



```

1  #include "led_fun.h"
2  #include "main.h"
3  #include <stdio.h>
4
5
6  void led_change(int mode){
7      switch(mode)
8      {
9          case All_led_on:
10             GPIOA->ODR |=0x603ul;
11
12             GPIOB->ODR |=0x3ul<<12;
13             GPIOC->ODR |=0x3ul;
14             break;
15          case All_led_off:
16             GPIOA->ODR &=~0xfffful;
17             GPIOB->ODR &=~0xffful;
18             GPIOC->ODR &=~0xffful;
19             break;
20
21          case Bit_led_loop:
22             GPIOA->ODR &=~0xffful;
23             GPIOB->ODR &=~0xffful;
24             GPIOC->ODR &=~0xffful;
25
26             GPIOA->ODR |=0x1ul;
27             HAL_Delay(300);
28             GPIOA->ODR &=~(0x1ul);
29
30             GPIOA->ODR |=0x1ul<<1;
31             HAL_Delay(300);
32             GPIOA->ODR &=~(0x1ul<<1);
33
34             GPIOA->ODR |=0x1ul<<9;
35             HAL_Delay(300);
36             GPIOA->ODR &=~(0x1ul<<9);
37
38             GPIOA->ODR |=0x1ul<<10;
39             HAL_Delay(300);
40             GPIOA->ODR &=~(0x1ul<<10);
41
42             GPIOB->ODR |=0x1ul<<12;
43             HAL_Delay(300);
44             GPIOB->ODR &=~(0x1ul<<12);
45
46             GPIOB->ODR |=0x1ul<<13;
47             HAL_Delay(300);
48             GPIOB->ODR &=~(0x1ul<<13);
49
50             GPIOC->ODR |=0x1ul;
51             HAL_Delay(300);
52             GPIOC->ODR &=~(0x1ul);
53
54             GPIOC->ODR |=0x1ul<<1;
55             HAL_Delay(300);
56             GPIOC->ODR &=~(0x1ul<<1);
57
58
59             GPIOC->ODR |=0x1ul<<1;
60             HAL_Delay(300);
61             GPIOC->ODR &=~(0x1ul<<1);
62
63
64             GPIOC->ODR |=0x1ul;
65             HAL_Delay(300);
66             GPIOC->ODR &=~(0x1ul);
67
68             GPIOB->ODR |=0x1ul<<13;
69             HAL_Delay(300);
70             GPIOB->ODR &=~(0x1ul<<13);
71
72             GPIOB->ODR |=0x1ul<<12;
73             HAL_Delay(300);
74             GPIOB->ODR &=~(0x1ul<<12);
75
76             GPIOA->ODR |=0x1ul<<10;
77             HAL_Delay(300);
78             GPIOA->ODR &=~(0x1ul<<10);
79
80             GPIOA->ODR |=0x1ul<<9;
81             HAL_Delay(300);
82             GPIOA->ODR &=~(0x1ul<<9);
83
84             GPIOA->ODR |=0x1ul<<1;
85             HAL_Delay(300);
86             GPIOA->ODR &=~(0x1ul<<1);
87
88             GPIOA->ODR |=0x1ul;
89             HAL_Delay(300);
90
91             GPIOA->ODR &=~(0x1ul);
92
93             break;
94     }
95 }

```