

ANSWER_1

```
#define LED_PIN 12
#define SWITCH_PIN 5

volatile int ledState = 0;

void __attribute__((interrupt)) switchInterrupt() {
    ledState = !ledState;

    if (ledState) {
        *((volatile uint32_t*)(GPIO_BASE + 0x18)) = (1
<< LED_PIN);
    } else {
        *((volatile uint32_t*)(GPIO_BASE + 0x18)) = (1
<< (LED_PIN + 16));
    }

    *((volatile uint32_t*)(EXTI_BASE + 0x14)) = (1 <<
SWITCH_PIN);
}

int main() {
    *((volatile uint32_t*)(GPIO_BASE + 0x00)) &= ~(3 <<
(LED_PIN * 2));
    *((volatile uint32_t*)(GPIO_BASE + 0x00)) |= (1 <<
(LED_PIN * 2));

    *((volatile uint32_t*)(GPIO_BASE + 0x00)) &= ~(3 <<
(SWITCH_PIN * 2));

    *((volatile uint32_t*)(EXTI_BASE + 0x00)) |= (1 <<
SWITCH_PIN);
    *((volatile uint32_t*)(EXTI_BASE + 0x0C)) |= (1 <<
SWITCH_PIN);
    NVIC_EnableIRQ(SWITCH_PIN_IRQn);

    while (1) {
    }

    return 0;}
```