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/*
* Title: gpio.h
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* Lab: ENEL 387-091
*/

#include "stm32f10x.h"
#include <stdint.h>
#include <stdbool.h>

//Retrieves the states of the four DIP switches
//Bits are ordered from left to right to match DIP switch
uint16_t getBits_SW(void);

//Retrieves the states of the four push buttons
//Bits are ordered left to right to match PB's meaning...
//      RED_PB = Bit 3
//      BLACK_PB = Bit 2
//      BLUE_PB = Bit 1
//      GREEN_PB = Bit 0
uint16_t getBits_PB(void);

uint8_t getUSER_PB(void);

//Sets the bits of the LED's
//Parameters: unint32_t (the bits for the desired LED states)
void setBits_LED(uint32_t);

void setBlueLED(uint32_t ledState);

void setGreenLED(uint32_t ledState);

//Configures a specific pin on a specific port for input
//Returns true if successful, returns false if port/pin combo was bad
//Parameters: char (the letter corresponding to the port)
//                  int (the number corresponing to the pin)
bool configGPIO_Input(char, int);

//Configures a specific pin on a specific port for output
//Returns true if successful, returns false if port/pin combo was bad
//Parameters: char (the letter corresponding to the port)
//                  int (the number corresponing to the pin)
bool configGPIO_Output(char, int);

bool configGPIO_AnalogIn(char, int);

bool configAFIO_Output(char, int);
```