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COMP 3500 HW1

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* 1. P1: x = x – 1 => x = 9

P2: x = x – 1 => x = 8

P1: x = x + 1 => x = 9

P1 into if statement

P2: x = x + 1 => x = 10

P1: “x is 10”

* 1. P1: LD R0, X => x = 10

P1: DEC R0 => x = 9

P2: LD R0, X => x = 9

P2: DEC R0 => x = 8

P1 into if statement

P1: “x is 8”

1. Binary semaphores are easier to implement and are restricted to only having 0 and 1. General semaphores, also called counting semaphores, have a variable k whose value is equal to the number of items in the buffer.
2. A monitor consists of a lock and condition variables. It allows a semaphore to have mutual exclusion and the ability the block due to a condition becoming true. Monitors can also signal other threads that their condition has been met.
3. Two operations can be performed on semaphores: wait and signal. Wait is a locking mechanism and signal/acquire is an unlocking mechanism. When the semaphore is locked, it is not accessible, and when it is unlocked, it is accessible to users.