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Introduction to Visual Basic .NET Programming *With Microsoft .NET*

(MS2559)

Course Objective :
This five-day instructor-led course provides students with the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform. The course focuses on user interfaces, program structure, language syntax, and implementation details.
This is the first course in the Visual Basic .NET curriculum and will serve as the entry point for other .NET courses.

Prerequisite :
Experience with developing applications in either a graphical or non-graphical environment AND Understanding of the basics of structured programming, including concepts such as flow control, variables and parameters, and function calls.

Certificate Of Attendance :
Certificate Of Attendance will be awarded to students completing the course achieving minimum 75% attendance.

Training Methodology & Materials :
- Practical hands-on sessions, 75% lab-based and 25% theory-based.
- Well-designed lab sessions to enhance further understanding of the courseware.

Training Duration :
Full-time: 5 Days
Time: 9.30am to 5.30pm

Training Fee :
Course Fee : S$999
Regn Fee : S$50

DETAILED COURSE OUTLINE

Module 1 : Getting Started
This module introduces Visual Basic .NET and explains how it fits into the .NET platform. It explains how to use the programming tools in Microsoft Visual Studio .NET and provides enough practice so that students can create their first application in Visual Basic .NET.
- Basic .NET Concepts
- Exploring the Development Environment
- Creating a Visual Basic .NET Project

Module 2 : Working with Forms and Controls
This module explains fundamental programming concepts, including event-driven programming, classes, objects, properties, methods, and events. This module also explains how to use forms and controls to create a user interface. This includes the following: how to create a form, set properties, call methods, and write code for events; how to add controls to a form; how to manage multiple forms; how to use message boxes; how to use naming conventions; and how to format and document code.
- Understanding Programming Concepts
- Working with Windows Forms
- Working with Controls
- Styling Your Code

Module 3 : Using Variables and Arrays
This module explains how to name, declare, assign values to, and use variables and constants. It explains how to declare variables with different levels of scope, how to create your own data structures, and how to convert variable values from one data type to another. It also describes how to store data in an array.
- Introduction to Data Types
- Using Variables
- Variable Scope
- Converting Data Types
- Creating and Using Structures
- Storing Data in Arrays

Module 4 : Working with Procedures
This module describes how to create and use Sub and Function procedures, including predefined functions, and how to structure code for increased reusability.
- Creating Procedures
- Using Procedures
- Using Predefined Functions

Module 5 : Decision Structures and Loops

This module explains how to implement decision structures and loop structures to control program output and execution.

- Using Conditional Expressions
- Using Decision Structures
- Using Conditional Loop Structures

Module 6 : Validating User Input

This module explains how to validate user input at both the field level and the form level. It describes how to handle invalid input by providing error messages and guiding users through the process of finding and fixing errors. It describes how to use control properties and methods to restrict and validate data entry.

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

Module 7 : Object-Oriented Programming in Visual Basic .NET

This module explains how to create and use classes. The module explains the concepts of abstraction, encapsulation, instantiation, initialization, constructors, and destructors. This module also describes inheritance, polymorphism, and namespaces.

- Understanding Classes
- Working with Classes
- Using Shared Members
- Inheritance, Polymorphism and Namespaces

Module 8: Handling Errors and Exceptions

This module explains types of errors that can occur in a program and explains how to use the debugging tools provided with Visual Basic .NET to help diagnose and correct the errors. These tools include the Visual Studio .NET debugger, debugging windows, and structured exception handling.

- Types of Errors
- Using the Debugger
- Handling Exceptions

Module 9: Enhancing the User Interface

This module explains how to create menus, status bars, and toolbars to enhance the usability of an application.

- Creating Menus
- Creating Status Bars
- Creating Toolbars

Module 10: Web Forms and XML Web Services

This module explains how to create a Web Form Application and how to invoke a simple XML Web Service.

- Working with Web Forms
- Using XML Web Services

Module 11: Using ADO.NET

This module explains how to use ADO.NET with a Windows Forms application to create, read, update and delete records in Access and SQL Server databases.

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

Module 12: Deploying Applications

This module explains how to deploy applications by using Visual Studio .NET. The module also describes deployment options available in Visual Basic .NET, and how to create and configure a setup project for a Windows-based application.

- Introduction to Deployment
- Deploying a Windows-based Application

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