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| Course Title: | Introduction to C# Programming Using MS.NET |
| Duration: | Five (5) Days |
| Class Schedule: | 9:00am to 5:00pm |
| Target Participants: | Government and Private I.T. Personnel, Members of the Academe and College Graduates of Computer Science and I.T. related courses. |
| Total Hours: | 35 Hours |
| Registration Fee : | Php 16,000 |

Course Contents:

I. Getting Started

This lesson presents the concepts that are central to the Microsoft .NET Framework and platform, and the Microsoft Visual Studio .NET integrated development environment (IDE); describes how to work in the development environment; and explains how to use Visual Studio .NET to create and build applications based on Microsoft .NET.

- Introduction to .NET and the .NET Framework
- Exploring Visual Studio .NET
- Creating a Windows Application Project

II. Understanding C# Language Fundamentals

This lesson explains the syntax and structure of the C# programming language. These topics are essential for students to understand in order to be successful in the remainder of the course; however, it is likely that most students will come into the class with some experience applying these concepts in other languages.

- Understanding the Fundamentals of a C# Program
- Using C# Predefined Types
- Writing Expressions
- Creating Conditional Statements
- Creating Iteration Statements

III. Creating Objects in C#

This lesson introduces the fundamentals of object-oriented programming, including the concepts of objects, classes, and methods.

- Defining a Class
- Declaring Methods
- Using Constructors
- Using Static Class Members

IV. Implementing Object-Oriented Programming Techniques in C#

This lesson introduces the fundamentals of object-oriented programming, including the concepts of objects, classes, and methods.

- Designing Objects
- Using Inheritance
- Using Polymorphism

V. Programming with C#

This lesson introduces various data structures, including arrays (the `System.Array` class) and collections (classes in the `System.Collections` namespace), and explains when to use each of these data structures in an application. The module also introduces interfaces, describes the concepts and syntax of exception handling, and explains delegates and their use in event handling.

- Using Arrays
- Using Collections
- Using Interfaces
- Using Exception Handling
- Using Delegates and Events

VI. Building .NET-based Applications with C#

This lesson presents the Microsoft .NET Framework class library, the Object Browser, and methods that are inherited from the `System.Object` class. This module also explains how to format strings and numbers and how to use streams and files.

- Examining the .NET Framework Class Library
- Overriding Methods from `System.Object`
- Formatting Strings and Numbers
- Using Streams and Files

VII. Using ADO.NET to Access Data

This lesson explains how to use Microsoft ADO.NET and the objects in the `System.Data` namespace to access data in a database. It describes how to create an application based on Microsoft Windows that uses ADO.NET. This module also describes how to use that application to connect to a database, create a query, and use a `DataSet` object to manage the data, bind data to controls, and insert, update, and delete records in a database.

- ADO.NET Architecture
- Creating an Application That Uses ADO.NET to Access Data
- Changing Database Records

VIII. Creating Windows-based Applications

This lesson describes how to create menus, common and custom dialog boxes, status bars, and toolbars to enhance the usability of an application based on Microsoft Windows. The purpose of this module is to allow the students to apply their newly acquired C# language skills and develop useful Windows-based applications.

- Creating the Main Menu
- Creating and Using Common Dialog Boxes
- Creating and Using Custom Dialog Boxes
- Creating and Using Toolbars
- Creating the Status Bar
- Creating and Using Combo Boxes

IX. Using XML Web Services in a C# Program

The lesson introduces the System.Web.Services namespace and the process of building and consuming XML Web services in a C# application.

- Consuming an XML Web Service
- Building an XML Web Service

X. Creating a Web Application with Web Forms

In this lesson, students learn that in Microsoft Visual Studio .NET, you can use Web Forms to create programmable Web pages. This lesson introduces the System.Web.UI namespace and describes how to create a Web application with a Web Form. Students learn how to add controls to a Web Form and then use the Web Form to submit data and respond to events. The module also covers Microsoft ASP.NET state management, security, and configuration settings.

- Creating a Web Forms Application
- Accessing Data by Using a Web Forms Application
- Configuring ASP.NET Application Settings

XI. Application Settings and Deployment

This lesson introduces the procedures that are involved in deploying a C# application by using Microsoft Visual Studio .NET. It explains how to deploy both Web-based applications and applications that are based on Microsoft Windows. It also describes how to store user preferences and configure application settings.

- Working with Application Settings
- Deploying Applications

XII. Exploring Future Learning

This lesson provides an opportunity for students to explore some of the more advanced capabilities of C#, to practice the knowledge and skills that they acquired during the course, and discuss their questions as a group.