

ConcAlgo 2010: Exercise Set 11

December 14, 2010

1 Problem 1

Consider the code of the N-process test-and-set algorithm on slide 22. Prove that there exists an execution in which a losing process returns *before* the winning process starts the execution. Fix the code on slide 22 to avoid this problem, and show that your implementation is linearizable.

2 Problem 2

What is the expected number of rounds that the consensus algorithm on slide 31 runs for, given the parameter ρ of the shared coin?