ECEN 5623
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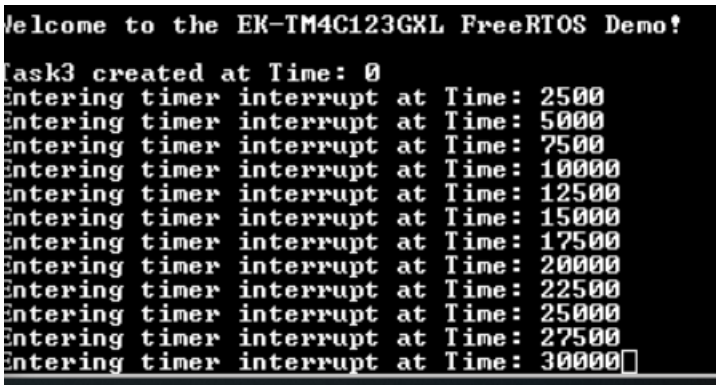
Homework set 3
Platform: FreeRTOS running on the TI TIVA board

1. Create a user-defined interrupt handler for the timer ISR and a task for processing. The timer should be scheduled on a regular basis, and the interrupt handler should signal the processing task. To ensure that the timer is being triggered with the correct periodicity, pass the interrupt timing to the processing task.



2. Create a pair of tasks that signal each other. The first task performs some computation, signals the other task, and waits for a signal from that task. The second task repeats the same pattern so that they alternate. Each task should complete a defined amount of work, such as computing a specified number of Fibonacci values. Profile each task so that one task is executing for 10 ms and the other for 40 ms.

3. Modify the timer ISR to signal two tasks with different frequencies: one task every 30 ms and the other every 80 ms. Use your processing load from #2 to run 10 ms of processing on the 30-ms task and 40 ms of processing on the 80-ms task.