

Problem Set 27

CS 311

Due Apr. 28, 2014

Due at the beginning of class in hardcopy.

Sections 12.4–6

1. Contrast the performance of the three techniques for allocating disk blocks (contiguous, linked, and indexed) for both sequential and random file access.
2. Some file systems allow disk storage to be allocated at different levels of granularity. For instance, a file system could allocate 4 KB of disk space as a single 4 KB block or as eight 512 byte blocks. How could we take advantage of this flexibility to improve performance? What modifications would have to be made to the free-space management scheme in order to support this feature?