1, Why the provided solution does NOT work? Which statement(s) cause the program to hang up?  
**The 2nd thread can never execute because the waiting all happens in the lock, and the 1st thread spends its entire lifetime in the critical section of code**

2, How did you fix that problem?   
**Moved the waiting to outside of the critical section while leaving any modifications to inside the critical section.**

3, How does your changes fix the problem? ( hints: with regard to the lock )  
**Threads wait until the lock is free, then enter the critical section and modify the lock therein**