Problem Set 10

CS 411

Due at the beginning of class on the first class day of the following week.
Sections 5.4–8

1. Which of the following scheduling algorithms could result in starvation?

   (a) First-come, first-served

   (b) Shortest job first

   (c) Round robin

   (d) Priority

   Explain your answer.

2. Discuss the tradeoffs between processor affinity and load balancing in a multiprocessor CPU scheduler.

3. The Linux Completely Fair Scheduler (CFS) is fair at the task level, but can be exploited by a user who runs a large number of tasks. Explain the nature of this exploit and suggest a mechanism that would counter it.