

# CPSC 3125, Operating Systems Homework 21

## Chapter 27, *Operating Systems, Three Easy Pieces*

### Readings

Read chapter 27 in the *Operating Systems, Three Easy Pieces* book.

### Discussion Questions

Answer the discussion questions in writing.

1. What are the arguments to `pthread_create()`? What is the return value? What does this function do?
2. What are the arguments to `pthread_attr_init()`? What is the return value? What does this function do?
3. What might be some of the problems when a multi-threaded program returns indeterminate results? There are at least two specific ones mentioned in this chapter. Please be specific in your answer.
4. What are the arguments to `pthread_mutex_lock()`? What is the return value? What does this function do?
5. What are the arguments to `pthread_mutex_trylock()`? What is the return value? What does this function do?
6. Give a simple definition of *condition variable*? Why do we have condition variables?
7. When using `gcc` to compile a multi-threaded program, what flag do you need to include on the command line? What header does your program need to `#include`?