ASURT
FSUK & ROAR
ACADEMY
26'

# Academy Task 2

*Low Voltage*

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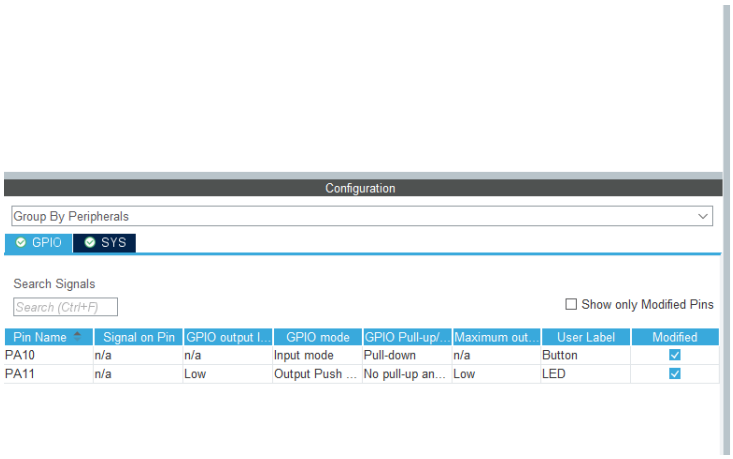
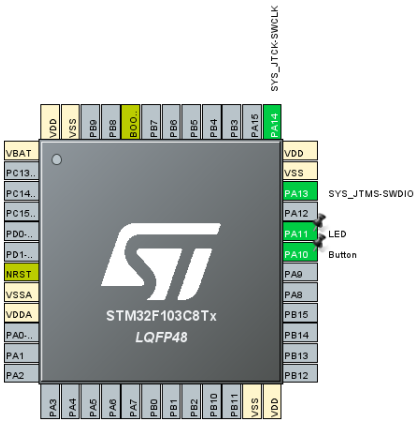
## ARM

**Configurations**:

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



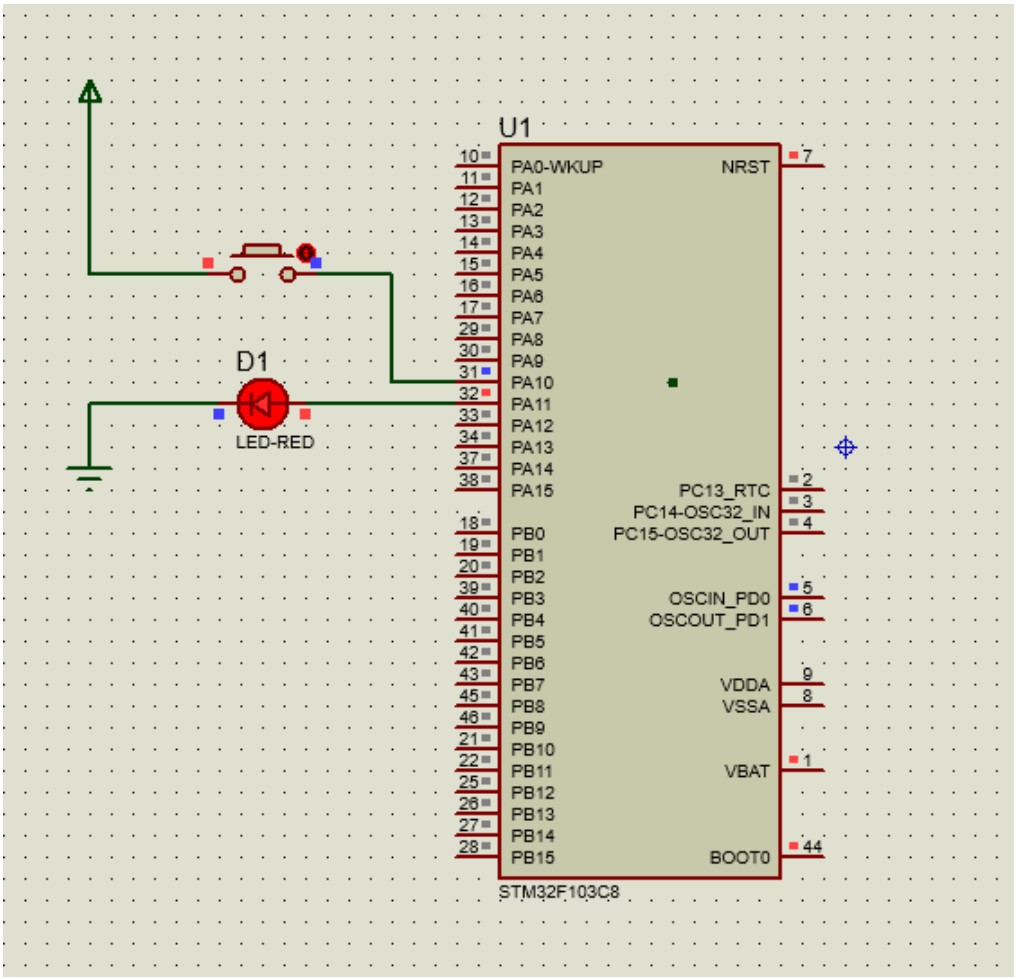




**Software Debouncing:**

```
//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:**




**Project Repository:**
https://github.com/jessicasamy/Roar_Academy_Task_2-.git