Real-Time and Embedded Systems Design – Lab 1 Report Submission

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```c
#include <stdint.h>
#include <stdbool.h>
//#include "driverlib/sysctl.h"
//#include "Task1.h"
//#include "driverlib/systick.h"
//#include "driverlib/interrupt.h"
//#include "inc/hw_memmap.h"
//#include "inc/hw_gpio.h"
//#include "inc/hw_types.h"
#include <stdio.h>
#include <stdlib.h>
//#include "driverlib/timer.h"
//#include "driverlib/gpio.h"
#include "tm4c123gh6pm.h"

#define LED_RED    (1U << 1)
#define LED_BLUE   (1U << 2)
#define LED_GREEN  (1U << 3)

static uint32_t volatile l_tickCtr;
uint32_t start;
uint32_t ticks_red=5; //LED_RED TICKS
uint32_t ticks_blue=10; //LED_BLUE TICKS

void main_blinky1(){
  while(1){
  GPIO_PORTF_DATA_R = LED_RED;
  __asm("CPSID I");
    start=l_tickCtr;
    __asm("CPSIE I");
    while((l_tickCtr-start)<ticks_red){}
    GPIO_PORTF_DATA_R &= ~LED_RED;
    __asm("CPSID I");
    start=l_tickCtr;
    __asm("CPSIE I");
    while((l_tickCtr-start)<ticks_red){}
  }
}
void main_blinky2(){
  while(1){
  GPIO_PORTF_DATA_R = LED_BLUE;
  __asm("CPSID I");
    start=l_tickCtr;
    __asm("CPSIE I");
    while((l_tickCtr-start)<ticks_blue){}
```

```
        GPIO_PORTF_DATA_R &= ~LED_BLUE;
        __asm("CPSID I");
        start=l_tickCtr;
        __asm("CPSIE I");
        while((l_tickCtr-start)<ticks_blue){}
    }
}
int main()
{
        __asm("CPSID I");
        SYSCTL_RCGCGPIO_R=0x20;
        GPIO_PORTF_DIR_R=0x0E;
        GPIO_PORTF_DEN_R=0x0E;
        NVIC_ST_RELOAD_R=0xFFFFFF;
        NVIC_ST_CTRL_R=7;
        __asm("CPSIE I");


        main_blinky1();
        main_blinky2();


}
void SysTick_Handler(void) {
        ++l_tickCtr;
}
```