

# Threads Lab II

CS 245

Oct. 4, 2002

1. Download `Synch1.java` from the class home page. Read through the program documentation, so that you understand what the program does. Compile and run it.
  - (a) What are the three synchronization problems possible here?
  - (b) Following the execution of `consumer.start()` in `init()`, exactly how many threads are executing?
2. Download `Synch2.java` from the class home page. Compare the implementation of the `Queue` class there with the original `Queue` class. This is the only change between the two programs. Compile and run `Synch2.java`.
  - (a) Notice there are two commented-out declarations in the `Synch2` class as well as two commented-out statements in that class' `init()` method.

Predict what will happen if you allow those four statements to execute. Confirm your prediction by removing the comment symbols and compiling and running the program. Re-insert the comment symbols.
  - (b) A queue of depth one isn't very useful. Modify the implementation of the `Queue` class so that it can store up to five items.

To test your revised `Queue` class, modify the `Producer` class so that it produces 20 integers and sleeps for only 100 ms. between producing items.