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CS-230 Operating Platforms

Module 6 Assignment: Memory and Storage Management

Memory and storage are vital components to any application, program, or software being created. The program being created could easily be rendered unusable if these two important aspects are not thoroughly thought though. Memory is how the device moves information back and forth and accesses the files needed. This is essentially what is known as RAM (random-access memory). This greatly affects performance because if there is not enough RAM then information will not be access quickly enough for the program to work properly. In the case of Draw It or Lose It, there will be at least 200 high-definition images for the game to generate. With the proper amount of memory, these images will easily be accessed for the game to work quickly and to allow for accurate competition. Most modern computers come with at least 8 gigabytes of RAM installed which would be more than enough for a game like Draw It or Lose It. Now the customer’s device specifications would be different than the server’s specifications. With Draw It or Lose It being web-based game and relying on a server this would change how memory is accessing the information. The server would have to cache images for the RAM to load as needed rather than RAM accessing photos directly from a drive or folder.

Storage become important because this is where files and discs are stored. With each of the 200 images for Draw It or Lose It being 8 megabytes, there would be a minimum requirement of at least 1.6 gigabytes just for the photos alone. If the game was downloadable to a customer’s device, this would increase the amount of storage required due to including the program’s code as well as any other device specific preferences. Since Draw It or Lose It is server based, the server will require the storage for the program, the photos, and the individual user accounts while the customer would need the storage for the caches of photos to be temporarily saved to their device while they play the game.

The main difference between memory and storage is that memory is the performance of the device to locate information while storage is the actual placement of information on the device. You can think of it like a brain. Storage is the brain itself while memory is quickly remembering that information when it is needed. Both aspects can be updated easily with different parts, such as RAM sticks and different types of hard drives. There is also cloud storage, while even though it does not increase RAM, it does allow for storage that is not located on the device itself. Instead, it is centrally located on a separate server to be accessed by the customer as needed.