Introduction to Microsoft Visual Basic .NET Programming

Course code: GOC301

In this course, developers with experience in structured programming will learn how to use the Microsoft Visual Basic .NET language to write a simple application. Extensive hands-on labs will help students practice the skills they learn.

Who is the course for

This course is intended for both novice and experienced programmers who have a minimum of three months

programming experience and have basic Microsoft Windows® navigation skills.

What we teach you

Create a simple Visual Basic .NET-based application based on the Windows Application template.

Use forms and controls to create a user interface.

Create and use variables and arrays.

Create and use Sub and Function procedures, including predefined functions.

Implement decision structures and loops by using conditional expressions.

Validate user input for fields, controls, and forms.

Apply object-oriented programming techniques to create classes, add methods, and add properties.

Resolve syntax, run-time, and logic errors by using the debugger and structured exception handling.

Enhance the user interface by adding menus, status bars, and toolbars.

Create a simple Visual Basic .NET-based Web Forms application that uses an XML Web Service.

Access and manipulate data in a Microsoft Access or Microsoft SQL Server™ database by using Microsoft ADO.NET.

Build, package, and deploy an application.

Required skills

Windows navigation skills

Experience (at least three months) with developing applications in either a graphical or non-graphical environment

Understanding of the basics of structured programming, including concepts such as flow control, variables and

parameters, and function calls

Course Outline

Getting Started
- Basic .NET Concepts
- Exploring the Development Environment
- Creating a Visual Basic .NET Project

Working with Forms and Controls
- Understanding Programming Concepts
- Working with Windows Forms
- Working with Controls
- Styling Your Code

Using Variables and Arrays
- Introduction to Data Types
- Using Variables
- Variable Scope

GOPAS®

- Converting Data Types
- Creating and Using Structures
- Storing Data in Arrays

Working with Procedures
- Creating Procedures
- Using Procedures
- Using Predefined Functions

Decision Structures and Loops
- Using Conditional Expressions
- Using Decision Structures
- Using Conditional Loop Structures

Validating User Input
- Restricting User Input
- Validating Field Data
- Validating Form Data

Object-Oriented Programming in Visual Basic .NET
- Understanding Classes
- Working with Classes
- Using Shared Members
- Inheritance, Polymorphism, and Namespaces

Handling Errors and Exceptions
- Types of Errors
- Using the Debugger
- Handling Exceptions

Enhancing the User Interface
- Creating Menus
- Creating Status Bars
- Creating Toolbars

Web Forms and XML Web Services
- Working with Web Forms
- Using XML Web Services

Using ADO.NET
- Database Concepts
- Overview of ADO.NET
- Working with Data

Deploying Applications
- Introduction to Deployment
- Deploying a Windows-based Application