



QUICKSTEP COMPUTER CENTER

National Accreditation Board of Education Training.
(NABET)- Quality council of India) An ISO 9001:2008

.Net Technologies

- Introduction to .NET
- Types of applications
- Real time requirements
- .Net framework
- CLR, CLS, CTS, CAS
- Keywords, operators
- Basic programming
- .Net core

2. OOPS Concepts

- Encapsulation, inheritance, polymorphism
- Access specifiers
- Overloading, overriding, shadowing
- Programming on OOPS
- Abstract class, sealed class, static class

3. Properties

- Get, set accessors
- features
- usage

4. interfaces

- introduction
- multiple inheritance

5. Delegate

- Introduction
- Multicasting
- Uses
- Anonymous types

6. Generics

- Introduction
- advantages
- Types of generics

7. IMPORTANT CONCEPTS

- Nullable types and Nullable Coalescing Operator
- Partial class
- Covariance and Contravariance
- Dynamic features to applications using DLR
- Leveraging WinRT and Windows 8 store apps
- Inferred types
- Named and Optional arguments

8. IO STREAMS

- Stream classes
- Working with files

9. WINDOWS PROGRAMMING

- Controls
- Container controls
- MDI
- Creating editor

10. EXCEPTION HANDLING

- Exception
- Types of exceptions
- Exception handling
- try, throw, catch, finally
- Custom exception handling

11. ADO.NET

- Evolution
- Managed providers
- Namespaces and classes used
- ADO.NET architecture
- Programming with ADO.NET

12. ASSEMBLIES

- Assembly and types
- GAC, strong name
- Sn.exe, gacutil.exe, ildasm.exe

ASP.NET

1.INTRODUCTION TO WEB APPLICATIONS

- Html, JavaScript
- CSS, jQuery
- Usage of jQuery in creating more responsive web pages
- Asp.net core

2.WEB SERVER

- What's a web server
- Services of IIS
- Port number, virtual directory

3.WEB SERVER CONTROLS

- Introduction to ASP.NET
- Asp.net architecture
- Web server controls and types of controls
- Programming using standard controls, validation controls
- Using dynamic data controls in asp.net pages
- Master pages

4.ADO.NET

- Data controls
- Managed providers
- Dataset and DataReader
- LINQ in ADO.NET
- Entity framework
- Dynamic data entities
- QueryExtender and Chart
- XML

5.STATE MANAGEMENT

- Cookie, session, application
- Session state modes

6.CACHING

- Caching and types
- Advantage of hing

7.SECURITY

- Configuration files
- Authentication, authorization, Impersonation

- Membership concept

8.WEB SERVICES

- Services
- Distributed applications
- Application architecture
- WebMethods
- WSDL,SOAP, UDDI

9.AJAX

- Introduction
- Server side controls
- Client side controls
- Creating rich, interactive web pages using AJAX



.Net MVC

*******Introduction to ASP.NET MVC 6*******

- **Introduction to MVC 6**
- **NET Web Forms (vs) ASP.NET MVC**
- **Advantages and disadvantages of each**
- **Determining when-to-use which one**
- **List of Versions of ASP.NET MVC**
- **Differences between versions of ASP.NET MVC**
- **Overview of installing ASP.NET MVC in various versions of Visual Studio**
- **MVC Architecture**
- **What is MVC?**
- **Architecture Explanation**
- **What is Controller and action method**
- **What is View**
- **What is Model**
- **Request Flow in ASP.NET MVC**

Getting started with MVC Core

- **New Project in Visual Studio**
- **Overview of Folders and files of MVC project**

Controllers

- **Introduction to Controllers**
- **Creating Controllers and Actions**
- **Calling action methods thru the browser**
- **Returning from action methods**
- **Parameters in Action methods**
- **ActionLink**
- **URL Routing**
- **Overview**
- **The need of URL Routing**
- **Parameters in URL**
- **Default Parameter Values**
- **Parameters with Constraints**
- **Literals in URL**

Views (Razor)

- **Introduction to Views (Razor)**
- **ActionResult and ViewResult**
- **Returning a view**
- **Creating a Simple Razor View**
- **Intermingling Code and Markup in Razor Views**
- **View Bag / View Data / Temp Data**
- **Shared Views**
- **ASPX View Engine (vs) Razor**

LayoutViews

- **Introduction to LayoutViews**
- **The need of layout views**
- **cshtml**
- **Creating custom layout views**
- **Layout Views with Sections**
- **RenderSection()**
- **cshtml**

- **Overriding the _ViewStart.cshtml**

Partial Views

- **Partial Views**
- **RenderPartial()**

Models

- **Introduction to Models**
- **Need of models**
- **Creating models using 'CodeFirst approach'**

