

UNI CS 3430

Operating Systems

Suggested Exercises 3 (Due on 2/12 in class)

1. Suppose each C statement is atomic in the following code. Create the execution order tree with all possible variable values. (See slide 11 in the Cooperating Threads lecture.)

Thread A	Thread B
<code>x=3;</code>	<code>y=2;</code>
<code>x=y-1;</code>	<code>y=x+1;</code>

2. Why does locking via disabling interrupts not work on multi-processor architectures?
3. Write pseudo code to implement a “Too Much Milk” solution with two threads (robots) using the `test_and_set()` operation to implement mutual exclusion. Remember to define the `Lock::Acquire()` and `Lock::Release()` functions