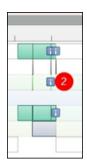
Home / Study Guide Comments

viaskbelay (schikana (10, 30)), // in the book, pg 170

- 1 Secti
- 2 Secti
- 3 Secti

- Also, that description is inconsistent with the Timeline, as the Timeline does not show TaskA returning the mutex and immediately taking it.
 - Instead, the Timeline shows about a 5ms delay between when TaskA returns and takes the mutex.
 - The Timeline shows that TaskA runs briefly at approximately -35ms, just before point (2). Point (2) is at approximately -30ms. A screenshot is below.
 - It appears TaskA returns the semaphore at -35ms. This is apparent because TaskC is waiting on the semaphore then, and at that point, TaskC's row is shaded grey. The grey shading indicates TaskC is marked Ready for execution. The mutex it's waiting for is now not taken.
 - However, at (2), TaskA takes the mutex. And, at (2) TaskC is no longer marked Ready for execution (TaskC is no longer shaded grey). This is because the mutex TaskC is waiting for is taken by TaskA.



- **Bug** in the book, page 195
 - In the Terminal and Timeline windows, the corresponding events shown have different timestamps.
 - I'm guessing they are not the same events. For each event in the Terminal window, its
 corresponding event in the Timeline window has a greater timestamp. The only way I know for
 that to happen is by using SystemView's "reference" time-feature.
 - Regardless, using different time-frames in the two windows is confusing.
- Additional info, page 195
 - This additional-info shows how a mutex is allocated, when two different tasks have requested it, and one task has higher priority than the other. In that case, the higher-priority task is given the mutex, even if the lower-priority task requested the mutex first.
 - o For example, task X has higher priority than task Y.
 - Task X holds the mutex, and blocks
 - Task Y requests the mutex and blocks
 - Task X releases the mutex
 - Task X requests the mutex, and it is given the mutex
 - o The behavior is specified in the FreeRTOS doc, *Mastering the FreeRTOS Real Time Kernel*. It's in the section, "Mutexes and Task Scheduling".
 - If two tasks of different priority use the same mutex, then the FreeRTOS scheduling policy makes the order in which the tasks will execute clear; the highest priority task that is able to run will be selected as the task that enters the Running state.

3 Section: Using Software Timers (pg 200-208)

- Typo in the book, page 202
 - o "oneShotCallBack() will simply turn off the blue LED after 1 second has elapsed"
 - o It should state 2.2 seconds (the value calculated by: (2200/portTICK PERIOD MS))
- **Bug** in the book and code (mainSoftwareTimers.c), pages 204-205
 - o Problem:
 - SystemView can't record the events shown in the book, for mainSoftwareTimers.c
 - With this code, it's not possible to start SystemView's Record feature in time for it to record
 the green LED being turned-on for the first time, nor to record the blue LED being turned
 off.
 - The figure on mage 201 chaws System View recording these events but I don't think it's

