

FAIR READERS-WRITERS PROBLEM with Semaphores -

Semaphore ReaderCount, Mutex, Order;

Reader:
P(Order)
P(ReaderCount)
#Readers += 1
if (#Readers == 1) P(Mutex)
V(Order)
V(ReaderCount)
(Write)
Critical Section (Read)
P(ReaderCount)
#Readers -= 1
if (#Readers == 0) V(Mutex)
V(ReaderCount)

Writer:

P(Order)
P(Mutex)
V(Order)

Critical Section

V(Mutex)