HTTP Server

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Contents

HTTP Server Model

It explores the fundamental principles behind HTTP (Hypertext Transfer Protocol) servers, explaining their role in facilitating communication between clients and servers over the web.

Code Implementation

It provides a detailed walkthrough of the C++ code implementing the HTTP server. It covers key components such as initializing Winsock, creating a socket, connecting to the server, sending and receiving data, and the overall structure of the client program.

Where is OOPS?

It discusses the advantages and features of C++ that make it a suitable language for server-side applications.

Q&A

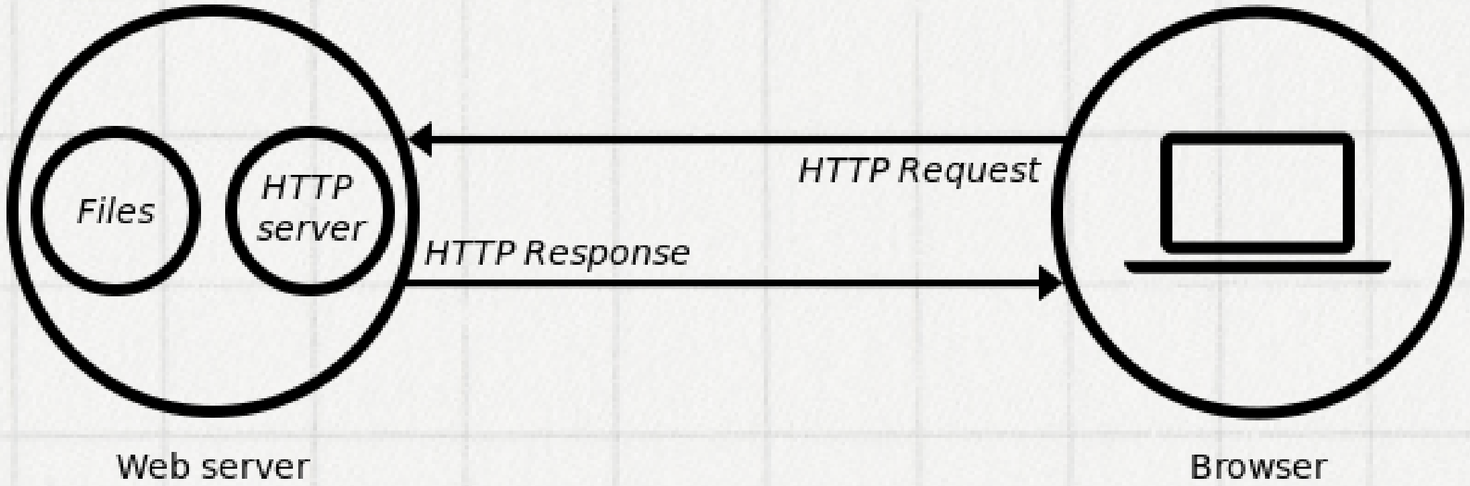
IAsk away your doubts and get a better clarification!

What is HTTP server?

