Introduction to Programming Microsoft .NET Applications with Microsoft Visual Studio 2005 (M4994)

Learn how to program using Visual Studio 2005.

This course is not currently offered by Global Knowledge. Information here is provided for reference only.

Get the knowledge and skills you need to develop applications in Microsoft Visual Basic .NET or Visual C# .NET for the Microsoft .NET platform.
This course incorporates material from the following Official Microsoft Learning Product (OMLP):

- 4994: Introduction to Programming Microsoft .NET Applications with Microsoft Visual Studio 2005

What You'll Learn

- Key features of the .NET Framework and Visual Studio 2005
- Create a simple Windows Forms application
- Programming fundamentals
- Create and use data types and variables
- Control program executionby using conditional statements and loops
- Fundamentals of object-oriented programming
- Create simple object-oriented applications
- Develop the user interface in a Visual Studio 2005 application
- Validate user input on a Windows form
- Implement debugging and exception handling in a Visual Studio 2005 application
- Access data in a Visual Studio 2005 application
- Create simple Web applications and XML Web services
- Key features of the .NET Framework version 3.0 technologies
- Test and deploy Microsoft .NET Framework applications

Who Needs to Attend

Novice programmers who have a minimum of three months' programming experience; Intermediate-level programmers who are otherwise new to .NET Framework development and want to learn how to use Visual Basic or C#.

Prerequisites

- Exposure to developing applications in either a graphical or a non-graphical environment
- Ability to understand and apply the basics of structured programming, including concepts such as flow control, variables, parameters, and function calls

Follow-On Courses

There are no follow-ons for this course.

Course Outline

1. Getting Started

- Microsoft .NET and the .NET Framework
- Software Development Life Cycle
- Exploring Visual Studio 2005

2. Creating a Simple Windows Forms Application

- Creating a Windows Forms Project
- Adding Controls to a Windows Forms Project

- Compiling and Running a Windows Forms Project

3. Programming Fundamentals
- Programming Concepts
- Program Structure and Flow
- Styling and Writing Code

4. Data Types and Variables
- Features of Data Types
- Defining and Using Variables
- Defining and Using Collections
- Converting Data Types

5. Controlling Program Execution
- Writing Expressions
- Creating Conditional Statements
- Creating Iteration Statements

6. Fundamentals of Object-Oriented Programming
- Object-Oriented Programming Concepts
- Define a Class
- Create a Class Instance

7. Creating Object-Oriented Applications
- Designing Classes with the Class Designer Tool
- Implementing Inheritance
- Defining and Implementing Interfaces

8. Building a User Interface
- Managing Forms and Dialog Boxes
- Creating Menus and Toolbars
- Providing User Assistance

9. Validating User Input
- Restricting User Input
- Implementing Field-Level Validation
- Implementing Form-Level Validation

10. Debugging and Exception Handling
- Types of Errors
- Debugging Applications
- Handling Exceptions in Applications

11. Accessing Data
- Overview of Data Access
- Accessing Data by Using the Visual Studio 2005 Integrated Development Environment
- Programmatic Access to Data

12. Creating Web Applications and XML Web Services
- Creating Web Applications
- Creating and Using XML Web Services

13. Exploring .NET Framework 3.0 Technologies
- .NET Framework 3.0 Technologies
- Windows Presentation Foundation
- Windows Communication Foundation

14. Testing and Deploying Microsoft .NET Framework Applications
- Overview of Testing
- Creating Object Test Bench Objects
- Deploying Microsoft .NET Framework Applications

Labs

Lab 1: Getting Started
- Working in the Development Environment

Lab 2: Creating a Simple Windows Forms Application
- Creating a Windows Forms Application

- Adding Controls to the Main Form
- Compiling and Testing the Application

Lab 3: Programming Fundamentals
- Displaying the Current Date on a Form
- Adding a New Form to the Application
- Adding Controls to the New Form

Lab 4: Data Types and Variables
- Implementing Variables and Constants
- Implementing Arrays and Enumerations

Lab 5: Controlling Program Execution
- Checking User Input
- Enabling and Disabling Controls

Lab 6: Fundamentals of Object-Oriented Programming
- Creating a SalesPerson Class
- Creating and Using a SalesPerson Object

Lab 7: Creating Object-Oriented Applications
- Creating a Base Class
- Creating Derived Classes

Lab 8: Building a User Interface
- Adding a Menu and a Toolbar to an Application
- Adding a Status Bar and Tooltips to an Application

Lab 9: Validating User Input
- Adding an ErrorProvider Component to a Form
- Providing Visual Cues to the User by Enabling an OK Button

Lab 10: Debugging and Exception Handling
- Detecting Logic Errors
- Handling Run-Time Errors

Lab 11: Accessing Data
- Displaying Data by Using a DataGridView Control
- Access Data Programmatically by Using ADO.NET

Lab 12: Creating Web Applications and XML Web Services
- Creating a Web Application
- Creating and Using an XML Web Service

Lab 13: Exploring .NET Framework 3.0 Technologies
- Building a Windows Presentation Foundation Application
- Building a Windows Communication Foundation Service
- Accessing a Windows Communication Foundation Service from a Windows Presentation Foundation Client

Lab 14: Testing and Deploying Microsoft .NET Framework Applications
- Testing an Application
- Deploying an Application by Using ClickOnce
- Deploying an Application by Using Windows Installer

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Date created: 11/25/2014 3:34:47 PM

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