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

Client-side means that the processing takes place on the user's computer. It requires browsers to run the scripts on the client machine without involving any processing on the server.

Server-side means that the processing takes place on a web server. This processing is important to execute the tasks required by the user on the web. Since the client-side script is executed on the client's computer, it is visible to the client. On the other hand, the server-side script is executed in the server; hence, it is not visible to the users.

Client-side:

- Does not need interaction with the server
- Runs on the user's computer
- Reduces load on the server's proccessing unit
- Languages used: HTML, CSS, JavaScript

Server-side

- Requires interaction with the server
- Runs on the web server
- Allows the server to provide dynamic websites tailored to the user. Increases the processing load on server.
- Language used:PHP,ASP.net,python

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

The method designates the type of request being made to the web server. The most common types of request methods are GET and POST but there are many others, including HEAD, PUT, DELETE, CONNECT, and OPTIONS. GET and POST are widely supported while support for other methods is sometimes limited but expanding.

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

JavaScript Object Notation (JSON) is a standard text-based format for representing structured data based on JavaScript object syntax. It is commonly used for transmitting data in web applications (e.g., sending some data from the server to the client, so it can be displayed on a web page, or vice versa). It is a human-readable data interchange.

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

Middleware is a controller.It is special type of controller executed after request but before in response.it acts as a bridge between a request and a response.

For example, a web server is middleware that connects websites to the backend database. When you submit a form on a website, your computer sends the request in XML or JSON to the web server. Then, the web server runs the business logic based on the request, retrieves information from databases, or communicates to other microservices using different protocols. Middleware works in three parameter.Req,Res or next.

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

It is a primary controller.Controller is a function/class/code response on request and process response.Controller acts as a bridge between a request and a response. It is special type of controller and it executed after request and before response .

A controller is responsible for controlling the way that a user interacts with an MVC application. A controller contains the flow control logic for an ASP.NET MVC application. A controller determines what response to send back to a user when a user makes a browser request.