```c
/************************************************************************
 *  Projekt 2
 *  Knight Rider LEDs
 *
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 *  @date 1.10.2020
 *  @Github https://github.com/venca611/Digital-electronics-2
 *
 ************************************************************************/


#ifndef F_CPU
#define F_CPU 16000000      // CPU frequency in Hz required for delay func
#endif

/* Includes ---------------------------------------------------------- */
#include <util/delay.h>     // Functions for busy-wait delay loops
#include <avr/io.h>         // AVR device-specific IO definitions


/* Defines ----------------------------------------------------------- */
#define DELAY 150   // Delay in milliseconds
#define PAUSE 50    // Pause in milliseconds
#define BTN PD0     // Button
int LED[5] = {PB1, PB2, PB3, PB4, PB5}; //RED LEDs

/* Variables --------------------------------------------------------- */

/* Function prototypes ----------------------------------------------- */
/**
 * @brief Blink with specific LED
 *
 * @param  number of LED
 * @return void
 */
void blink(int);

/* Functions --------------------------------------------------------- */
void blink(int number){
    PORTB ^= (1<<LED[number]);
    _delay_ms(DELAY);
    PORTB ^= (1<<LED[number]);
    _delay_ms(PAUSE);
    return;
}


/**
 * Knight Rider LEDs
 */
int main(void)
{
    // PORTs setup (LEDs and Button)
```

```c
    for(int i = 0; i < 5; i++){
        DDRB |= (1<<LED[i]);
        PORTB &= ~(1<<LED[i]);
    }
    DDRD &= ~(1<<BTN);
    PORTD |= (1<<BTN);

    /**
     * main infinite loop
     *
     * when inc is 1 then increase i else decrease i
     * if i is 4 then inc changes to 0
     * if i is 0 then inc changes to 1
     */
    for(int i = 0, inc = 0;; inc? i++: i--){
        inc = i%4?inc:(inc+1)%2;
        // If Button is pressed, then LEDs are off.
        if(bit_is_set(PIND,BTN)){
            blink(i);
        }
    }

    return 0;
}

/* Interrupt routines ---------------------------------------------*/
```