1. **WebApi\_Handson:**

RESTful Web Service:

A RESTful web service is an architectural style that uses HTTP requests to access and manipulate data. It is based on the principles of Representational State Transfer (REST), which emphasizes stateless communication and the use of standard HTTP methods.

Web API vs. Web Service

Web Service: A broader term that refers to any service available over the web, which can use various protocols (SOAP, XML-RPC, etc.).

Web API: A specific type of web service that adheres to REST principles and typically uses JSON or XML for data interchange.

Microservices

Microservices architecture is a design approach where an application is structured as a collection of loosely coupled services. Each service is responsible for a specific business capability and can be developed, deployed, and scaled independently.

Features of REST Architecture

Representational State Transfer: Resources are represented in a format (like JSON or XML) and can be manipulated using standard HTTP methods.

Stateless: Each request from a client contains all the information needed to process that request. The server does not store any client context.

Messages: Communication is done through messages, typically in JSON or XML format.

HTTP Request and Response

HttpRequest: Represents a request made by a client to a server, containing information such as the HTTP method, headers, and body.

HttpResponse: Represents the response sent by the server back to the client, containing status codes, headers, and the response body.

Action Verbs

The main HTTP action verbs used in Web APIs are:

HttpGet: Retrieve data from the server.

HttpPost: Send data to the server to create a new resource.

HttpPut: Update an existing resource on the server.

HttpDelete: Remove a resource from the server.

