**Memory and storage for Draw It or Lose It**

According to Drime.cloud, there are three main types of storage. There is cloud storage, local storage, and hybrid storage. Cloud storage stores data in an off-site location. These locations are upkept by the storage provider. Cloud storage takes care of hosting, managing, and security. This allows for 24/7 access to all information from the cloud. Local storage, on the other hand, puts all the work back into the company. This means that upkeep, management, and security are all done within. It also only allows the company to access this server, so security is greater compared to cloud storage. While there is higher security, the company would also need to hire another person to work and repair any issues with the server. The last is a hybrid of these two options. Hybrid storage takes the positives from both cloud and local storage. According to storedbits.com, hybrid storage offers “Faster bootup and file access time, high capacity, and smart data management.” This storage type also allows for growth in case the team wants to add more pictures. This is because of its performance capabilities, along with the bulk storage it offers. While local storage allows for security and a more hands-on approach, the game needs more storage and speed over privacy. Following this train of thought, this leads us to using either cloud or hybrid storage. Both would be good options, but the most effective would be cloud storage. There is usually a monthly fee attached, but no new hardware is required, along with no physical upkeep. This would put the storage into the hands of the cloud owner.

In the case of Draw It or Lose It, not only will the pictures need to be stored, but also any assets, players in short-term memory, and any created files. Pretty much the whole game will need to be stored to be accessed anywhere. For storage within the game, the 200 photos teaching being 8-megabyte files, we would need at least 1600 megabytes, but we would need larger storage than that. This increase in storage would account for any new pictures added, data added by the player, such as team names, player names, and any additional storage that might be taken up by the rest of the game. Since the game needs to be accessed anywhere in the world, we use cloud storage because of its accessibility. Now we can handle user input, it seems that we would need a short-term way of saving memory from round to round. We wouldn’t need to store this memory over multiple games, since the players could change for each game, and each game has its unique instance.

Looking into peerdh.com, memory allocation “is the process of reserving a portion of memory for your game to use”. There are two types of allocation, which are static and dynamic, and as the name suggests, static compiles the memory at the start of the program when the program first begins, while dynamic compiles during the program. Each asset is a static allocation, while player input would be considered dynamic, which in turn allows for the system to properly give the correct amount of storage to each part of the game. On the other hand, storage is used to hold game assets. This is the game itself, being able to be added to or taken away as the game develops. So, enough storage to properly run the game is crucial when it comes to choosing which cloud-based server to lean towards. Overall, I would recommend cloud-based storage for its ability to grow with the game, its speed, and less maintenance for Draw It or Lose It.

**Citations**

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