**System description**

**It can be done over 6 tasks:**

1. environment preparation:

* create layers folder
* create drivers folders in each layer
* create .c and .h for each module
* create header gaurds and main file

1. implement MCAL layer:

-create folder for:

-DIO

-TIMER

-INTERRUPT

-implement DIO.h ,TIMER.h,INTERRUPT.h

-implement DIO.c,TIMER.C,Interrupt.c

3- implement ECUAL layer:

-Create folder for:

-LED

-BUTTONS

-implement LED.h,Button.h

-implement Leds.c ,Buttons.c

4-implement application

-APP.h,APP.c

5-testing:

-user story1

-user story2

-user story3

-user story4

-user story5

**System design**

**Layer1 ---🡪**MCAL--🡪DIO, TIMER, INTERRUPTS

**Layer2---🡪** ECUAL-🡪Buttons ,LED

**Layer3--🡪**APP

**Layer4-🡪**main**.c**

**System constraints**

Timing constraints: each mode remains only 5 seconds, Pedestrians have the priority over the cars