

AWD

DOT NET CORE MVC TOPICS



C# TOPICS

- Data Type
- Variables - Console Output/Input
- Decision Statements (if, Switch)
- Ternary Operator
- Loops (for, while, do....while)
- Break/Continue
- Array (one dimensional, two dimensional)
- Foreach loop
- Type Casting
- Boxing and Unboxing

- Exception Handling

- Enum

C# OOPS Concepts

- Classes & Objects
- Functions
- Constructors
- Inheritance & Its types
- Interface
- Polymorphism
- Method Overloading & Overriding
- Abstraction
- Encapsulation

Non-Generic Collections

- Array List
- Sorted List
- Stack
- Queue
- Hash table

Generic Collections

- List and Dictionary
- Sorted List
- Queue
- Stack

Other Topics

- Introduction to dependency injection
- Introduction to GIT





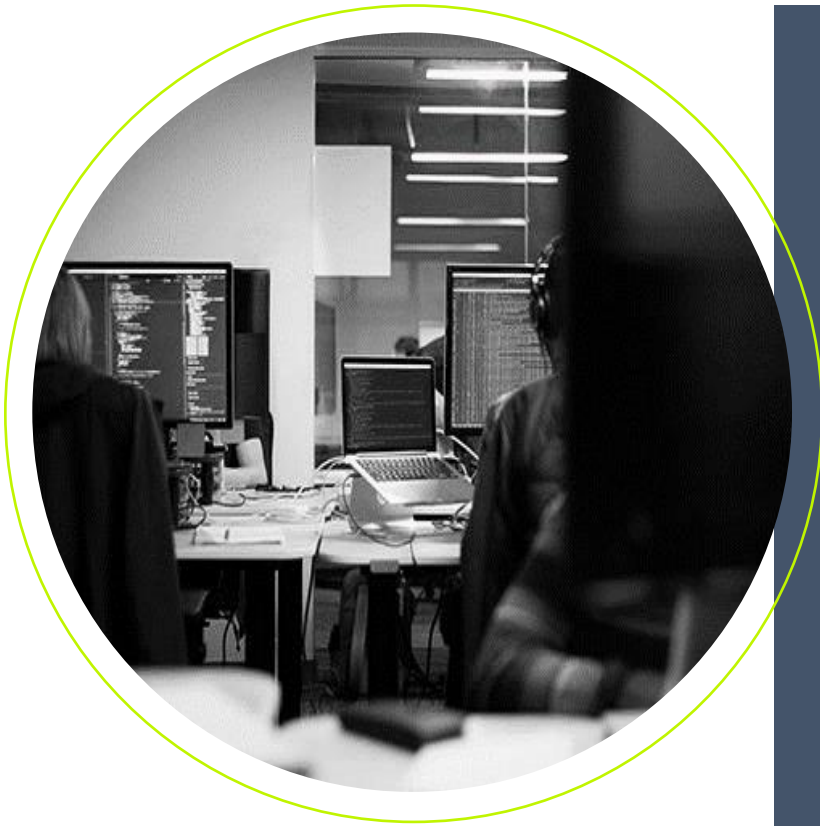
CREATING A NEW ASP.NET CORE MVC PROJECT

- Using Visual Studio/Visual Studio Code to create a new project.
- Project structure and important files (Program.cs, Startup.cs, appsettings.json).
- Understanding the Model-View-Controller pattern.
- Role of Models, Views, and Controllers in ASP.NET Core MVC.

DOT NET CORE MVC

- Overview of .NET Core and its evolution.
- Differences between .NET Core and .NET Framework.
- Setting up the development environment.
- Using Visual Studio/Visual Studio Code to create a new project.
- Project structure and important files (Program.cs, Startup.cs, appsettings.json).





VIEWS

- Razor syntax and its features.
- Working with layouts, partial views, and view components.
- Strongly-typed views and view models.
- Creating and using models.
- Model binding and validation.
- Data annotations for validation.



DEPENDENCY INJECTION & ENTITY FRAMEWORK CORE

- Understanding dependency injection (DI).
- Configuring services and using built-in and custom services.
- Introduction to Entity Framework Core (EF Core).
- Setting up EF Core in ASP.NET Core MVC.
- Creating and using DbContext and migrations.
- CRUD operations with EF Core.

Other Important Topics

• Form Handling

- Creating and handling forms in ASP.NET Core MVC.
- Using Tag Helpers and HTML Helpers.

• Authentication and Authorization

- Setting up authentication (e.g., using ASP.NET Core Identity).
- Role-based and policy-based authorization.
- Implementing custom authorization handlers.

• Middleware

- Understanding the middleware pipeline.
- Creating and configuring custom middleware.

• Error Handling

- Configuring global error handling and custom error pages.
- Logging and monitoring.

• API Development

- Creating Web APIs using ASP.NET Core MVC.
- Using attributes like [HttpGet], [HttpPost], etc.
- Serializing and deserializing JSON data.

• Client-Side Development

- Integrating client-side frameworks/libraries (e.g., Angular, React, Vue.js).



- Using JavaScript, jQuery, and AJAX in MVC applications.

• Performance and Optimization

- Caching strategies (in-memory, distributed).
- Response compression.
- Asynchronous programming with `async/await`.

• Testing

- Unit testing controllers, models, and views.
- Using testing frameworks (e.g., xUnit, NUnit).
- Integration testing.

• Deployment

- Publishing ASP.NET Core MVC applications.
- Deployment to IIS, Azure, Docker, etc.

• Globalization and Localization

- Implementing localization and globalization.
- Using resource files for multi-language support.

• Advanced Topics

- SignalR for real-time communication.
- Using third-party libraries and tools

