

2373BC

Programming with Microsoft
Visual Basic .NET

5 DAYS

The goal of this course is to provide Microsoft Visual Basic developers with the knowledge and skills needed to develop Microsoft .NET-based applications by using Visual Basic .NET. Visual Basic .NET is a significant upgrade to Visual Basic and incorporates many new features and framework goals of the .NET architecture. These changes will allow Visual Basic developers to create enterprise applications for the .NET Platform and to create more traditional Visual Basic applications that can take advantage of the enhancements to the language.

Module 1: Overview of the Microsoft .NET Platform

- What Is the Microsoft .NET Platform
- What Is the .NET Framework
- What Are the .NET Framework Components
- What Are the Visual Basic .NET Enhancements
- List the main elements of the .NET Platform.
- Describe the .NET Framework and its components.
- List the major enhancements to Visual Basic .NET.

Module 2: Development Environment Features

- Describing the Integrated Development Environment
- Creating Visual Basic .NET Projects
- Using Development Environment Features
- Debugging Applications
- Compiling in Visual Basic .NET
- Describe the overall benefits of the new IDE.
- Describe the different types of Visual Basic .NET projects and their structures, including their file structures.
- Reference external applications from your project.
- View and set the properties of a project.
- Use the various windows in the IDE, including Server Explorer, the Object Browser, and the Task List.
- Debug a simple application.
- Build and compile a simple application.

Module 3: Language and Syntax Enhancements

- Data Types
- Using Variables
- Functions, Subroutines, and Properties
- Exception Handling
- Describe the changes to data types in Visual Basic .NET.
- Declare and initialize variables and arrays.
- Use shorthand syntax to assign values to variables.
- Implement functions and subroutines.
- Call the default properties of an object.

Module 4: Object-Oriented Design for Visual Basic .NET

Designing Classes

Object-Oriented Programming Concepts

Advanced Object-Oriented Programming Concepts

Using Microsoft Visio

Describe the basics of object-oriented design.

Explain the concepts of encapsulation, inheritance, interfaces, and polymorphism.

Create classes based on use cases.

Model classes for use in Visual Basic .NET by using Visio.

Module 5: Object-Oriented Programming in Visual Basic .NET

Defining Classes

Creating and Destroying Objects

Inheritance

Interfaces

Working with Classes

Define classes.

Instantiate and use objects in client code.

Create classes that use inheritance.

Define interfaces and use polymorphism.

Create shared members.

Create class events and handle them from a client application.

Module 6: Using Windows Forms

Why Use Windows Forms?

Structure of Windows Forms

Using Windows Forms

Using Controls

Windows Forms Inheritance

Describe the benefits of Windows Forms.

Use the new properties and methods of Windows Forms.

Write event-handling code.

Use the new controls and control enhancements.

Add and edit menus.

Create a form that inherits from another form.

Module 7: Building Web Applications

Introduction to ASP.NET

Creating Web Form Applications

Building Web Services

Using Web Services

Explain and take advantage of the benefits of ASP.NET and its various libraries in application development.

Create Web Form applications.

Use HTML server controls and Web server controls.

Create Web Services.

Use Web Services from a browser or from another client application.

Module 8: Using ADO.NET

ADO.NET Overview

.NET Data Providers

The DataSet Object

Data Designers and Data Binding

XML Integration

List the benefits of ADO.NET.

Create applications by using ADO.NET.

List the main ADO.NET objects and their functions.

Use Visual Studio .NET data designers and data binding.

Explain how XML integrates with ADO.NET.

Module 9: Developing Components in Visual Basic .NET

Reading and Writing Data Locally

Adding Offline Support by Using the Application Cache

Components Overview

Creating Serviced Components

Creating Component Classes

Creating Windows Forms Controls

Threading

Create components that can be used by managed and unmanaged client applications.

Create serviced components.

Create component classes.

Create Windows Forms controls.

Create Web user controls.

Use threading to create multithreaded applications.

Module 10: Deploying Applications

Describing Assemblies

Choosing a Deployment Strategy

Deploying Applications

Describe an assembly.

List the different types of application deployment.

Deploy a component assembly.

Deploy an application based on Windows.

Deploy a Web-based application.

Module 11: Upgrading to Visual Basic .NET

Creating Interactive Graphics by Using Scalable Vector Graphics

Programmatically Drawing Graphics by Using a Canvas

Deciding Whether to Upgrade

Options for Upgrading

Recommendations

Performing the Upgrade