

.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



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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

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

24. SQL Server Management

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

