LED sequence V2.0

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Sprint

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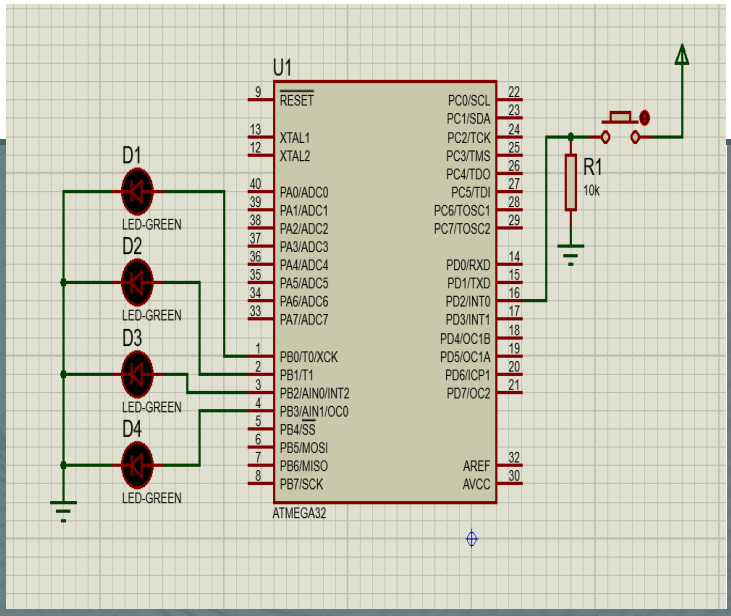
Project description

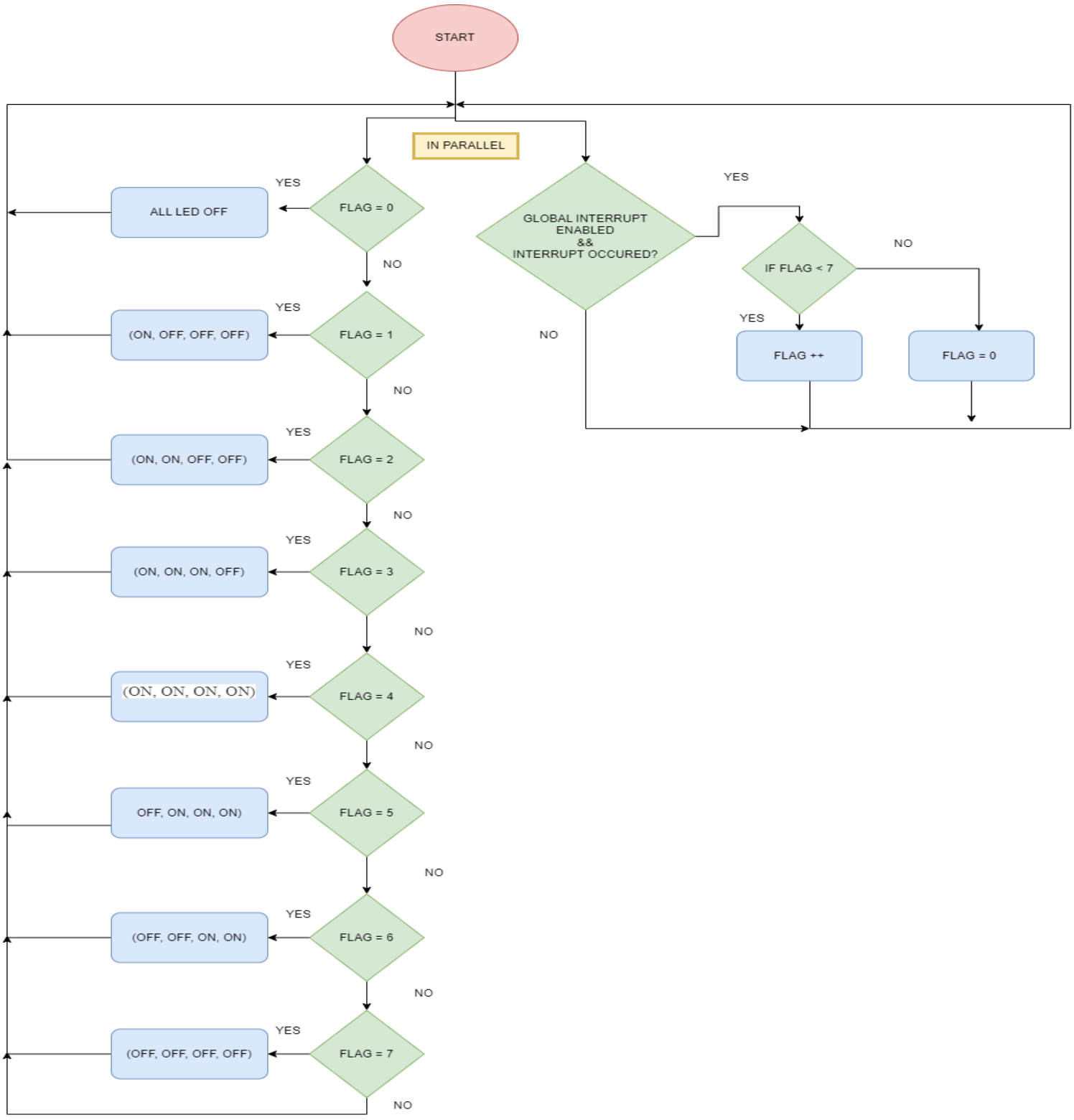
Initially, all LEDs are OFF
Once BUTTON0 is pressed, LED0 will be ON
Each press further will make another LED is ON
At the fifth press, LED0 will changed to be OFF
Each press further will make only one LED is OFF
This will be repeated forever
The sequence is described below

