

## Middleware:

Definition: Software components that sit between an application and a network, handling requests and responses.

Example: In ASP.NET Core, middleware components handle tasks like logging, authentication, and error handling. For instance, the built-in logging middleware logs details about incoming HTTP requests.

## State and Stateless session:

State Session: Maintains data about a user's interactions across multiple sessions or page requests.

Example: In ASP.NET, the Session object retains user-specific data, like items in a shopping cart, as users navigate through a website.

Stateless Session: Does not retain user-specific data between different sessions or page requests.

Example: Stateless APIs, where each request is treated in isolation without retaining any information about past user interactions.

## Protocols:

Definition: Rules and conventions for communication between devices or software.

Example: HTTP (Hypertext Transfer Protocol) is a protocol that defines how requests and responses should be formatted and transmitted over the web.

## Working flow of MVC:

Model: Represents data and business logic.

View: Displays data, UI elements.

Controller: Coordinates between Model and View.

## Flow:

User sends a request.

Controller processes the request.

Controller communicates with the Model.

Model returns data to the Controller.

Controller selects the appropriate View.

View is rendered and sent to the user.

Example: In an online bookstore using MVC, the "Book" might be the Model, a webpage showing book details could be the View, and the logic to retrieve a specific book's details based on a user's click would be in the Controller.

## Action method and IActionResult:

Action method: Methods inside a controller in ASP.NET MVC that handle HTTP requests and return a response.

Example: `public IActionResult Index() { return View(); }` – An action method in a controller that returns the "Index" view.

IActionResult: An interface in ASP.NET Core representing the result of an action method.

Example: Various results like ViewResult, JsonResult, and RedirectToActionResult are implementations of IActionResult.

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## User Form

Name:

Email:

Password: