

CSE411: Embedded Systems

Lab (5): Creation of Multiple Tasks using FreeRTOS

Goals of this Lab:

- Creating multiple tasks using FreeRTOS.
- Drawing the expected timing diagram of the tasks.

Task 1: Create a new FreeRTOS project on Keil:

Refer to lab sheet 2 to setup a new FreeRTOS project using Keil.

Task 2: Initialize Tasks

1. Create three tasks: one toggles the red LED on the Tiva c launchpad every second, one toggles the blue LED every two seconds, and the final task toggles the green LED every three seconds.
2. Draw by hand the expected timing diagram of the tasks.
3. Draw by hand the expected timing diagram of the output color of the LEDs.
4. Upload the code on the Tiva c launchpad and validate the timing diagrams.