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 .NET CORE

17 PROJECT EVALUATION

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