



.Net Framework 4.6 With C# .net, ASP.net Using Visual Studio 2015

C#.Net

Introduction to .Net

- Overview of the .NET Platform
- How .NET is Different from Traditional Programming
- .NET Framework Classes
- Common Language Run time (CLR)
- Overview of .NET Assemblies

Introduction to Visual Studio .NET

- Setting Profiles
- Creating a Project
- Using the solution Explorer
- Setting Project Properties
- Adding References
- Using the code Editor
- Compiling a Program
- Running a program

.NET Programming in C#

- Data Types
- Value Types vs. Reference Types
- Control/Conditional Statements
- If...Else
- While
- Do...While
- For
- Break, continue
- Switch..Case

Data Structures

- Defining and Using Arrays
- Using System .Array
- Defining and Using Structures
- Defining and Using Enumerations

Exception Handling

- What are Exceptions
- .NET Exception Hierarchy
- Catching Exceptions
- Throwing Exceptions
- Managing Resources With Finally
- Defining Custom Exception Types

Defining and using Classes

- Class Members
- Access Modifiers
- Working With methods
- Working With Property Procedures
- Working with constructors and Finalizers
- Working with indexers

Object-Oriented Programming

- Defining and Using Classes
- Class Members
- Access Modifiers



- Working With Constructors and Finalizers
- Working with Indexers

Advanced Object -Oriented programming

- Defining and Implementing Interfaces
- Defining and implementing inheritance
- Forcing inheritance with Abstract Classes
- Preventing inheritance with Sealed classes
- Understanding partial Classes
- Working with Generics
- Working with iterators
- Working with Nullable Types
- Working with Anonymous methods

Delegates and Events

- Difference between delegate and function pointer
- Types of delegates
- Defining events
- EventHandlers

Windows programming in C#.NET

- What are Windows Forms
- Overview of controls
- Using the Windows Forms Designer
- The Life-cycle of a Form
- The .NET Control Hierarchy

Using Controls

- Label and Textbox Controls

- Button and other controls
- Making Choices Using the CheckBox and RadioButton Controls
- Managing Lists Using the ListBox,ComboBox ,
- Providing Assistance with the ToolTip Control
- Using the Error provider Control
- Building Menus and MDI forms
- Additional controls : Timer, Data Time Picker

Working with Dialogs

- Using the MessageBox Class
- Using the standard Dialogs
- Creating and using Windows Dialogs
- Modal versus Modeless Dialogs
- Using DialogResult

ADO.NET

- The ADO.NET Object Model
- Connectedvs. Disconnected Access
- Using connection Classes to Connect to a Data Source
- Using Command Classes to Execute Queries and Stored procedures
- Insert, Update and Delete with ADO.NET
- Using DataReader classes
- Using Stored Procedures in ADO.NET

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- Using Data Reader Classes
- Using Stored procedures in ADO.NET
- Using the Data Set Class with Disconnected Data
- Using DataAdapter Classes with DataSets

Working with Assemblies

- The Role of .NET Assemblies
- Private and shared Assemblies
- Understanding Private Assemblies
- Understanding Shared Assemblies
- Strong Names
- Global Assembly Cache (GAC)
- Building, Configuring and Consuming Shared Assemblies
- **Reading and Writing Files**
- System .IO Name space
- Examining Files and Directions
- Opening Files
- Reading Files
- Writing Files
- Serialization
- **Multireading in .NET**
- Threading Concepts
- Creating Threads in C#
- Managing Threads
- Problems with Threads
- Thread Synchronization

XML

- Why xml
- Creating xml document
- Using System .XML classes

- Importing data from xml file
- Exporting data to xml file

Language integrated Query (LINQ)

- Understanding the role of LINQ
- LINQ to objects
- LINQ to Ado .net
- LINQ to XML

Deploying Applications

- Creating set project
- Using visual studio Development projects
- Deploying Windows Application
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New features in .Net Framework 4.6

ASP.NET

Introduction

- Types of Applications – Web, Desktop & Mobile
- Introduction to Web applications
- Web server role, about IIS
- Web Browsers, Web Support Languages
- Why Scripting & its importance
- Client –side & its importance
- Client-side & server – side scripting

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Introduction to ASP.NET

- What is ASP.NET
- Differences between ASP and ASP.NET
- Page Directives and its use
- Separating Code & Design
- Understanding
- The ASP.NET Execution Scenario
- C#.Net in ASP.NET development

ASP.NET Web Forms (Beginning).

- Introducing Web Forms
- HTML Controls
- Working with Server Controls
- Consuming ASP.NET Controls in Webforms
- Understanding the Rendering Nature of controls
- Asp.net page life cycle

Web Forms –validation controls

- Required Field Validator control
- Compare validator control
- Range Validator control

- Regular Expression control
- Custom Validator control
- Validation summary control

User Controls

- Creating user controls
- Registering User Controls
- Properties & Methods
- Dynamic loading user controls

Master Pages

- Thre Basics of Master page
- Coding a Master page
- Coding a content page

ADO.NET

- Over of ADO.NET
- Connect/Insert/Update/Delete,Query data – using ADO.NET
- Retrieve data with datasets
- Data Adapters ,Understanding Data tables

Databinding Using Asp.Net Bound Controls

- ASP.NET bound controls
- Grid view & its importance in Development

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- Grid View (Basic)- simple uses
 - Grid view (Advanced)- Runtime Fields, Empty DataRows
 - SqlData Source
 - Details View and Form View
 - DetailsView and FormView
- DataList and Repeater

Entity Framework

- Need of Entity Framework
- Different entity framework Models
- Database First
- Model First
- Code First

STATE MANAGEMENT

- Different State Management Techniques
- Client Side State Management
- Session Variable
- Application Variable
- Using Global.asax file
- Application vs session variables

CACHING

- Advanced of Coaching
- Page Output Caching
- Page Data caching
- Fragment caching
- Crosspage postback and its advantages

Security

- Security Overflow
- Authentication & Authorization
- Windows-based Authentication
- Forms-based Authentication
- Memberships
- Authoring Users and Roles
- User Account Impersonation

Deployment

- Deploying ASP.NET Application

AJAX & JQUERY

- Introduction to Microsoft AJAX
- Using AJAX Toolkit Controls
- Need of JQUERY
- Ajax with the help of JQUERY

ASP.NET XML Web Services

- Introducing XML Web Services
- Writing a Simple Web Services
- Web Services Type Marshalling
- Using Data in Web Services

Webparts

- Advantages of Webparts
- Using Webpart Controls

ASP.NET MVC

- Introduction to asp.net MVC
- Difference between asp.net and asp.net MVC
- Model
- Views
- Controller

WCF

- WCF Overview
- Simple Service and Client

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- Contracts
- Binding
- Hosting
- Consuming WCF service from client

WPF

- Introduction WPF
- XAML
- The WPF Application
- Gathering User Input
- Performing Validation

Interview Questions

Sample Project Using C#.NET and ASP.NET

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