

## **.Net Full Stack Syllabus**

### **C# .Net:**

#### **1. C# Basics**

- Variables, data types, and operators
- Control structures (if statements, loops)
- Pattern programming and Logical Programming
- Arrays and Strings
- Object-oriented programming

#### **2. C# Advanced Topics**

- Exception handling
- Delegates and events
- Generics and collections
- LINQ (Language Integrated Query)
- Asynchronous programming (async/await)
- Reflection

#### **3. NET:**

- Introduction to ADO.NET
- Data access technologies
- NET architecture

#### **4. NET Connected Architecture**

- Connection objects
- Command objects (SqlCommand)
- DataReader and DataAdapter
- Working with SQL Server databases

#### **5. NET Disconnected Architecture**

- DataSets and DataTables
- Data binding
- DataAdapter updates
- DataViews and filtering

#### **6. Windows Forms:**

- Introduction to Windows Forms
- Windows Forms application architecture
- Creating a Windows Forms project

#### **7. Designing Windows Forms**

- Controls (buttons, textboxes, labels, etc.)
- Event handling
- Layout and positioning
- Menus and toolbars

#### **8. Data Access with Windows Forms**

- Using ADO.NET with Windows Forms

- Data-bound controls
- DataGridView and data binding

## 9. **Web Forms:**

- Introduction to Web Forms
- Web Forms application architecture
- Creating a Web Forms project

## 10. **NET Controls**

- Web controls (TextBox, DropDownList, etc.)
- Validation controls
- Master Pages and Themes

## 11. **State Management in Web Forms**

- ViewState and Session state
- Cookies and application state
- URL parameters

## 12. **NET MVC:**

- Introduction to ASP.NET MVC
- MVC architecture
- Creating an MVC project

## 13. **Controllers in MVC**

- Actions and routing
- Controller filters
- Dependency Injection

## 14. **Views in MVC**

- Razor view engine
- Layouts and partial views
- Strongly-typed views



## 15. **Models in MVC**

- Data models and validation
- Model binding
- Entity Framework with MVC

## 16. **HTML, CSS, and JavaScript:**

### 17. **HTML Basics**

- HTML elements and structure
- Forms and input elements
- Semantic HTML

### 18. **CSS Basics**

- Selectors and styling
- Layout with CSS
- CSS frameworks (e.g., Bootstrap)

### 19. **JavaScript Basics**

- Variables, data types, and operators
- Functions and closures
- DOM manipulation
- Client-Side Validation

### 20. **JavaScript for form validation**

- HTML5 validation attributes

## 21. **SQL Server:**

### 22. **Introduction to SQL Server**

- SQL Server architecture
- Creating databases and tables

### 23. SQL Query Language

- SELECT, INSERT, UPDATE, DELETE
- JOINS and sub queries
- Stored procedures and functions

### 24. SQL Server Management

- SQL Server Management Studio (SSMS)
  - Backup and restore
  - User and permissions management considerations
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