## System constraints:

- Short and long press on push button (pedestrian request):
  - Short and long press issues are fixed by using a rising edge interrupt for button. So, interrupt will be only triggered at the begging of the press.

• Double click on the same phase for pedestrian request, can be fixed by using a flag value to check if the BTN pressed before or not.

## system description:

- Microcontroller layer
- MCAL Layer:
  - 1. DIO Driver:

Driver can be used to controller pins input/output. Driver can be used to initialize, read, write, toggle pins.

2. Interrupt Driver:

Driver can be used to enabling global interrupt, enabling external interrupt 0 with rising edge, enabling Timer0 overflow interrupt.

3. Timer Driver:

Driver can be used to initialize, set initial value, start, stop, reset, delay Timer0.

- ECUAL Layer:
  - 1. BTN Driver:

Driver can initialize, read pin.

2. LED Driver:

Driver can initialize, set Haigh, low, toggle pin.

- Application Layer:
  - 1. Driver can initialize registers and running app.

