

C#.NET Introduction - 3 days

Visual C# 2005

Course Objectives

The goal of this course is to teach students how to create scripts using the NET Framework and C#.NET.

At the end of the course, students will be able to:

- To be able to understand the syntax of C#
- Develop structured and commented code for events.
- To be able to understand OO development techniques.

Prerequisites

Before attending this course, Students should be able to:

- Have a understanding of programming techniques
- Use Windows XP or 2000

Exercises

This course is instructor led, involving the utilisation of examples and exercises in a workshop environment.

Introduction to the .Net Framework and C#

- Pre Microsoft .Net Days
- Microsoft .Net
- C# Language
- Net Architecture and .Net Framework

Visual Studio.Net

- Visual Studio.Net's Integrated Development Environment (IDE)
- Writing Your First Hello World Console Application in C#
- Understanding Hello World Application Code
- A more interactive Hello World Application

C# Language Fundamentals

- Basic Data Types
- Variables
- Constant Variables or Symbols
- Operators in C#
- Flow Control And Conditional Statements
- Loops In C#
- Arrays in C#

Classes and Objects

- Concept of a Class
- Objects
- Fields
- Methods
- Instantiating the class
- Accessing the members of a class
- Access Modifiers or Accessibility Levels
- Properties
- this keyword
- Static Members of the class
- Constructors
- Method and Constructor Overloading
- Value types (out and ref Keywords)

Inheritance and Polymorphism

- Inheritance
- Polymorphism



Structure, Enumeration, Garbage Collection and Nested Classes

- Structures
- Enumeration
- Garbage Collection in .Net

Abstract classes and Interfaces

- Abstract Classes
- Interfaces

Collections and string Manipulation

- Collections
- Dictionaries
- String Handling in C#

Exception Handling in C#

- Exceptions Basics
- Exceptions in C# and .Net
- Handling Exceptions using the try...catch...finally blocks
- Catching Multiple Exceptions using multiple catch blocks
- Other important points about Exception Handling in C#
- Defining your own custom exceptions

Delegates and Events

- Delegates Basics
- Delegates in the .Net Framework
- Multicast Delegates

Working With The File System & Streams

- Working with the File System
- The System.Environment class
- System.IO.File Class
- System.IO.FileInfo class
- System.IO.Directory Class
- System.IO.DirectoryInfo class
- Streams
- Important points regarding the use of Streams