

## Training SYLLABUS

### 1. Object Oriented Programming

- Basic Concept of OOPs?
- Principles of OOPs
- Object
- Class
- Abstraction
- Encapsulation
- Inheritance
- Polymorphism
- Overloading

### 2. Introduction to .Net Framework

- .Net Framework Architecture
- Components of framework
- CTS
- CLS
- CLR
- FCL
- ADO .Net
- Console Programming
- Windows Forms
- Assembly Types
- GAC
- Build, Package, Deploy

### 3. C# Language

- CLR Execution Model
- Primitive Types
- Reference & Value Types
- Nullable Types
- Constants & Fields

- Properties, Methods, Events & Delegates.
- Generics
- Working with Chars, Strings & Text Enums, Arrays.
- Assembly Loading & Reflection
- Serialization

### 4. Errors & Exception Handling

- The Idea behind Exception
- Exceptions & Errors
- Types of Exception
- Control Flow in Exceptions
- Use of try, catch, finally, throw, throws in Exception Handling.
- In-built and User Defined Exceptions

### 5. Collections

- Collection Classes
- List, Dictionary, Hashtable
- IEnumerable, IList, IQueryable

## 6. Threading

- Thread Basics
- Foreground, Background Threads
- Multithreading concepts
- Asynchronous Operations using threads

## 7. Windows Forms

- Basics of Winforms programming
- Controls in Winforms
- Execution flow
- Event Driven programming
- Assignments

## 8. ADO .Net

- Basics of RDBMS
- ADO .Net Classes
- Connectivity to Database
- Connected and Disconnected Architecture
- Dataset, Datatable, DataReader
- XSD

## 9. ASP .Net

- Introduction to Web Applications
- Why ASP .Net?
- IIS
- ASP .Net Pipeline
- Page Life Cycle
- Front end and Code Behind
- User Controls
- Custom Controls
- Master Pages
- Asp .Net Controls
- HTML Controls
- Validations
- Debugging

## 10. Web Services

- Web Methods
- Attributes
- Using Web Services

## 11. LINQ

- Linq Queries
- Conditions in Linq
- Data management

## MVC Syllabus

### **Introduction to .NET Framework**

- What is .NET Framework?
- What are components of .NET Framework?
- IDE for .NET

### **Introduction to ASP .NET MVC**

- The role of the Model, View and Controller
- Key benefits of ASP.NET MVC

### **Getting Started with ASP .NET MVC**

- ASP.NET MVC project templates
- Understanding the structure of an ASP.NET MVC project
- Naming Conventions
- Creating views
- Defining controllers
- Defining a data model

### **MVC Model**

- Editing Model in MVC
- Update Model function in MVC
- Using data transfer object as model in MVC

### **View Techniques**

- Defining and using custom HTML Helpers
- Generate hyperlinks using Action Link html helper
- Razor Views in MVC
- Layout View
- Defining and using partial views
- View Engines in MVC
- Customizing the auto generated Create view

### **Creating a Complete ASP .NET MVC Application**

- Creating strongly-typed views
- Understanding URLs and action methods
- Using HTML helpers
- ViewData and ViewBag

### **Using Entity Framework in MVC**

- ASP.NET application architecture best practices
- Implementing a Repository and Entity Framework Data Model

- Data Access in MVC using entity Framework.
- Working with multiple tables in MVC
- Using business objects as model in MVC

## **ASP.NET MVC & LINQ-working with Data**

- Languages features used in LINQ
- Creating simple LINQ queries
- Using LINQ queries in a web application

## **Using AJAX with ASP.NET MVC**

- Overview of AJAX and ASP.NET MVC