

**CS520—Spring 2013—Homework 8**  
**Wednesday March 27**

**Question 1**

Write pseudo code for a function to implement a *barrier* for a set of  $n$  threads. By *barrier*, I mean that threads that call the function block until all  $n$  threads have called the function. That is, no threads proceed through the barrier until all threads reach the barrier.

Hint: You will want to associate some data with the barrier that will monitor, for instance, how many threads have reached the barrier so far.

Ideally your solution should be able to repeatedly be called by the set of threads. That is, re-set the barrier when the group of threads is let through the barrier.

You may assume the existence of a *signalAll* facility that releases all threads waiting on a condition variable.