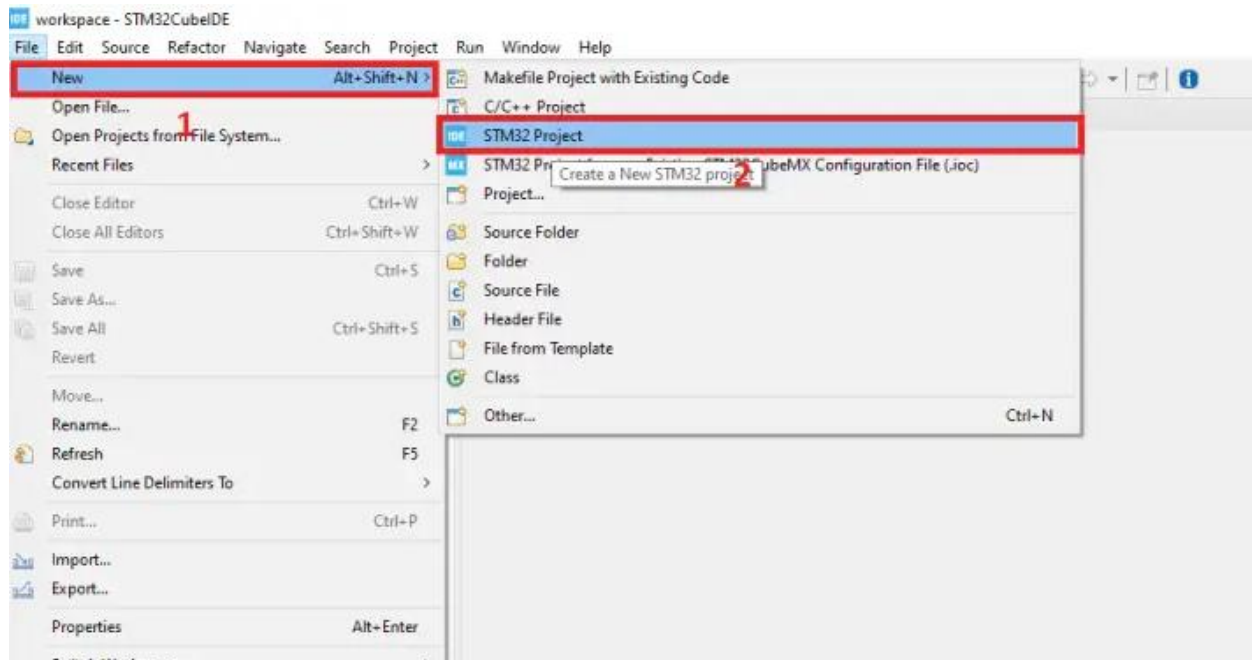
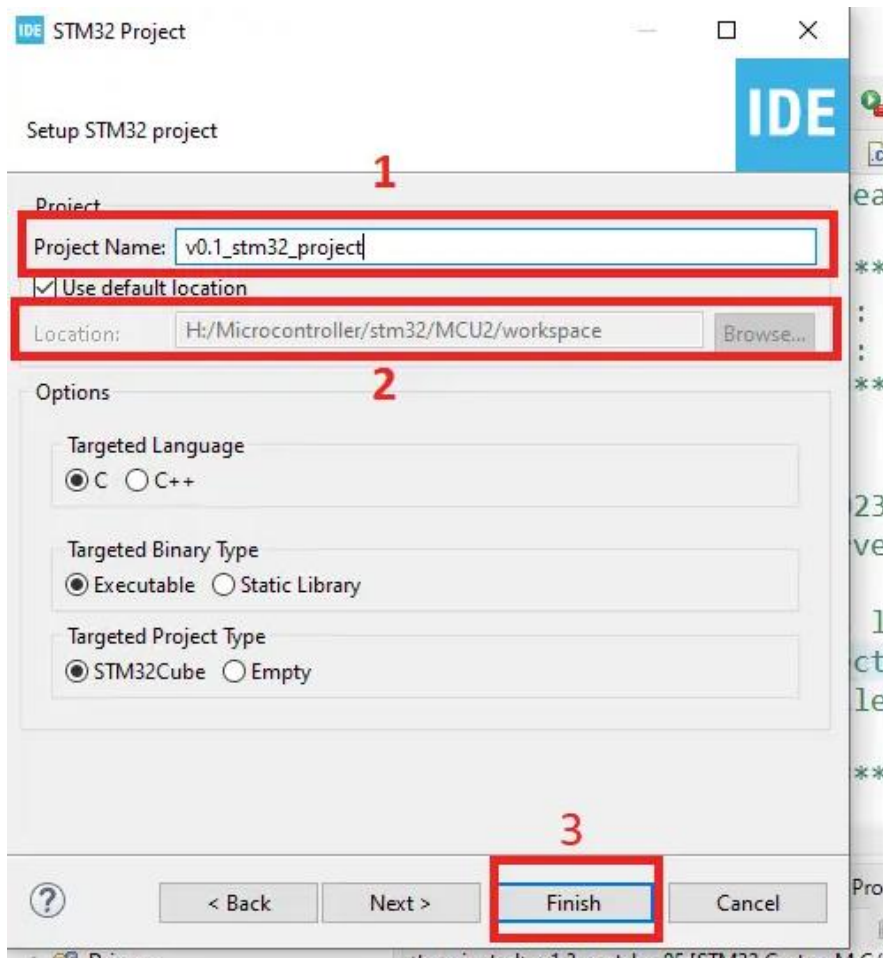


