.Net   Windows Based Application Development

Duration: 45 Days   **Fee: Rs** 4,500 only

C# .net Syllabus:-

MS.NET Framework Introduction (The .NET Framework - an Overview ,Framework Components , Framework Versions , Types of Applications which can be developed using MS.NET , MS.NET Base Class Library , MS.NET Namespaces , MSIL / Metadata and PE files. , The Common Language Runtime (CLR) , Managed Code , MS.NET Memory Management / Garbage Collection , Common Type System (CTS) , Common Language Specification (CLS) ,Types of JIT Compilers , Security Manager).

Developing Console Application (Introduction to Project and Solution in Studio ,Entry point method - Main. ,Compiling and Building Projects ,Using Command Line Arguments , Importance of Exit code of an application ,Different valid forms of Main ,Compiling a C# program using commandline utility CSC.EXE)

Language Basics (Why Datatypes ,Global, Stack and Heap Memory , Common Type System ,Reference Type and Value Type ,Datatypes & Variables Declaration , Implicit and Explicit Casting , Checked and Unchecked Blocks – Overflow Checks , Casting between other datatypes , Boxing and Unboxing , Enum and Constant ,Operators ,Control Statements ,Working with Arrays , Working with Methods , Pass by value and by reference and out parameters)

Introduction to Object Oriented Features (What is an Object? ,What is not an Object? , What is state of an Object? ,What is the Lifecycle of an Object? ,How will you distinguish two Objects? , What is the relationship between Class and Object? ,Define Application using Objects? , Principles of Object Orientation , Encapsulation ,Inheritance , Polymorphism , Encapsulation is binding of State and Behavior together , Inheritance is based on "is a" relationship. , Understanding Polymorphism with Examples.)

Programming Object Oriented – Encapsulation (Write a class and add field members to the class ,Create an Object of the Class and understand the difference between object and reference. , Access the members of the object ,Copy the reference in another reference variable. , Abandoning the object. , Working with Methods ,Working with Properties ,Constructor & Destructor. ,Working with "static" Members)

Inheritance (Inheritance and "is a" relationship ,Protected Keyword ,Constructor in Inheritance ,Type Casting of Reference Types ,Static and Dynamic Binding and Virtual Methods , Abstract Class)

Interface & Polymorphism (What is Interface ,Syntax for Implementation of Interface ,Explicit Implementation of Interface members ,Types of Inheritance)

Working With Collections and Generics (Importance of IList and IDictionary. ,Using ArrayList and Hashtable. ,Understanding IEnumerable and IEnumerator. ,Sorting Items in the collection using IComparable. ,Typesafety issue with ArrayList and Hashtable classes. , Writing custom generic classes. , Working with Generic Collection Classes.)

Exception Handling (What is Exception , Rules for Handling Exception ,Exception classes and its important properties ,Understanding & using try, catch keywords , Throwing exceptions , Importance of finally block , "using" Statement , Writing Custom Exception Classes.)

Operator Overloading, Partial Class, Attributes, Reflection, Configuration :(Operator Overloading. , Partial Classes. , Importance of Attributes. , Reflection , Configuration Files.)

Working with Components / Assemblies (What is a DLL and how is it different from EXE ,Types of DLL ,About Assemblies , How to build a ClassLibrary? , How to use a ClassLibrary in another Application? ,What is Namespace? , Internal Access Specifier , Private Assemblies , Shared Assemblies)

Introducing the windows forms: Creating a windows application, Setting& adding properties to the windows form, Visual inheritance, Events handling, Building graphical interface elements by using ,The system drawing namespace.

Controls: Adding controls to a windows forms, Setting properties of controls, Handling control events, Dialog

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boxes, Common windows forms controls, Creating menus & menu items, Creating multiple document interface (MDI) application.

SQL:(DDL,DML)

ADO .NET Connectivity:- Introduction ADO.NET , Connection to an ADO.NET database ,Use of a DataSet to fill with records ,Use of a DataAdapter to load data into the DataSet ,Display data in a DataGrid / data relationship between two tables ,DataBindings for TextBoxes ,Using the CurrencyManager,Navigation through records with **Next**, **Previous**, **Last**, **First** buttons ,How to trap keystrokes in the DataGrid (Up, Down, Esc, …)

 Note: **Project work is mandatory after the completion of the training program.**