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/*Proj_1C1_Pin_Change_Interrupt
*****
A SLIGHT VARIATION ON PROGRAM 3 THE REACTION TIME TESTER.
INTRODUCES the statement "if(m == 1)" which means execute the next statement if m equals 1, and
if it equals anything else skip the next statement.
*/

#include "Proj_1C1_header_file.h"

volatile unsigned int PORT_1, mask;
char switch_control; //Prevents rapid switch_3 presses from shooting leds down at random

int main (void){
    setup_HW;
    config_sw3_for_PCI;

    mask = 0xFFFF; //0xFFFF = 0b1111111111111111 indicating that none of the leds have yet been shot down
    switch_control = 0;
    sei();
    while(mask){
        PORT_1=1;

        for(int m = 1; m < 17; m++){
            if(m == 1)switch_control = 0; //Set switch_control to zero at the start of each sweep
            I2C_Tx_2_integers
            (PORT_1 & mask, (~mask) ^ PORT_1);

            Timer_T0_10mS_delay_x_m(10);
            PORT_1 = (PORT_1 << 1);
        }I2C_Tx_2_integers(0, 0xFFFF);
        Timer_T0_10mS_delay_x_m(100);
        SW_reset;}

    /*****Routine executed every time that switch is operated*****/
    ISR(PCINT0_vect) {
        if(switch_3_up)return;
        if (switch_control) return; //Return early if "switch_control" is 1
        mask &= ~PORT_1;
        switch_control = 1;} //Set switch control to 1.

```