

## LED sequence V1.0

### 1. Description

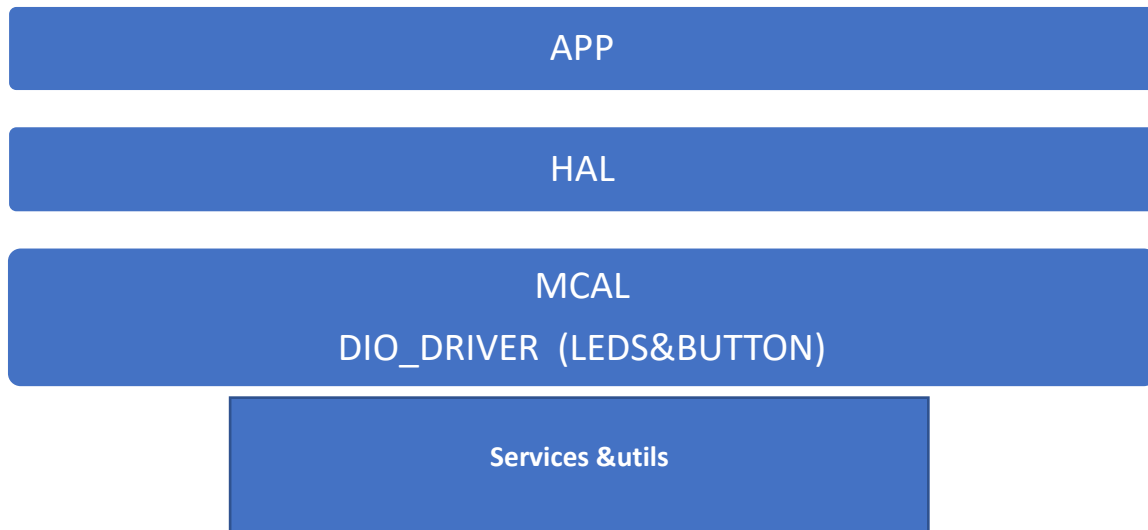
#### 1. **Hardware Requirements**

1. Four LEDs (LED0, LED1, LED2, LED3)
2. One button (BUTTON0)

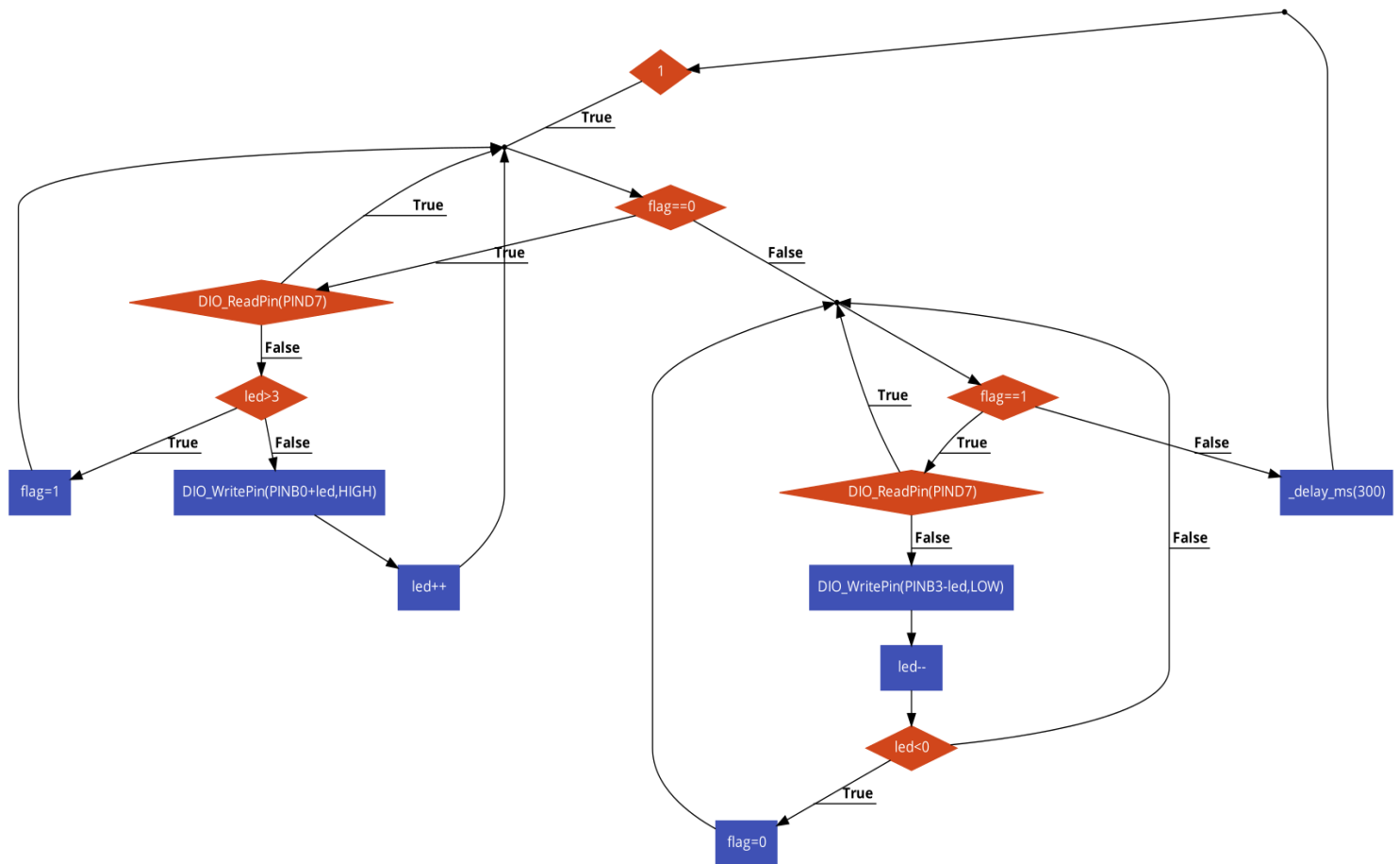
#### 2. **Software Requirements**

1. Initially, all LEDs are OFF
2. Once BUTTON0 is pressed, LED0 will be ON
3. Each press further will make another LED is ON
4. At the fifth press, LED0 will change to be OFF
5. Each press further will make only one LED is OFF
6. This will be repeated forever
7. 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)

### 2. Layered architecture



### 3. Project flowchart



#### 4. State machine