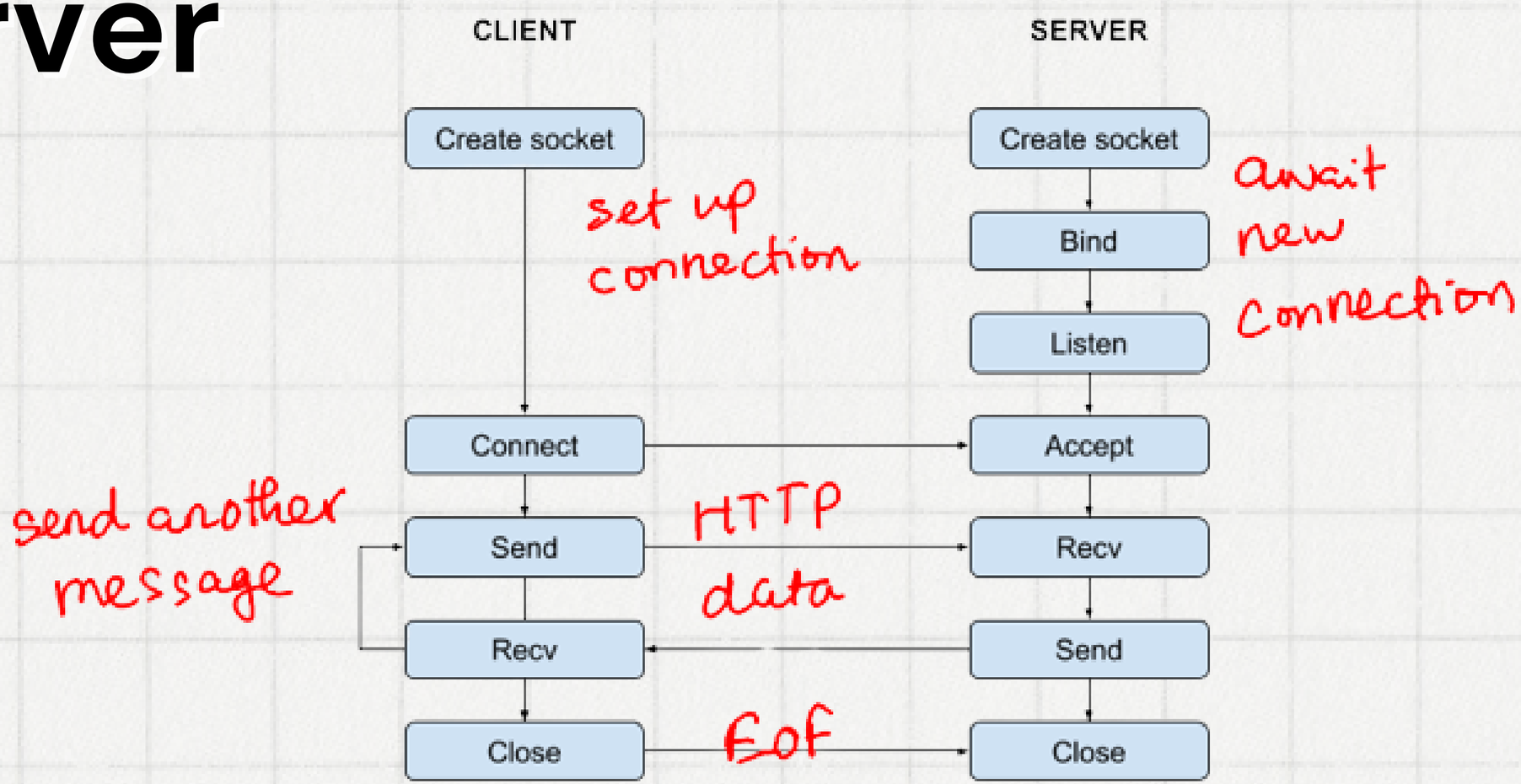
- HTTP stands for Hypertext Transfer Protocol.
- It is a standard for sending and receiving data, be it HTML, JSON, or just plain text over the internet.
- HTTP server is simply a computer that *serves* data over a network via HTTP. It is the basic building block of a web server.

Client and Server

- A **client** is a program that runs on the local machine requesting service from the server. A client program is a finite program means that the service started by the user and terminates when the service is completed.
- A **server** is a program that runs on the remote machine providing services to the clients. When the client requests for a service, then the server opens the door for the incoming requests, but it never initiates the service.
- So, its basically the Client requesting something and the Server serving it as long as its present in the database.



Client and Server



Let’s get our hands dirty with code!!!

Where is OOPS?

- **Abstraction:** The code abstracts away the details of socket communication by encapsulating them within functions. The details of how sockets work are hidden from the main program flow.
- **Encapsulation:** In this code, the use of functions and data (variables like ipAddress, port, sock, etc.) within the main() function represents a basic form of encapsulation.
- **Reusability:** While the code is relatively small, the use of functions allows for the reuse of specific functionality, such as socket initialization and communication, in other parts of the program or in different programs.
- **Inheritance:** The classes student and calculator inherit publicly from the Data class. This means that they inherit the members (attributes and behaviors) of the Data class. Inheritance helps in code reuse and establishing a relationship between classes.

Q&A

Ask Away People!

THANK YOU!