Working with Data in Modeless Windows
- Using Common Dialogs
- Creating Irregularly Shaped Windows

Working with Multimedia

- Working with Images

Working with Data Binding

- Overview of Data Binding

- Working with Resources
- Handling Events in XAML
- Working with Resources
- Defining and Using Styles

Using XAML Layout Elements

- Overview of Layout Elements
- Using the `Canvas`
- Using the `StackPanel`
- Using the `WrapPanel`
- Using the `Grid`
- Using the `UniformGrid`
- Using the `DockPanel`
- Using the `ViewBox`
- Adding Scrolling Capabilities

Working with Styles, Triggers and Control Templates

- Using Styles
- Working with Triggers and Multi-Triggers
- Using Control Templates

Working with Menus, Toolbars and Status Bars

- Working with Menus
- Working with Toolbars
- Working with Status Bars
- Working with the Ribbon

Graphics and Animations

- Working with Shapes
- Working with Brushes
  - Using Solid Brushes
  - Using Gradient Brushes
- Building Simple Animations

MVVM Commands

- Understanding Commands

- Binding to Control Properties
- Binding to Data Sources
    - Binding to a List
    - Binding to an ADO.NET Object
    - Binding to an Object
    - Binding to XML
- Sorting and Filtering Data
- Using Value Converters
- Working with Change Notifications
- Creating Commands
- Associating Command with a Command Source
- Binding Command to Command Handlers
- Building WPF Applications Using the MVVM Design Pattern
    - Understanding MVVM
    - Implementing `INotifyPropertyChange`
    - Using a DelegateCommand
    - Working with ObservableCollections
    - MVVM Case Studies

Deploying WPF Applications

- Understanding Deployment Options
- Configuring an Application for Deployment
- Using XCOPY Deployment
- Using Installers
- Using Click-Once Deployment

Related Bootcamp

Track	Duration	Price
Microsoft .NET Developer: C#	161 hours	$4,475

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