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Operating Systems

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Chapter 7 Exercises

1. Secondary storage is the place where data is stored in nonvolatile media such as disk and flash memory. USB is a very common form of storage other than hard disk because they are so small and portable.
2. Five platters
   * 1. There are three recording services that are involved.
     2. With every recording there are heads to 6 heads that do the read and write
     3. 12 arm
3. Dedicated device that has been transformed into a shared device through the use of spooling.
4. DVD blue ray disk uses the red lasers along with the red ray
5. Buffering is a region of memory used to temporarily store data while it is being moved from one place to another. Blocking is a storage saving and I/O saving technique that groups individual records into a block that stored and retrieved as a unit.
6. Seek time is the time that is required to position the read/write head on the proper track from the time the I/O request is received by the device. Search time is the time it takes to rotate the disk until the request record is under the read/write head. This is also known as a rotational delay.
7. The total seek time is .85 m/s
8. Total time for the virtual cylinder is 5.7 m/s
9. I would recommend it being a device or disk that is easy to use for the system designer and the mechanism I would use is the disk to make sure everything is where it is supposed to be.
10. Raid is an acronym for redundant array of independent disks a group of hard disks controlled in such a way that they speed up read access on secondary storage devices and aid in data recovery.
11. Secondary is used just in case the primary storage does not do what it is supposed to do.