

# CSCI 3323 (Principles of Operating Systems), Fall 2021

## Reading Quiz 1

**Credit:** 15 points.

### 1 Reading

Be sure you have read, or at least skimmed, Chapter 2 of the textbook.

### 2 Instructions

Answer the questions below using *only* the course textbook — 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”. (Please put this in the same document as your answers, so I don’t overlook it.)

You may write out your answers by hand and scan them, or you may use a word processor or other program, but please submit PDF or plain text in the “turn-in” folder I set up for you on Google Drive. (So, no word-processor files and no links to other Google Docs. This is a change from how I’ve asked students to turn in work in previous semesters, meant to reduce both the chance of mistakes on my part and the amount of time I spend managing multiple file formats.)

### 3 Questions

1. (2.5 points) What name does the textbook use for the techniques that make it possible to have open more applications than there are processors?
2. (2.5 points) The textbook shows an example of a program that obtains memory with `malloc()`. When more than one copy of this program is run, all report the same address for the space returned by `malloc()`. Does that mean all programs share the same physical memory, and if not, what term does the textbook use for the techniques that make it possible for them not to?
3. (2.5 points) In the context of concurrency, what does “atomically” mean?
4. (2.5 points) What is the term the textbook uses for the part of the operating system that organizes the contents of an I/O device such as a disk?
5. (2.5 points) One design goal of an operating system is to provide something convenient and easy to use. What are some other goals? (List at least two. Don’t worry about listing them all.)
6. (2.5 points) What’s the difference between a library call and a system call, and why is it important or useful to make this distinction?