Project creation in Stm32Cube IDE



Select STWINBX1 board



Open MX and clear all Pinouts

SETTING UP LEDS

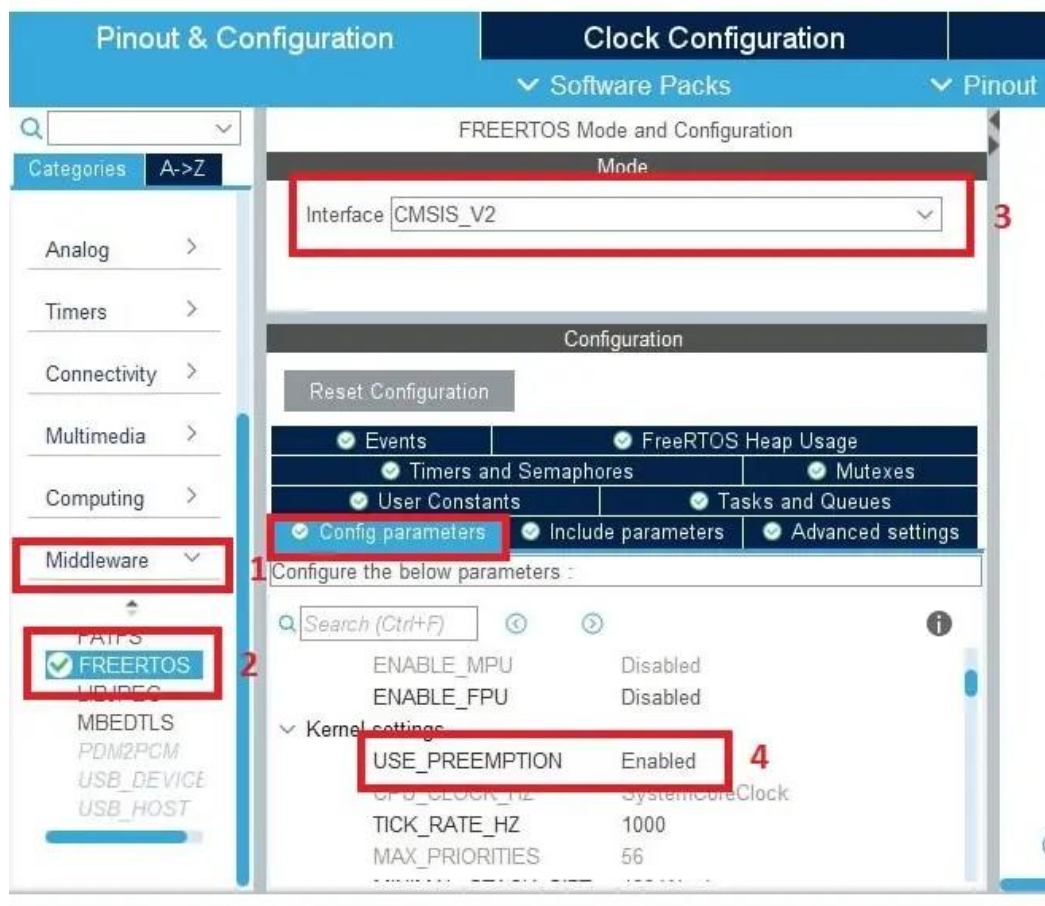
Find the pins and set them up as GPIO Output

Set up FreeRTOS

Download the middleware

▼ STMicroelectronics.X-CUBE-FREERTOS	✓	1.3.1	
▼ CMSIS RTOS2	✓	10.6.2	
▼ RTOS2	✓		
Core	✓	10.6.2	TZ_Non_Supported ▼
Heap	✓	10.6.2	Heap_4 ▼

Then



Create tasks

Enable RTOS ☒ CMSIS RTOS2

Configuration

Reset Configuration

✔ Config parameters

✔ Include parameters

✔ Advanced settings

✔ User Constants

✔ CMSIS RTOS2

Tasks and Queues

Timers and Semaphores

Mutexes

Events

FreeRTOS Heap Usage

Tasks

Task name	Priority	Stack size (W...	Entry Func...	Code Generation ...	Parameter	Allocation	Buffer Na...	Control Block ...
LED1_task	osPriorit...	128	LED1_tas...	Default	NULL	Dynamic	NULL	NULL
LED2_task	osPriorit...	128	LED2_tas...	Default	NULL	Dynamic	NULL	NULL

AddDelete

Queues

MX Edit

×

Task name

LED2_task

Priority

osPriorityBelowNormal

▼

Stack size (Words)

128

↕

Entry Function

LED2_task_function

Code Generation Option

Default

▼

Parameter

NULL

Allocation

Dynamic

▼

Buffer Name

NULL

Control Block Name

NULL

OK

Cancel

Change timebase for SYS from SysTick to TIM3 (any available TIM)

SYS Mode and Configuration

Mode

Timebase Source

TIM3

Multitask toggle LED

```
void LED1_task_function(void *argument)
{
    /* USER CODE BEGIN LED1_task */
    /* Infinite loop */
    for(;;)
    {
        HAL_GPIO_TogglePin(LED1_GPIO_Port, LED1_Pin);
        osDelay(500);
    }
    /* USER CODE END LED1_task */
}
```

Make sure both tasks toggle different LEDs