

ASP.NET COURSE OUTLINE

1 AN INTRODUCTION TO C#

- 1.1 What is .NET, C# and the correlation between C# and .NET?
- 1.2 What is CLR, what is JIT?
- 1.3 What are FCL, Primitive Types, Namespaces, Statements
- 1.4 What are Expressions and Operators.
- 1.5 What are Loops, Conditional Statements
- 1.6 **Demo:** Console Application

2 EVENTS, PROPERTIES METHODS AND FUNCTIONS

- 2.1 Methods, Method Overloading, Fields, Properties and Events
- 2.2 What is Event Based Development?
- 2.3 **Demo:** Windows Form

3 ADO.NET

- 3.1 Creating database
- 3.2 SQL Queries
- 3.3 Connectivity
- 3.4 What is CRUD and the concept of transactions?
- 3.5 **Demo:** SQL Management Studio

4 WINDOWS WITH ADO.NET

- 4.1 Establishing connection.
- 4.2 Performing CRUD operation
- 4.3 Final Project Allotment.
- 4.4 **Demo:** Creating a small windows application.

5 OBJECT ORIENTED PROGRAMMING CONCEPTS

- 5.1 Inheritance, Generalization, Specialization, Encapsulation, Abstraction
- 5.2 Polymorphism, Overloading, Overriding, Interfaces, Enumerations, Structures

5.3 **Demo:** Creating an ER Diagram for a live project

6 OBJECT ORIENTED PROGRAMMING CONCEPTS (CONT.)

6.1 Reference Type, Classes, Objects, Instances, Constructors

6.2 Attributes, Properties and Methods

6.3 Abstract Classes, Virtual Members, Static Class, Sealed Class, Partial Class

6.4 **Demo:** Creating the C# project for ER Diagram.

7 EXPLORING THE FRONTEND DESIGN

7.1 HTML Tags and Attributes

7.2 CSS and types of implementation

7.3 Integrating CSS to HTML

7.4 Introduction to JavaScript, jQuery and DOM

7.5 **Demo:** Frontend programming demo

8 ASP.NET

8.1 What is ASP.NET?

8.2 ASP.NET Architecture

8.3 Control-based Programming

8.4 UI Elements

8.5 Web Sites/Applications?

8.6 Performing CURD operations

8.7 **Demo:** Creating the ASP.NET Application

9 ASP.NET MVC

9.1 What is MVC architecture?

9.2 How does it work?

9.3 What are models, views and controllers?

9.4 **Demo:** Creating an ASP.NET MVC application.

10 CREATING AND CONFIGURING MODELS

10.1 What is a model?

10.2 How can we create and configure models?

- 10.3 What are Data Annotations?
- 10.4 What is the relation between models and data object?

11 ENTITY FRAMEWORK

- 11.1 What is Entity Framework?
- 11.2 What are the different types of Approaches?
- 11.3 What is code first approach and how to use it?
- 11.4 What are data migrations?
- 11.5 **Demo:** Running migrations and seeing the effect.

12 CUSTOMIZING VIEWS

- 12.1 What are views and how do they connect to model
- 12.2 How to create a custom view and connect it to model
- 12.3 **Demo:** Personalize views according to your application

13 BOOTSTRAP

- 13.1 Introduction to Bootstrap
- 13.2 How to customize Bootstrap in ASP.NET Application.
- 13.3 **Demo:** Bootstrap demo

14 CUSTOMIZING CONTROLLERS

- 14.1 What is controller?
- 14.2 How to connect controller to a view to represent data?
- 14.3 Introduction to routing in ASP.NET MVC

15 INTRODUCTION TO ASP.NET IDENTITY

- 15.1 What is Authentication and Authorization?
- 15.2 How to manage membership sites in ASP.NET MVC?
- 15.3 What is Virtual Directory, IIS and their correlation?
- 15.4 **Demo:** Sample app with deployments

16 PROJECT EVALUATION

Note: Quizzes will be unannounced and Assignments will also be give.