

Colloquium 5 - Concurrent Programming

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1 TF-1

- (a) False, you can define recursive functions and call functions of the same monitor without getting a new lock.
- (b) Not sure (True)
- (c) False, interleaving its still possible.
- (d) Yes. With locks at the begining and end, only problem are recursive calls.

2 TF-2

- (a) Datarace if line 14 is executed before l.6.
Fix: Use the same lock for accesses to b.
- (b) Deadlock, if mainagent gets lock m2 and a1 gets lock m1.
Fix: Use the locks in the same order everytime.
- (c) Datarace, even if it doesnt impact the output, the program contains a paralell read and write on the same variable Fix: Use the lock for l. 13 aswell.

3 TF-3

See implementation