Iteration 1: Homework 1

- Create a TestLED.c file
- Use TDD to implement LED.c
  - LED_Init
    - This is the only function required for now
    - It should turn on all the LED's
- Verify with "ceedling test:LED"

Notes on How The Registers Work

(To save you from having to look it all up)

- The LED_PORT is register LPC_GPIO1
  - Assign LED_PORT->FIOSET to a uint32_t mask of bits to set high
  - Assign LED_PORT->FIOCLR to a uint32_t mask of bits to set low
  - Assign LED_PORT->FIODIR bits high for outputs and low for inputs. All bits are affected by writes to this register.
- The Bits to drive the LED's are 18, 20, 21, and 23
- Drive the bits high to turn the LED's on
- You may want to use the macro BIT_TO_MASK
- The LED Pin Select register is LPC_PINCON->PINSEL3. If you use the following macro with bits 18, 20, etc, it will give you the mask to use for this register. CLEAR the bits to select those pins as GPIO

```
#define LED_PIN_BIT(bit)   (0x3u << ((bit & 0x0F) << 1))
```

- The LED Pin Mode register allows us to configure for pulldowns. Clear all the bits using the same macro