

(c)

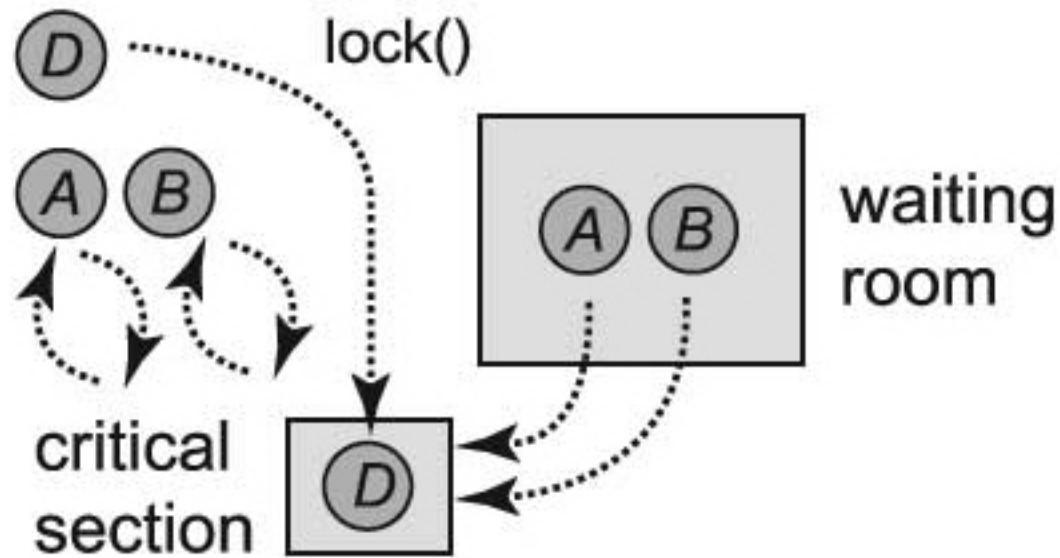


FIGURE 8.4C A schematic representation of a monitor execution. In part (a), thread *A* has acquired the monitor lock, called `await()` on a condition, released the lock, and is now in the waiting room. Thread *B* then goes through the same sequence of steps, entering the critical section, calling `await()` on the condition, relinquishing the lock, and entering the waiting room. In part (b), both *A* and *B* leave the waiting room after thread *C* exits the critical section and calls `signalAll()`. *A* and *B* then attempt to reacquire the monitor lock. However, thread *D* manages to acquire the critical section lock first, and so both *A* and *B* spin until *D* leaves the critical section. Note that if *C* had issued a `signal()` instead of a `signalAll()`, only *A* or *B* would have left the waiting room, and the other would have continued to wait.