

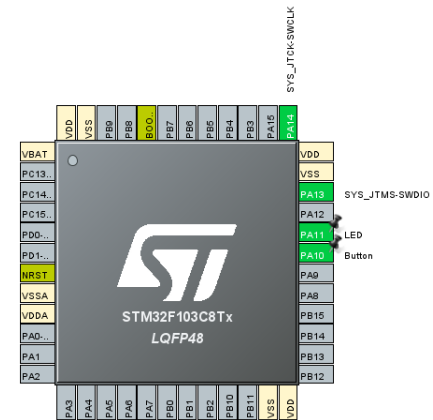
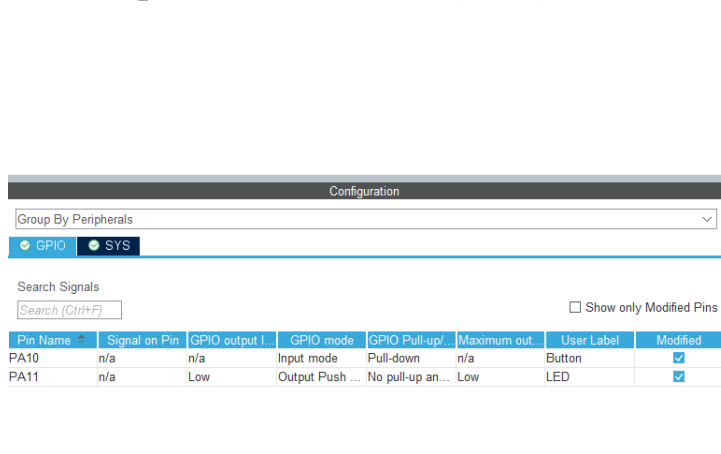
# Academy Task 2

## *Low Voltage*

## ARM

### Configurations:

- Pull-down Input Pin (Button)
- Output Push Pull Pin (LED)



### Software Debouncing:

```
//Read Pin state
//page no. #227
if(HAL_GPIO_ReadPin(Button_GPIO_Port,Button_Pin) == 1)
{
    //delay until bouncing is settled
    //page no. #50
    HAL_Delay(50);
    //check pin state again
    if(HAL_GPIO_ReadPin(Button_GPIO_Port,Button_Pin) == 1)
    {
        //Keep the led on its state until the button is released
        while(HAL_GPIO_ReadPin(Button_GPIO_Port,Button_Pin));
        //Toggle pin state
        //page no.228
        HAL_GPIO_TogglePin(LED_GPIO_Port, LED_Pin);
    }
}
```

Step 1:

Check if the button is pressed

Step 2:

Wait until the bouncing period is finished

Step 3:

Check again if the button is pressed

Step 4:

If the button is still pressed stay in the while loop to avoid multiple LED toggling

Step 5:

Once the button is released change the Pin state

### Circuit Simulation:

