CMIT COMPUTER INSTITUTE
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C# Syllabus

This is a fast paced, in depth course on development with the C# .NET language. The course focuses on the fundamentals of the C#.NET language, as well as important topics such as error handling and debugging, object oriented design, and data access.

Salient Features

A brief history of .Net
Backbone of .Net framework

Application

Web solution

Prerequisites (Should have knowledge of)

Basic programming

Topics Covered

The .NET Framework
Over view of the .NET Framework and Common language runtime
Class library / API
Assemblies
What's new in the C# language

The Visual Studio .NET IDE

Creating a new C# projects and choice of projects
Development environment windows
Using control from the Toolbox
Using the MSDN Library Help Files

C# Fundamental

Properties - read only, run time only, and design - time properties discussed
Events - discussion on the point of lifecycle of an objects
Default Event & Event firing objects
Method - intrinsic behaviours of objects
.NET Language Syntax - writing proper code
Data Types and Casting
Variable Scope

Object Oriented Features

Overview of Windows Form
Encapsulation, Polymorphism, Inheritance, EXPLAINED
Objects Defined - Objects in C# .NET
The importance of the new keywords
Accessing member variables of an object
Using access modifiers

Understanding Classes in C#.NET

Building blocks of all .NET applications
Class structure, Class definitions
Name, access, modifier, extending another class
Implementing the interface of another class
Class body, initialization and clean-up, use of constructor
Objects Instances, Default Constructor, Overloading
Method in C# - Signature, Body, Arguments, Return Type

Error Handling and Debugging

Understanding C# 's integrated debugging environment
Demonstrated use of debugging tools within IDE
Errors - discussions of compile, Run time and Logic Error within code
Error Handling - writing, creating and logging good exception handling in code

Data Access

History of Microsoft data access strategies
Rundown of ADO .NET Object Model
Accessing Data - Common methods for accessing and displaying data
Data Binding
Using Datasets
Discussion on Microsoft's Data Access Components (MDAC)

Forms Programming

Forms Overview
Forms as Objects
Handling Form Events
Using .Net Controls
Binding objects to forms

XML and Web Services in .NET

What is a Web Service and how is it used in .NET?
SOAP - the details on creating SOAP packages for transporting data.
3 Parts to a Web Service
Using COM objects with Web Services
UDDI - Service for discovering Web Services

Advanced Project Properties and IDE

Administering Project Property tabs - controlling project information about .application
Administering IDE tabs - Setting-up the environment to be more productive

Compiling and Distributing a .NET Application

Deployment Options
Installing assemblies into the GAC

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AFTER A STUDENT COMPLETES THIS COURSE :

Student will confidently be able to develop within the visual basic .NET Development Environment and compose sound Visual Basic .NET syntax. The student will develop a basic understanding of object oriental design concepts and within a project, will be poised to take control of any VB.Net code and manipulate objects & design-time & at run-time. The student will know the value in variable scope and what the scoping of procedures and variables means to an enterprise application. The student will be able to deftly administer project & properties and work with the base classes within the .NET Frame work. The student will have a foundation understanding of data access and Microsoft's data access paradigm - ADO.NET