

## CS681 Homework 12

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## Problem 1

```

public class Singleton{
    private Singleton(){};
    private Singleton instance = null;
    private static ReentrantLock lock = new ReentrantLock();
    public static Singleton getInstance(){
        lock.lock();
        if(instance==null)
            instance = new Singleton ();
        lock.unlock();
        return instance; } }

```

If you remove the above three red lines, this code becomes thread unsafe. (Race conditions can occur.) Explain a potential race condition with a diagram like in a previous slide.

## Solution

