

(c)

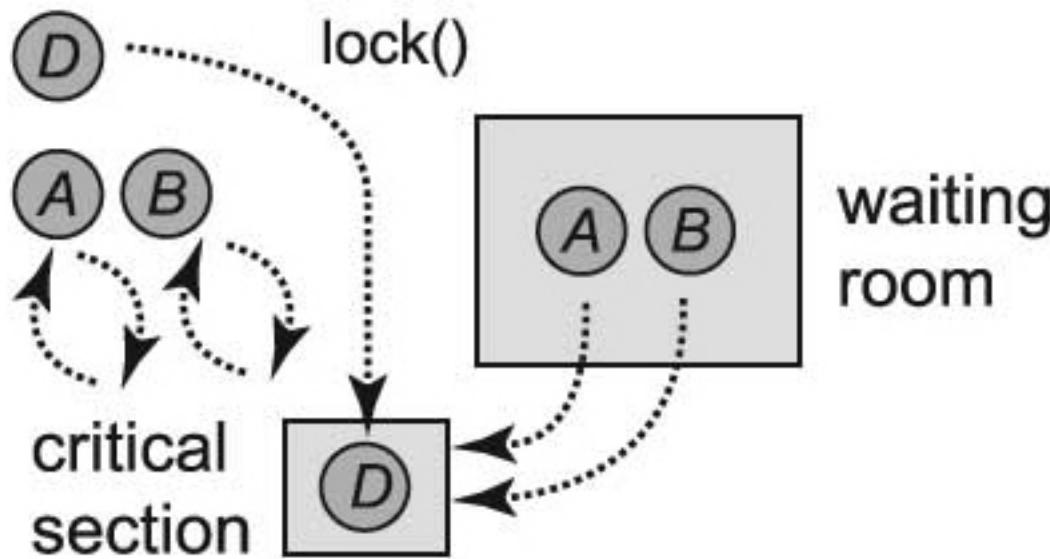


FIGURE 8.4C A schematic representation of a monitor execution. In part (a), thread A has acquired the monitor lock, called `await()` on a condition, released the lock, and is now in the waiting room. Thread B then goes through the same sequence of steps, entering the critical section, calling `await()` 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.