



## **Course 10262A: Developing Windows Applications with Microsoft Visual Studio 2010**

### **About this Course**

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.

### **Audience Profile**

This course is intended for Technology Specialists in the area of Windows Client Development who work in a development environment that uses Microsoft Visual Studio .NET 2010 and Microsoft .NET Framework 4.0 to create rich client applications for Windows.

### **At Course Completion**

After completing this course, students will be able to:

- understand how varying business requirements influence the design decisions when planning a Windows Client application.
- understand the new features of Visual Studio 2010 WPF
- design and build a UI that provides the expected end-user experience and UI functionality
- create a consistent and manageable user interface
- understand best practices when testing and learn how to debug their applications
- use advanced exception handling in Windows Client application scenarios
- implement advanced data binding scenarios
- use coding techniques to improve the responsiveness of their applications
- implement localization, user assistance, and accessibility features within an application
- understand the basics of graphics in WPF
- customize controls and introduce students to custom controls
- implement application behaviours based on user actions or events by using attached properties and Expression Blend behaviours
- develop data visualization within their applications in a manner that enables the application user to drill down into data visually
- manage application state and settings throughout the application lifecycle
- deploy their applications using the various methods supported by Visual Studio 2010

### **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:

- modern software development models
- typical phases of a software development lifecycle
- concepts of event-driven programming
- concepts of object-oriented programming
- creating use-case diagrams
- designing and building a user interface
- developing a structured application

A general understanding of the purpose, function, and features of following .NET Framework topics:

- Common Language Runtime
- .NET Framework class library
- Common Type System

- Component interoperation
- Cross-Language Interoperability
- Assemblies in the Common Language Runtime
- Application Domains
- Runtime hosts supported by the .NET Framework

Experience using Visual Studio 2008 in the following task areas:

- Declaring and initializing typed variables using the Camel case naming convention
- Using arithmetic, relational, and logical operators in code statements
- Using branching statements to control code execution
- Using looping statements to iterate through collections or repeat steps until a specified condition is met
- Creating classes and methods to establish the basic structure of an application
- Using methods and events to implement the programming logic of an application
- Identifying syntax and logic errors
- Accessing and managing data from a data source

Experience in object oriented design and development as follows:

- Creating and accessing classes and class properties
- Creating and accessing methods and overloaded methods
- Implementing inheritance, base classes, and abstract classes
- Declaring, raising, and handling events
- Responding to and throwing exceptions
- Implementing interfaces and polymorphism
- Implementing shared and static members
- Implementing generics
- Creating components and class libraries

Experience in N-Tier application design and development as follows:

- Managing a software development process
- Controlling input at the user interface level in Windows Client applications
- Debugging, tracing, and profiling .NET applications
- Monitoring and logging .NET applications
- Implementing basic testing best practices
- Performing basic Data Access tasks with LINQ
  - Basics of LINQ to XML
  - Basics of LINQ to Entities
  - Basics of LINQ to SQL
- Implementing basic security best practices in .NET Applications
  - Basics of Code Access Security
  - Basics of Role-Based Security
  - Basics of Cryptography Services
- Implementing basic service calls
  - Basics of consuming XML Web Services
  - Basics of consuming WCF Services
- Using .NET Configuration Files
- Deploying .Net Framework Applications using ClickOnce and the MS Installer

Full outline is here :-

<http://www.microsoft.com/learning/en/us/Course.aspx?ID=10262A&Locale=en-us#tab3>

