

## BRIEF INTRODUCTION OF ASP.NET

- Introduction of Project with n tier architecture
- What is asp.net
- Version of asp.net
- JIT compiler
- Component of asp.net
- CLR
- FCL
- Assemblies and its Type
- Reflection
- .net framework
- Garbage Collection
- Comparison between different version of .net (1.0,2.0,3.0,3.5,4.0)
- Webconfig file
- Wcf, Wpf, Linq
- Introduction of C#
- Introduction of SQL Server
- Introduction of Ado.Net

## OBJECT ORIENTATION WITH C#

### Classes and Object

- **Classes and object**
- **Hello world with class and object**
- **Access modifier**
- **Constructor and its type**
- **Properties**
- **Event**
- **Static variable and constructor**
- **Private constructor**

### Inheritance

- **Classes with inheritance**
- **Access moodier with inheritance**
- **Upcasting**
- **Overriding**
- **Overloading**
- **Abstract Classes**
- **Sealed Classes**

### Interface

- **Interface implementation**
- **Difference between abstract class and interface**

### Type Casting

- **Type casting and its type**
- **Value type and reference type**
- **Heap and stack**

- **Boxing and unboxing**

## **Polymorphism**

- **Function overloading**
- **Operator overloading**
- **Virtual keyword**

## **Exception Handling**

### **Type of exception (Checked and unchecked)**

- **Try**
- **Catch**
- **Finally**
- **Throws**

## **Arrays and looping**

- **1-d array**
- **2-d array**
- **Jagged array**
- **For loop**
- **For each loop**

## Collection and Generics

- **Difference between collection and generics**
- **Where use both**
- **Hash table**
- **Stack**
- **Queue**
- **Implementation of both collections and generics**

## String and StringBuilder

- **Implementation of string and its different method and properties**
- **Implementation of stringbuilder and its different method and properties**
- **Difference between string and stringbuilder**

## **Garbage Collection**

- **Memory management**
- **Destructor**
- **Garbage collection implementation**

## **Thread**

- **Thread and its property**
- **Thread and its priority**
- **Implementation of thread**

## **Delegate and Event**

- **Implementation of delegation**
- **Implementation of event**

## **Reflection**

- **Introduction of attribute**
- **Retrieving metadata using reflection**
- **Interview Question on C#**

## ADO.NET

### ADO.NET Overview

- Visual Studio .NET
- OLEDB and SQLServer
- Namespaces and Classes
- Interfaces
- First ADO.NET Program.

### ADO.NET Connections

- Managed Providers
- Connection Class
- Connection Strings
- Connection Pooling
- Connection Events
- Connection Factory Pattern
- Error Handling

### ADO.NET Commands

- Command Objects
- Command Types
- Result Sets
- Running queries
- Running scalar queries
- Running nonqueries
- Parameters

## DataReaders and Connected Access

- **DataReader Classes**
- **Retrieving Data**
- **Updating Data**

## Data Sets and Disconnected Access

- **DataSet**
- **DataAdapter**
- **Command Objects**
- **DataTable**
- **DataColumn**
- **DataRow**
- **Editing Columns**
- **Row States and Versions**
- **Sorting and Searching DataTables**
- **Events**

## Concurrency and Transaction

- **Concurrency Overview**
- **Transaction**
- **Transaction and DataAdapter**
- **Isolation Levels**

## XML and ADO.NET

- **Strong coupling between ADO.NET and XML**
- **Typed DataSet**
- **Rendering XML from a DataSet**
- **Reading XML into a DataSet**
- **Synchronized DataSet**

## Data Binding

- **DataView**
- **Data Binding in Windows Forms**
- **Simple Data Binding**
- **DataGrid Binding**
- **Master Detail Binding**
- **Data Binding in Web Forms**

## Data Binding with Procedure

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## ASP.NET

### Introducing ASP.NET

- Understand the basic architecture of a Web application
- Understanding the role of HTTP
- The difference between HTML and XHTML
- Learn the key features of ASP.NET
- The ASP.NET Namespaces
- The history of ASP.NET Web development
- Contrast the use of IIS vs. the Visual Studio development Web server
- Work with different versions of IIS
- Know the differences between a Visual Studio Web Site and a Web Application project

### User Controls and Master Pages

- Understanding and creating user controls
- Creating composite user controls
- Manipulating user controls on the host page
- Exposing events from user controls
- Host Web pages subscribing the user control events
- Introducing Master pages
- A Master page walkthrough
- Nested Master pages
- Master page events and page access

## Caching

- Importance of caching
- ASP 3.0 Support for caching
- Type of caching in ASP.NET
- Output caching Web user control vs custom control
- Fragment caching
- Data caching vs. Application object

## Site Navigation

- Basic page navigation
- Response.Redirect() and Server.Transfer()
- Work with the MultiView control
- Work with the Wizard control
- Understand the site map model of ASP.NET
- Examine the Menu navigation control
- Examine the TreeView navigation control
- Create Web application breadcrumbs

## State Management

- Define the role of view state
- Read and write cookies
- The role of application state and session state
- Work with The State Service
- Use SQL Server session management
- Study the various forms of caching (the Cache object and OutputCache)
- Work with Cache dependencies, such as a Sql Server dependency Practical

## ASP.NET and Web Services

- Web Forms
- Html Controls
- Web Controls
- Collaborative Web Applications
- Moving from Web Sites to Web
- Services
- Simple Object Access Protocol
- (SOAP)
- Web Services Description Language

## Reporting

- Detail Concept of Crystal Report
- Implementation of Crystal Report
- Detail Concept of RDLC Report
- Implementation of RDLC Report
- Concept of dataset, mapping in Report

## Security

- **Login Control**
- **Authentication**

## ASP.NET AJAX with Toolkit

- **Know the role of AJAX**
- **AJAX in today's Web world**
- **Understand the role of the XMLHttpRequest object**
- **Learn the ASP.NET AJAX controls**
- **Explore the ASP.NET AJAX client libraries**
- **Use the UpdatePanel and the UpdateProgress controls**
- **Build a Web site using the ASP.NET AJAX Control Toolkit**

## Other .NET Services

- **Interoperating with Win32**
- **Interoperating with COM**

## Introduction of WCF

- **Basic concept of wcf**
- **Implementation of wcf**
- **Concept of protocol,binning**
- **Managing in web confi9**

## Introduction of LINQ

- **Basic concept of linq**
- **Implementation of linq**
- **Lemda expression**

## Introduction of WPF

- **Basic concept of wpf**
- **Implementation of wpf**

## Introduction of Silverlight

- **Basic concept of Silverlight**
- **Implementation of Silverlight**