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Question one:

The Java does not have a thread safe linked list because the linked list data structure does not work well in parallel systems. They must be locked to be read/written from. A queue and a stack would work very similarly to a Linked list. The only functionality that you gain from a linked list is the ability to get a specific index from the list, the problem is keeping track of the index in a concurrent program making get index virtually useless.

Question four:

The way a spinning lock class works is it has an atomic boolean (It is by definition thread safe because it uses a memory bus block to switch state). When the lock method is called it will loop in a while continuously until the atomic bool states that the lock is free. The lock is free by another process calling the unlock statement (turns the atomic bool state to unlocked) then another process can pick up the lock and then do work. This lock is not fair.