



Summer Semester, 2021

CSE 345/CSE 347: Embedded Systems

Lab. 5: Adding Multiple Tasks

Goals of this Lab:

- Create multiple tasks
- Adding the Idle Task for the freeRtos

Task 1: Idle Task:

- When the OS is not doing any task, it falls back to this task when there are no tasks being executed at the time
- Start by adding `#define configUSE_IDLE_HOOK` in the `FreeRTOSConfig.h`, this will allow the idle task hook.
- Write the Idle Task function according to the following prototype:
 - `void vApplicationIdleHook();`
- In the Idle task, toggle the blue LED
- This task would be the same as the other tasks but you will not need to add `xTaskCreate`

Task 2: Task Creation

- Start by enabling all LEDs on
- Create 2 tasks that has the same priority
- Task 1 shall toggle red LED only - 1000 ms
- Task 2 shall toggle green LED only - 2000 ms
- Draw the expected time line for the tasks
- Draw the observed time line for the LEDs