1. Initially (OFF, OFF, OFF, OFF)
2. Press 1 (ON, OFF, OFF, OFF)
3. Press 2 (ON, ON, OFF, OFF)
4. Press 3 (ON, ON, ON, OFF)
5. Press 4 (ON, ON, ON, ON)
6. Press 5 (OFF, ON, ON, ON)
7. Press 6 (OFF, OFF, ON, ON)
8. Press 7 (OFF, OFF, OFF, ON)
9. Press 8 (OFF, OFF, OFF, OFF)
10. Press 9 (ON, OFF, OFF, OFF)

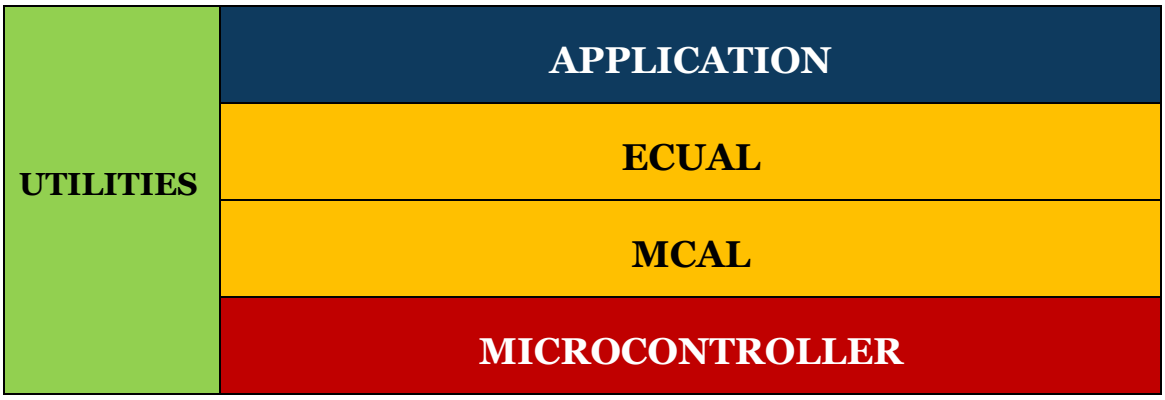
USE EXTERNAL INTERRUPTS

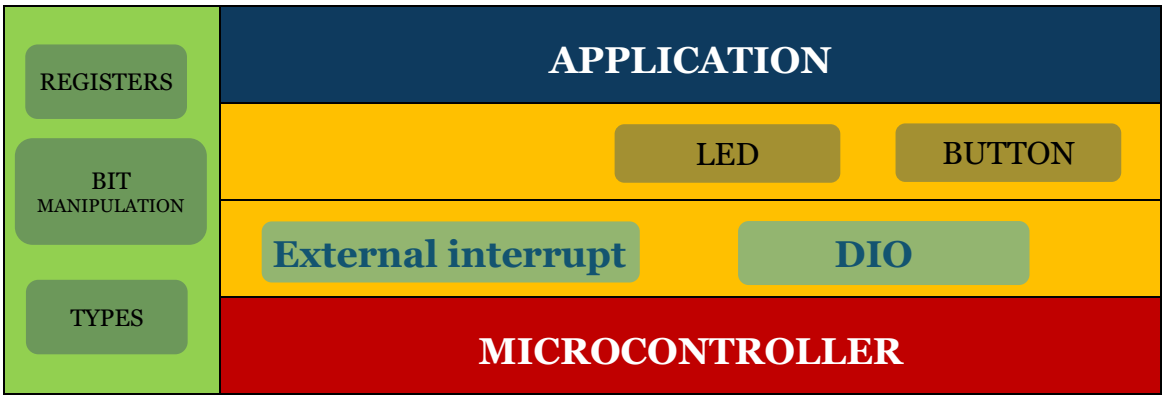


PROJECT FLOWCHART



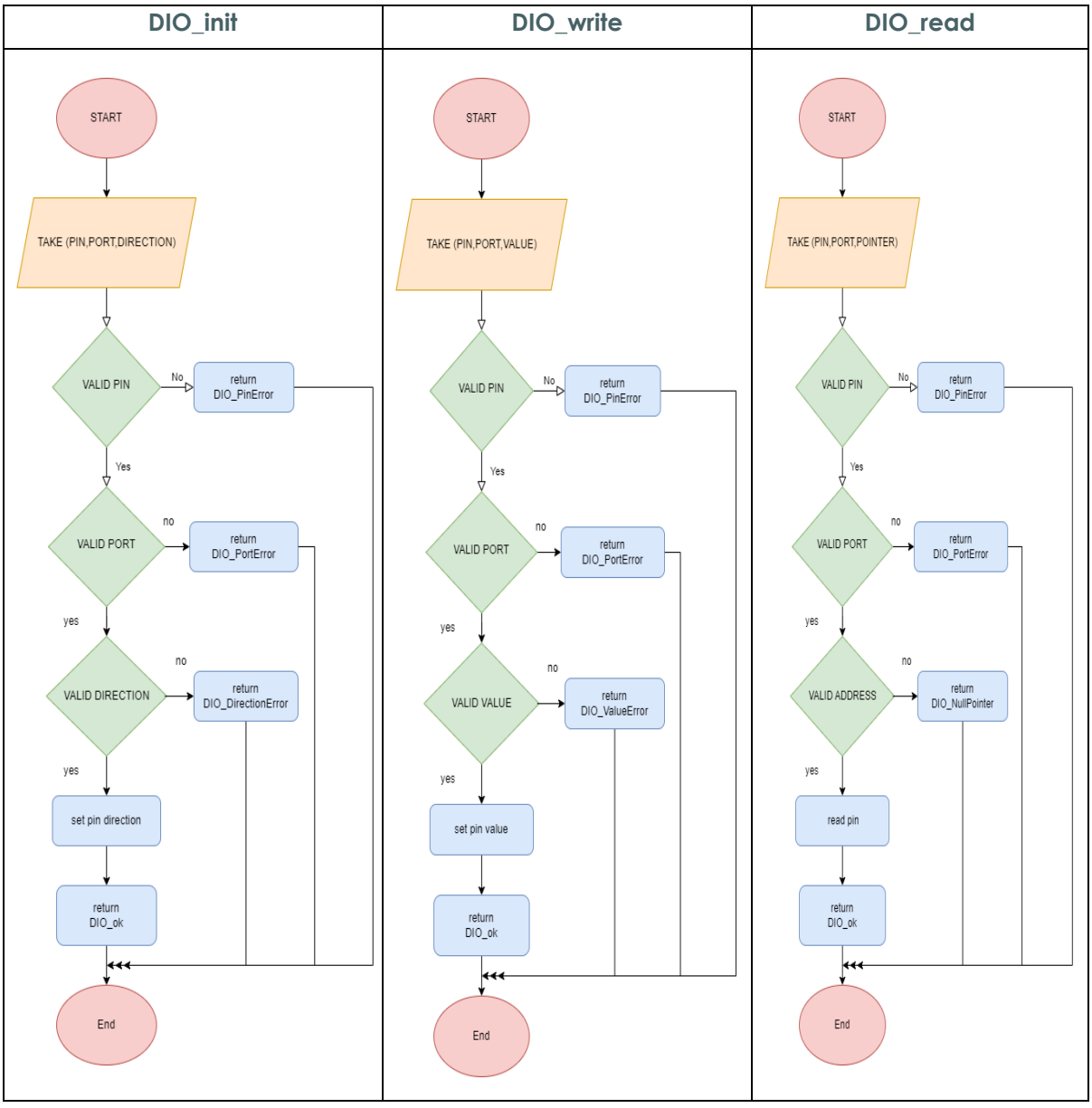
LAYERD ARCHTICTURE





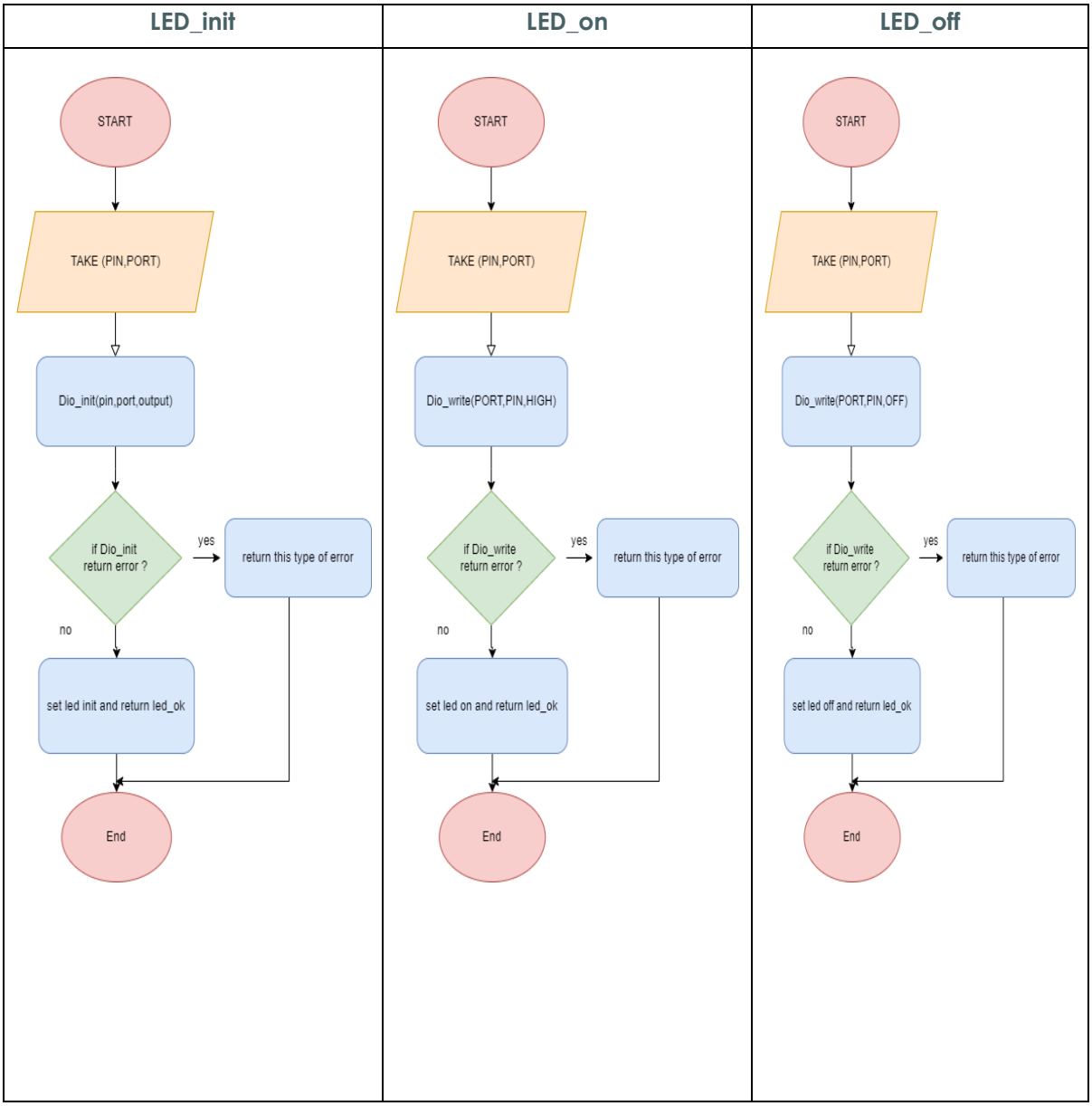
DIO DRIVER

```
Dio_ErrorStatus DIO_init(PORT_NUM PortNum, PIN_NUM PinNum , PIN_DIR direction);
Dio_ErrorStatus DIO_write(PORT_NUM PortNum, PIN_NUM PinNum , uint8_t value);
Dio_ErrorStatus DIO_read(PORT_NUM PortNum, PIN_NUM PinNum , uint8_t* value);
```



