Operating Systems - Review Questions 4

Deadline: Dec. 18, 2022

1. Consider a disk queue with requests for I/O to blocks on cylinders 183, 98, 14, 122, 37, 67, 124, 65, in that order. If the disk head is initially at cylinder 30, what would be disk scheduling using FCFS, SCAN, and C-SCAN scheduling?

2. Consider a system that supports 5000 users. Suppose that you want to allow 4990 of these users to be able to access one file. How would you specify this protection scheme in UNIX-like (e.g., Linux) OS?

3. Why must the bit map for le allocation be kept on mass storage, rather than in main memory?

4. Consider a system that supports the strategies of contiguous, linked, and indexed allocation. What criteria should be used in deciding which strategy is best utilized for a particular file?

5. Explain how the VFS layer allows an operating system to support multiple types of le systems easily.