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CS 230 Operating Platforms Module Four Journal

A client-server pattern can be used to efficiently solve problems like running applications on multiple operating platforms. When using web-based applications, information from the client side sends information to the server using the web browser. The server then receives the information, performs a task, and then sends information back to the user via the web browser. Each interaction between the client and server is independent from one another, allowing the server to be running on one platform and the user to be running on another. A web browser is essentially a window to a server to view information given by the server. Web browsers like Chrome, Firefox, Edge, and Safari are available on multiple platforms, but each one will bring you to the same website. Using this pattern would allow The Gaming Room to have their application be used on multiple platforms.

The server-side can respond to the client in a text-based format, usually in the form of JSON. This format is extended from JavaScript and can be used to temporarily store data from a user or from a website. It can also be used as a data format for any programming language, allowing for cross platforms. Another tool is Dropwizard, which is a Java framework for developing high-performance, RESTful web services. Dropwizard has many libraries, including JSON, to interpret commands and requests between client and server. This allows the application to be not available to the public, ensuring security. REST is an acronym for Representational State Transfer, meaning that the server can not send requests and the user can not send responses.

In order to reach clients on different platforms, developers on the client side are responsible for what the end user sees and interacts with. Developers for the server side should use tools like Dropwizard so the application can be compatible with different languages, thus being compatible with different platforms. One aspect that should be taken into consideration is security. In the Draw it or Lose it application, the Authenticator class is implemented to validate user credentials with a username and password. The Authorizer class then validates the roles, either user or administrator, and allows proper access. If more users were to be added, perhaps stricter rules for creating usernames and increasing the number of administrators may be needed.

Considering that Xbox and PlayStation support cloud streaming, I believe that this application could be implemented on these systems. Consoles used to be strictly disc driven with no servers involved. As technology advanced, internet connections slowly became a requirement to update games to fix bugs. With cloud technology, games can be accessed instantly with no pre-loading or installing, allowing an application from The Gaming Room to be played on these consoles.