Exercise: Explicit Locks

1) The API specification for the java Platform ReentrantReadWriteLock states:
*"Reentrancy also allows downgrading from the write lock to a read lock, by acquiring the write lock, then the read lock and then releasing the write lock. However, upgrading from a read lock to the write lock is **not** possible."*
Do you think that such upgrade should be possible/is needed? Motivate your answer.

2) Write a program where multiple threads read and write to a sequential data structure (e.g. ArrayList) using java.util.concurrent.locks framework. Write the same program, but now using Synchronized instead of the locks framework.   Play with the number of threads (readers and writers) and note differences in the performances.