Entity Framework in MVC

- **Introduction to Entity Framework**
- **Need of Entity Framework**
- **Creating DbContext and DbSet**
- **Configuring connection string**

Scaffold Templates in MVC

- **Introduction to scaffold Templates in MVC**
- **Need of Scaffolding**
- **Creating controllers and views using scaffold**
- **Strongly typed views**
- **Understanding Index, Details, Create, Edit, Delete action methods and views**

HTML Helpers

- **Introduction to HTML helpers**
- **DisplayNameFor()**
- **DisplayFor()**
- **BeginForm()**
- **LabelFor()**
- **EditorFor()**
- **ValidationMessageFor()**
- **RadioButtonFor()**
- **DropDownListFor()**
- **ListBoxFor()**

- **CheckBoxFor()**
- **AntiForgeryToken()**
- **Code First Migrations**

Action Filters

- **Introduction to action filters**
- **[HttpPost]**
- **[HttpGet]**
- **[ValidateAntiForgeryToken]**
- **[OutputCache]**
- **[HandleError]**
- **[NonAction]**
- **[ActionName]**

Bundles and Minification

- **Introduction to Bundles and minification**
- **Understanding BundleConfig.cs**
- **ScriptBundle (vs) StyleBundle**
- **Importing a ScriptBundle and StyleBundle**
- **Creating and consuming custom bundles**

Validations

- **Introduction to Validations**
- **Model level validations (vs) View level validations**
- **Importing jQuery Validation Plug in**
- **[Required]**
- **[RegularExpression]**
- **[Range]**
- **[StringLength]**
- **[Compare]**
- **[Remote]**
- **IsValid**

Data Annotations

- **[Display]**
- **[Datatype]**

- [DisplayFormat]
- [ScaffoldColumn]

jQuery in MVC

- Introduction to jQuery in MVC
- Need of jQuery in MVC
- Importing/updating jquery plug in
- Demos

jQuery AJAX in MVC

- Need of jQuery-AJAX in MVC
- Demos on jQuery-AJAX (with json) in MVC with database handling
- Intro to jqGrid

Web API

- Introduction to Web API
- WCF REST (vs) Web API
- Understanding HTTP methods(GET, POST, PUT, DELETE)
- Creating API controller
- API configuration

- Calling Web API from jQuery
- Demo: CRUD operations using jQuery AJAX with Web API

Security in MVC

- Forms based security with [Authorise]
- Windows based security

What's new in MVC Core

- Web API 2
- Overview of Facebook Application
- OWIN Abstraction

- **Inbuilt Support for Dependency Injection**
- **SIGNAL R 3**
- **Web API 3**

Repository Layer and Service Layer

- **Introduction to Repository Layer and Service Layer**
- **MVC Architecture with both layers**
- **Demos**

Dependency Injection

- **Problems in accessing repository layer / service layer directly in controller**
- **What is Dependency Injection**
- **Installing 'Unity' plug in**
- **Configuring Unity**
- **Construction injection and property injection using interface**

Consuming WCF in MVC

- **Introduction to Consuming WCF in MVC**
- **Demos how to consume WCF in MVC**

Database – First approach in MVC

- **Introduction to Database-First approach in MVC**
- **Demos on 'Database-First' approach**

Areas in MVC

- **Introduction to areas in MVC**
- **Demos on areas**

Mobile Web Apps using MVC

- **Introduction to jQuery Mobile**
- **Mobile Application' project template**

- **Overview of Customizing jQuery Mobile**
- **Deployment**
- **Configuring IIS**
- **Publishing MVC web applications to local IIS**

Angular JS Integration

- **What is AngularJS**
- **Advantages**
- **Getting started**
- **MVVM and MVC Architecture**
- **What is Model, View, ViewModel**
- **Creating view model**
- **data-bind**
- **Observable properties**
- **Subscribe**
- **Working with Directives, Services, Filters, Functions**

*******SQL SERVER CONCEPTS*******

T-SQL elements

- **Databases**
- **Tables**
- **Various operations**
- **Grouped functions**
- **Group by, having clauses**
- **Joins**
- **What is a join?**
- **Types of joins**
- **Data Integrity**
- **Categories**
- **Constraints**
- **Types of constraints**
- **Views**
- **Why a view?**
- **Types of views**
- **Stored procedures**
- **Types of stored procedures**
- **Advantage of a stored procedure**
- **Triggers**
- **Types of triggers**
- **Difference between trigger and stored procedure**

- Functions
- Types functions
- Types of user defined functions
- Difference between a function and stored procedure
- Indexes
- Types of indexes
- advantages
- Sub queries

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