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Operating Platforms

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**Client-Server Pattern: Discuss how the client-server pattern can be used to satisfy software requirements and efficiently solve a problem**. Specifically, the web-based game application must be able to be run on multiple operating platforms.

With a client-server pattern we rely on a single host computer and allow it to run all of the software that will allow a client(s) to interact with the server and the software we have running, this allows the client(s) computers to interact and show results from the host computer. Servers are a bit more complex but they do a lot of waiting for the client to do some interaction with the server in order to provide the data that is requested. One of the main things that servers are used for are things like storage server and the like a lot of times these servers are a more powerful (generally besides having a larger storage array they will have a bigger processor sometimes ones that may seems monstrous like a 32 core 64 thread CPU for instance, another thing they have is a lot of ram or volatile memory. Although most times they will have error checking memory.).

**Server Side**: You have developed the application from the server side. **Discuss how the server side provides communication to the client side with REST API style**.

With the application we made, we have a JSON file which is a encrypted which allows a better communication between the server and the client. Given the REST API we made, it allows us to give a lot of data on the server such as the health checker app which allows us to see error messages and how the server itself is running although this is more of a backend approach compared to another type of server such as one developed on BSD which allows all of these things, we did but also gives a nice interface that helps with client support.

**Client Side**: You wrote an application for multiple clients where the multiple environments can interact with the server. **Discuss what is required of the developers so that the application on all three clients is able to be used on the website**. Consider what next steps would entail to develop for the client side of the game application. For instance:

How would you add more users to the database?

Given the server we made, we have a local server that is only broadcasting to our network which in this case is a good thing as it is not a very secure platform and broadcasting an unsecure website could lead to problems happening for your computer as well as you local network. To increase the number of users we would have to resolve the security issues that come with a not very secure local hosted web server, fixing this will allow more users as we broadcast a server into the wider internet and allows for things such as the gaming service.

What other features might you include in the game app?

A lot of things that can increase our game app is strengthening our server and having checks that make sure that the players are have a stable connection as well as making sure the game sessions are encrypted. Some things that would benefit the game is some way to make it more user friendly as we teach them how to play the game while they are playing and then somehow challenging the things we taught them in order to make sure the players have a good time and don’t get frustrated about doing something they were never taught.

What if The Gaming Room asked you to host the application on a fourth and fifth client? For example, on Xbox and PS4.

Given that most console games are special made and generally locked to the given system allowing for the game to be playable, one thing that could help with this emulation is taking our app made on our computer and trying to restrict it and make it more playable for a console by making the video assets less demanding (If they were demanding before), and also figuring out how the consoles would interact with a previously web based application and how they could do a similar thing just using an app in the console itself.