Assignment 2

Note: you must not use **wait()**, **notify()**, or **synchronized**, or any of the java provided locks, semaphores etc, other than **Atomic** things – the whole point of this assignment is to write a lock using only atomic compare and set operations.

There are two kinds of locks, those that put the calling thread to sleep if it cannot acquire the lock, and those that spin if the calling thread cannot acquire the lock (so the calling thread loops until the thread can acquire the lock).

Write a Java class representing a **spin lock** with two methods: **lock** and **unlock.**

Carefully explain how and why your lock works. Be as formal and precise as you can – **I will be looking at your explanation more than your code**.

Also write a **main** method showing your lock being used and functioning correctly.

Hint: You will need to use some kind of atomic compare and set operation, and understanding how they work is the heart of the assignment.