CS 230

Southern New Hampshire University

Module Four Journal

The client-server pattern is an architectural framework that consists of a server and its clients. there are two main components: The client, which is the service requester, and the server, which is the service provider. In the context of our web-based game application, where cross-platform compatibility is crucial, the client-server pattern proves invaluable. By having a central server that processes requests and sends responses, the game can seamlessly run on multiple operating platforms, providing a consistent user experience. One of the biggest benefits of a client-server pattern is the security. Since all data is stored on the server side.

On the server side, using the REST API style allows for independent setup of the client and server as long as they follow the same communication format. the client will send requests to the server and responses will be sent back to the client from the server. By adopting JSON as the communication language in the REST API, the data will be encryption which will add an extra layer of security, the utilization of JSON in the REST API deserves special attention. It serves as the intermediary language between the server and the client, and its encryption capabilities contribute to the overall security posture. This encryption is a safeguard, protecting the transmitted data from unauthorized access and ensuring the confidentiality of in-game communications. The stateless nature of REST systems enhances speed and reliability, as the server doesn't need to keep track of the client's state.

For the client side, it is important to make sure there are not too many clients on the same server and offload graphics and heavy processing, to ensure that the application functions seamlessly. Having too many clients on one server can cause performance issues and result in lagging.

To add new users to the server developers can integrate an add accounts package, enhancing user accessibility, also implementing monthly or weekly VIP packages provides users with additional benefits, such as extra guesses, encouraging user engagement and monetization.

Although the client-server pattern inherently offers security, incorporating HTTPS which stands for HyperText Transfer Protocol Secure it is the secure version of HTTP, which is the protocol used for transferring data between a user's web browser and the website they are connected to, encryption further fortifies the game, especially when users input personal information.

If The Gaming Room requests hosting on additional clients like Xbox and PS4, we would need to adapt the client-side application for these platforms ensuring compatibility with the unique features and constraints of each gaming console.