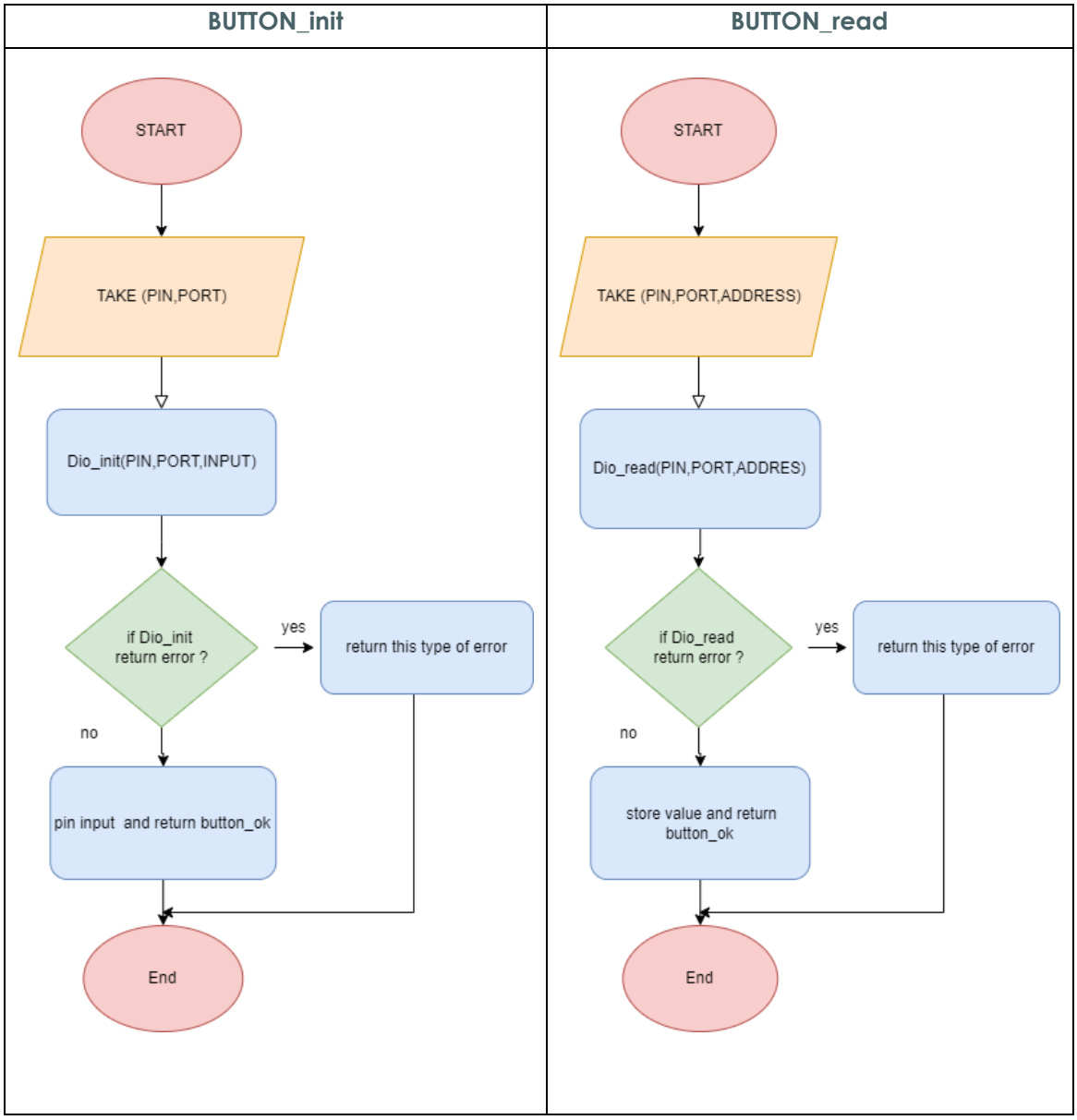
LED DRIVER

```
Dio_ErrorStatus LED_init(PORT_NUM portNum , PIN_NUM pinNum);
Dio_ErrorStatus LED_on (PORT_NUM portNum , PIN_NUM pinNum);
Dio_ErrorStatus LED_off(PORT_NUM portNum , PIN_NUM pinNum);
```



BUTTON DRIVER

```
Dio_ErrorStatus BUTTON_init(PORT_NUM portnum ,PIN_NUM pinnum);
Dio_ErrorStatus BUTTON_read(PORT_NUM portnum ,PIN_NUM pinnum, uint8_t *value);
```



EXTERNAL INTERRUPT DRIVER

```
Ext_intErrorStatus ExtInt_init();
```

NOTE: ALL INTERRUPT CONFIGURATIONS ARE IN `Ext_IntCnfg.h`