

Problem Set 4

CS 311

Due at the beginning of class the following Monday in hardcopy.
Sections 2,6,7,10

1. Compared to the monolithic kernel approach to operating system design, what is the main advantage of the microkernel approach to operating system design? How do user programs and system services interact in a microkernel architecture? What are the disadvantages of using the microkernel approach?
2. Consider booting a Linux kernel using GNU GRUB as the boot loader.
 - (a) Where is the first stage bootloader stored on disk and how is it loaded into memory?
 - (b) What are the responsibilities of the second stage loader?
 - (c) Briefly describe the two phases of kernel load.