Requirement acquisition 1

1. Buttons press capture

- Gearbox button:(DIO)

This is automatic car that has gear box state

- Neutral (N)
- Driving (D)
- Reverse (R)

Initially car has default state when open Neural state(N) and there is button used to change this state

Sequence for states:

N -> D -> R then restart from N

Note

This state should displayed on LCD(Dashboard).

When change from Driving state to Reverse state should disable Cruise control system if it was Enabled.

- Accelerate button : (DIO)

that increase car speed during press and turn Blue led On during press

Constarins :

Has effect in car speed during N & R gear box state

- Brake button : (EXT Interrupt)

reduce car speed and turn on Red led on during press

Note

It has effect on Cruise control system as if this system on turn it off

- Cruise Control system button:(DIO)

Make car move with current speed and can release accelerate paddle

Default state for system is off.

This system has Two states:

- ON that make green led on
- OFF that make greenled off

Note

Work only in Driving state(D)

2. Brake assist system (Connected to ADC)

This component in system will be Button

This system used to make car avoid crushing with front car as try to keep safe distance .

Default state for system is off.

Will map range of values of potentiometer (0:1023) to (0:10)M.

distance	[0:2[M	[2:4[M	[4:6[M	[6:8[M	[8:10]M	
action	Turn of all input and output for system & Display message for crushing & flash relay	Turn yellow led on & Flash red led & Make braking	Turn yellow led on & Turn red led on & Make braking	Turn yellow led on	Nothing	

Note

Work only in Driving mode (D) and closed automatic when switch from Driving to Reverse state