

PART-1

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

Answer:

We can divide the web development part by two sides, one is called client side development and other is called server side web development .

Client side :

Client side development usually refers to front-end web development . client side development focused on building user interface and user experience or we call it (UI/UX). This is the part where users interact with the web application .Suppose when we go to the facebook.com button ,image ,responsiveness and functionality are all done by client side developers. Client side technologies programming language is javascript and markup language are html and css .

Server side:

Server side development usually refers to back-end web development . back-end web development focused on building application logic ,database ,security etc .back-end web development is called the heart of web development .server side development is happening on behind the scene that's why usually users don't see the server side development .server side programming language are python , java , go , nodejs , php , ruby , C# etc.

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

Answer:

HTTP is a protocol. This protocol governs the structure and language of the requests and responses that take place between clients and servers. The protocol enables you to receive data, including text, images, videos, stylesheets, scripts, and more. Some of the most common types of HTTP protocols are:

GET: GET requests usually read/retrieve data from a web server. Data can be HTML file, images, form etc. Its status code is 200 most of the time.

POST: POST requests are used to send data to the server. Its status code is 201 most of the time.

PUT: PUT request modifies the data in web server. Usually its status code is 200 most of the time.

PATCH: PATCH request is similar to PUT request but it doesn't modify the entire data; rather, it modifies only a part of the data or content of data.

DELETE: DELETE request is used to delete data from the server.

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

Answer:

JSON (JavaScript Object Notation) is a text-based, human-readable data interchange format used to exchange data between web clients and web servers. The format defines a set of structuring rules for the representation of structured data. It uses key-value pairs to organize the data in a hierarchical structure. JSON is language independent, meaning it can be used in any programming language; it is less lightweight than XML and other data formats. It is way more popular than other ways of data exchanging formats.

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

Answer:

Middleware is a layer between front-end and back-end , or between any otherwise discrete software components. It's often responsible for implementing business rules, resolving incompatibility, or transferring messages between software services, but can do anything specified by the particular software architecture.

An middleware example is that it implements api request rate limit .means it checks the how many times user sends request to server and if it crosses the limits.

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

Answer:

The controller is the component that allows the views and the model to communicate with one another . It acts as a mediator. The controller does not require to deal with data logic; it only instructs the model. After getting data from the model, the controller processes it before sending it to the display and explains how to convey it to the user. We note that views and models cannot communicate directly.

In web development a controller is a function or class or any code responding on request and process response.Controller acts as a bridge between a request and a response.