Dylan Thornburg

Prelab:

This week's prelab must be done individually by each student.

You need to refamiliarize yourself with the STM32L476VGT6 Reference manual and the other Cortex M4 and STM documentation. Review the documents and answer the following questions.

1. What bits in the RCC_AHB2ENR register must be set to allow use of GPIO ports B and E?
   On a Bits 0-31 scheme:
   Bit 1 and bit 4
   RCC_AHB2ENR_GPIOBEN EQU (0x00000002)
   RCC_AHB2ENR_GPIOBEN EQU (0x00000010)
2. What is the address of the RCC_AHB2ENR register?
   0x4002104c
3. Which GPIO registers need to be configured in order to properly configure the red and green LED output pins to control those LEDs?
   We need to configure GPIO MODER and GPIO ODR. GPIO OTYPER controls reset states and should be included but I do not think you NEED them for configuration.
4. Which bits must be set and/or cleared in each of those GPIO registers in order to configure the read and greed LEDs respectively?
   On a Bits 0-31 scheme:
   CLEARED:
   In GPIO MODER: red led = 4th and 5th bit; green led = 16th and 17th bit
   SET:
   In GPIO MODER: red led = 4th bit; green led = 16th bit
   In GPIO ODR: red led = 2nd bit; green led = 8th bit
   Source:
   GPIO_MODER_MODER2 EQU (0x00000030)
   GPIO_MODER_MODER2_0 EQU (0x00000010)
   GPIO_MODER_MODER2_1 EQU (0x00000020)

   GPIO_MODER_MODER8 EQU (0x00030000)
   GPIO_MODER_MODER8_0 EQU (0x00010000)
   GPIO_MODER_MODER8_1 EQU (0x00020000)

   GPIO_ODR_ODR_2 EQU (0x00000004)

GPIO_ODR_ODR_8 EQU (0x00000100)

Prelabs must be turned in by the Sunday before lab at 5PM.