

Part 1: Short Answer Questions

- 1) In web development, client-side and server-side mean the two separate areas where code is executed when a web page is loaded. Client-side code runs on the user's computer, and server-side code runs on the web server. The key difference between the two is that client-side code can be performed without needing any kind of interaction from the server, but server-side code requires the user to send a request to the server before it can be executed.
- 2) An HTTP request is a message sent from a client to a server to obtain a resource, such as a web page, image, or file. HTTP requests are classified into the following types:
 - GET: Used to request a resource from the server.
 - POST: Used to send data to the server, such as when submitting a form.
 - PUT: Used to update a resource on the server.
 - DELETE: Used to delete a resource from the server.
- 3) JSON is a simple data interchange format that people can read and write. It is frequently used in web development to send data between the client and the server. JSON is a text-based format that represents data using JavaScript Object Notation (JSON). JSON objects are made up of key-value pairs, where the key is a string and the value can be a string, number, Boolean, array, or object.
- 4) A middleware in web development is a piece of code that is executed between the client and the server. Middleware is commonly used to handle tasks such as authentication, authorization, and logging. Middleware can be used to improve the security and performance of a web application.

Here is an example of how middleware can be used:

A web application might use middleware to authenticate users before they are allowed to access certain pages. The middleware would check the user's credentials and, if they are valid, would allow the user to access the page. If the user's credentials are invalid, the middleware would redirect the user to a login page.