

Assignment 5 – Survey and Concurrency

Question 1: Survey (1 point)

Have you filled in the surveys on Canvas?

Answer “Yes” if you do; otherwise, “No” (then you will lose points).

Question 2. Threads, Mutex, and Condition variable (2 points)

Read OSTEP Ch27 (<https://pages.cs.wisc.edu/~remzi/OSTEP/threads-api.pdf>) and answer questions below.

2.a Why “never return a pointer which refers to something allocated on the thread’s call stack” (page4, Ch27, OSTEP)?

Explain why in 2-3 sentences.

2.b Use your own words to explain this line of code:

```
pthread_cond_wait(&c, &l)
```

where “c” is a condition variable and “l” is a mutex.

Explain in 2-4 sentences.

Question 3. Read Mike Dahlin's "Basic Threads Programming: Standards and Strategy" (3 points)

(<https://naizhengtan.github.io/24spring/notes/programming-with-threads.pdf>) and answer questions.

Write down the six rules, or sometime called "the six commandments".