CSCI 3323 (Principles of Operating Systems), Fall 2020
Reading Quiz 8

Credit: 10 points.

1 Reading

Be sure you have read, or at least skimmed, Chapter 5.

2 Instructions

Answer the questions below using *only* the course textbook (i.e., no Web searches). Please work independently rather than in groups, and include the Honor Code pledge in what you turn in, either the full pledge or just the word "pledged".

You may write out your answers by hand and scan them, or you may use a word processor or other program, but please submit a PDF or plain text via e-mail to my TMail address. (No links to shared files on Google Drive please.) Please use a subject line that mentions the course and the assignment (e.g., "csci 3323 quiz 8" or "O/S quiz 8").

3 Questions

1. (2 points) The textbook talks about "block devices" and "character devices". What's the difference between them? Do all devices fit neatly into one category or the other?

2. (2 points) The textbook disusses I/O using ports versus memory-mapped I/O. Which one one pretty much requires use of assembly language?

3. (2 points) In Windows different (logical) devices are accessed via drive letters. In UNIX there's no such thing, so how does the system access different devices?

4. (2 points) Device drivers are sometimes written by device manufacturers rather than operating system developers. Given that in some sense drivers are part of the O/S, how can that work? I.e., what about the structure of I/O software of I/O software makes it feasible?

5. (2 points) Discussions of the X Window System sometimes mention an "X server" and "X clients". If you're using X to run a graphical program on a remote computer, which of these runs on the local machine and which on the remote machine?