1. What is a RESTful Web Service?

A RESTful Web Service uses HTTP methods to access and manipulate resources via URLs. It is stateless, supports JSON/XML, and follows the REST architecture.

2. What is a Web API?

A Web API is a framework for building HTTP services that return data (usually JSON) to clients like browsers, mobile apps, etc.

3. What is a Microservice?

A Microservice is a small, independent service that handles one function and communicates with others via HTTP or messaging.

4. Difference between Web Service & Web API

| **Web Service** | **Web API** |
| --- | --- |
| Uses SOAP/XML | Uses REST/JSON |
| Heavy | Lightweight |
| Not browser-friendly | Browser-friendly |
| Less flexible | More flexible |

5. What is HttpRequest?

It represents the data sent from the client to the server, including URL, method, headers, and body.

6. What is HttpResponse?

It represents the server's response to the client, including status code, headers, and returned data.

7. Types of Action Verbs

| **Verb** | **Purpose** | **Attribute** |
| --- | --- | --- |
| GET | Read data | [HttpGet] |
| POST | Create data | [HttpPost] |
| PUT | Update data | [HttpPut] |
| DELETE | Delete data | [HttpDelete] |

8. Common HTTP Status Codes

Code Meaning

200 OK – Success

400 BadRequest – Invalid input

401 Unauthorized – Not logged in

500 InternalServerError – Server crash

9. Structure of Web API

Uses Controllers that inherit from ApiController

Methods are decorated with [HttpGet], [HttpPost], etc.

Follows api/[controller] route convention

10. Configuration Files in Web API

| **File** | **Purpose** |
| --- | --- |
| Program.cs / Startup.cs | App setup, middleware, dependency injection |
| appsettings.json | App config values |
| launchSettings.json | Debug settings (port, env) |

In .NET 4.5:

WebApiConfig.cs: Sets up API routing

Route.config: Handles MVC routing