

1.

- Line: 57
- Modification: Write “pthread\_cond\_wait” instead of “pthread\_cond\_signal”.
- Rational: We are waiting to be signaled that the queue is no longer full. For that we need to wait on the full condition variable, not signal it. Also, it causes a compilation error this way.

2.

- Line: 59
- Modification: Move this line above line 56.
- Rational: A lock must be held when calling wait and signal with CV. Otherwise race conditions on the CV can occur.

3.

- Line: Between 77 and 78
- Modification: Add line “pthread\_mutex\_lock(&Queue\_lock);”
- Rational: Same as error 2.

4.

- Line: 83
- Modification: Change “pthread\_mutex\_unlock” to “pthread\_cond\_signal”.
- Rational: This is where the program should be signaling other threads that the queue is no longer full. Also “full” is not a mutex but a CV.

5.

- Line: 88
- Modification: Change “pthread\_cond\_signal” to “pthread\_mutex\_unlock”.
- Rational: The thread should be unlocking here after adding a consuming from the queue and signalling any variables. Also “Queue\_lock” is not a CV but a mutex.