```
typedef struct{
	unsigned volatile int * RCC_CR;
	unsigned volatile int * RCC_PLLCFGR;
	unsigned volatile int * RCC_CFGR;
	unsigned volatile int * RCC_CIR;
	unsigned volatile int * RCC_AHB1RSTR;
	unsigned volatile int * RCC_AHB2RSTR;
	unsigned volatile int * RCC_AHB3RSTR;
	unsigned volatile int * reserved_1;
	unsigned volatile int * RCC_APB1RSTR;
	unsigned volatile int * RCC_APB2RSTR;
	unsigned volatile int * reserved_2;
	unsigned volatile int * reserved_3;
	unsigned volatile int * RCC_AHB1ENR;
	unsigned volatile int * RCC_AHB2ENR;
	unsigned volatile int * RCC_AHB3ENR;
	unsigned volatile int * reserved_4;
	unsigned volatile int * RCC_APB1ENR;
	unsigned volatile int * RCC_APB2ENR;
	unsigned volatile int * reserved_5;
	unsigned volatile int * reserved_6;
	unsigned volatile int * RCC_AHB1LPENR;
	unsigned volatile int * RCC_AHB2LPENR;
	unsigned volatile int * RCC_AHB3LPENR;
	unsigned volatile int * reserved_7;
	unsigned volatile int * RCC_APB1LPENR;
	unsigned volatile int * RCC_APB2LPENR;
	unsigned volatile int * reserved_8;
	unsigned volatile int * reserved_9;
	unsigned volatile int * RCC_BDCR;
	unsigned volatile int * RCC_CSR;
	unsigned volatile int * reserved_10;
	unsigned volatile int * reserved_11;
	unsigned volatile int * RCC_SSCGR;
	unsigned volatile int * RCC_PLLI2SCFGR;
}rcc;

typedef struct{
	unsigned volatile int * GPIOG_MODER;
	unsigned volatile int * GPIOG_OTYPER;
	unsigned volatile int * GPIOG_PUPDR;
	unsigned volatile int * GPIOG_IDR;
	unsigned volatile int * GPIOG_ODR;
	unsigned volatile int * GPIOG_BSRR;
```

```
	unsigned volatile int * GPIOG_LCKR;
	unsigned volatile int * GPIOG_AFRL;
	unsigned volatile int * GPIOG_AFRH;
}gpiog;

void init_led(){
	rcc data_register_pointer;
	gpiog io_register;
	data_register_pointer.RCC_CR = 0x40023800;
	data_register_pointer.RCC_AHB1ENR = 0x40023830; //Address of the respected
register
	*data_register_pointer.RCC_AHB1ENR = 1 << 6; //Clock enable for GPIOGEN ports

	io_register.GPIOG_MODER = 0x40021800;
	*io_register.GPIOG_MODER = 0x17000000;
	io_register.GPIOG_ODR = 0x40021814; //Address of the respected register
}


void turn_name_on(){
	rcc data_register_pointer;
	gpiog io_register;
	io_register.GPIOG_ODR = 0x40021814; //Address of the respected register
	*(io_register.GPIOG_ODR) = 1 << 13;
}

void turn_name_off(){
	rcc data_register_pointer;
	gpiog io_register;
	io_register.GPIOG_ODR = 0x40021814; //Address of the respected register
	*(io_register.GPIOG_ODR) = 0 << 13;
}

void turn_surname_on(){
	rcc data_register_pointer;
	gpiog io_register;
	io_register.GPIOG_ODR = 0x40021814; //Address of the respected register
	*(io_register.GPIOG_ODR) = 1 << 14;
}

void turn_surname_off(){
	rcc data_register_pointer;
	gpiog io_register;
	io_register.GPIOG_ODR = 0x40021814; //Address of the respected register
```

```
	*(io_register.GPIOG_ODR) = 0 << 14;
}


int main(void){
	init_led();
	for (int i = 0; i < 8; ++i) {
		turn_name_on();
		for (int k = 0; k < 800000; k++);
		turn_name_off();
		for (int k = 0; k < 800000; k++);
	}
	for (int i = 0; i < 5; ++i) {
			turn_surname_on();
			for (int k = 0; k < 800000; k++);
			turn_surname_off();
			for (int k = 0; k < 800000; k++);
	}

}
```