

## **1.What is client-side and server-side in web development, and what is the main difference between the two?**

**Answer:** Client-side refers to the execution of code on the user's browser, which is commonly done with languages such as JavaScript, HTML, and CSS. It manages user interactions as well as presentation logic. Server-side code is code that is executed on the web server using languages such as PHP, Python, or Node.js. It handles business logic, data processing, and response generation. The fundamental distinction is that client-side code is executed on the user's device, whereas server-side code is executed on the server.

## **2. What is an HTTP request and what are the different types of HTTP requests?**

**Answer:** An HTTP request is a request sent by a client (such as a web browser) to a server using the Hypertext Transfer Protocol (HTTP). It requests that a specified action be taken on a resource. HTTP requests are classified as GET (get a resource), POST (deliver data to the server), PUT (change a resource), DELETE (delete a resource), and others.

## **3. What is JSON and what is it commonly used for in web development?**

**Answer:** JSON (JavaScript Object Notation) is a simple data-transfer format. It is frequently used to express structured data in a comprehensible fashion. JSON is frequently used in web development for data exchange between a server and a client. It offers a straightforward and standardized method of exchanging data, making it simple to parse and create data in a variety of programming languages.

## **4.What is a middleware in web development, and give an example of how it can be used?**

**Answer:** Middleware in web development acts like a link between the server and the application, intercepting and changing HTTP requests and responses. It enables extra functions like authentication, logging, and error handling.

For example, a middleware can authenticate incoming requests by checking for the presence of a valid access token before allowing access to protected routes.

## **5.What is a controller in web development, and what is its role in the MVC architecture?**

**Answer:** A controller is a component in web development that handles business logic and works as a middle between the user interface (views) and the data (models). It receives user input, processes it, and chooses how to respond. The controller in the Model-View-Controller (MVC) architecture controls data flow, handles user actions, and updates the model or takes the right view to display based on the application's logic.