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1. Problem Set

1. Explain why SSDs often use an FCFS disk scheduling algorithm.

    SSDs don't have moving parts, so issues such as seek time and rotational latency have little to do with performance. Therefore, a simple FCFS policy is enough for SSDs.

2. Compare the throughput achieved by a RAID level 5 organization with that achieved by a RAID level 1 organization for the following:

    a. Read operations on single blocks

    b. Read operations on multiple contiguous blocks

    (a) RAID 5 with one parity block for every set of four blocks can support four to five operations simultaneously. RAID 1 consists of two disks can support two operations simultaneously.

    (b) RAID 5 can have better bandwidth for accessing, since the contiguous blocks can be accessed simultaneously. This kind of bandwidth improvement can't be implemented by RAID 1.