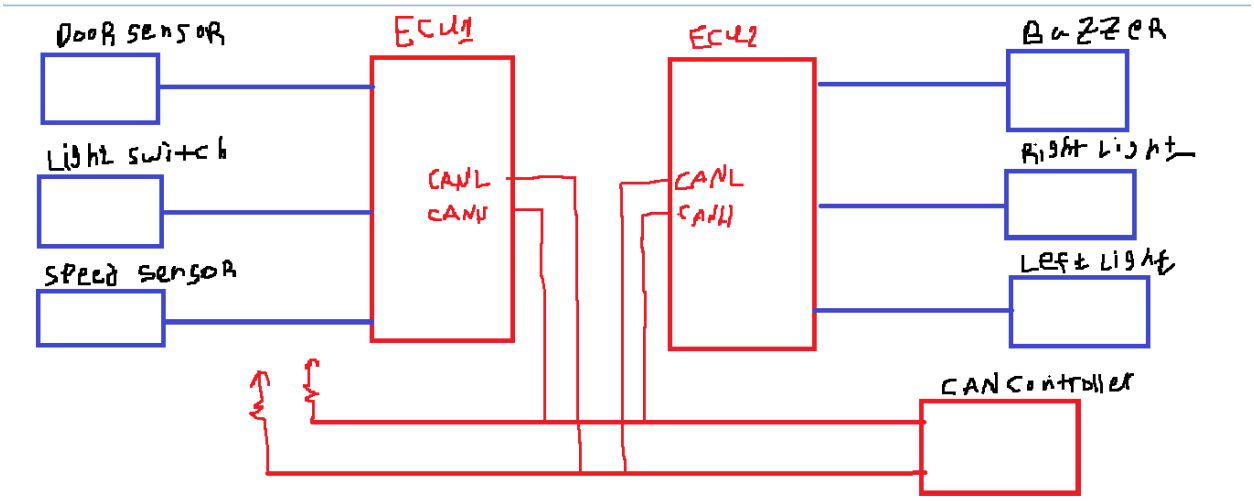
KHALED SHALABY

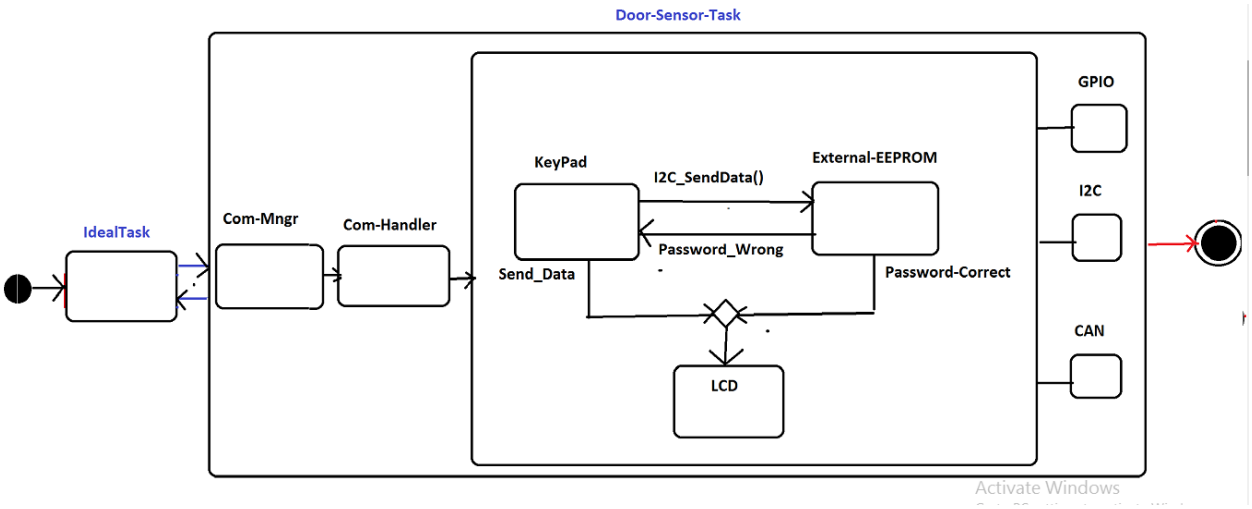
BlockDigrame:



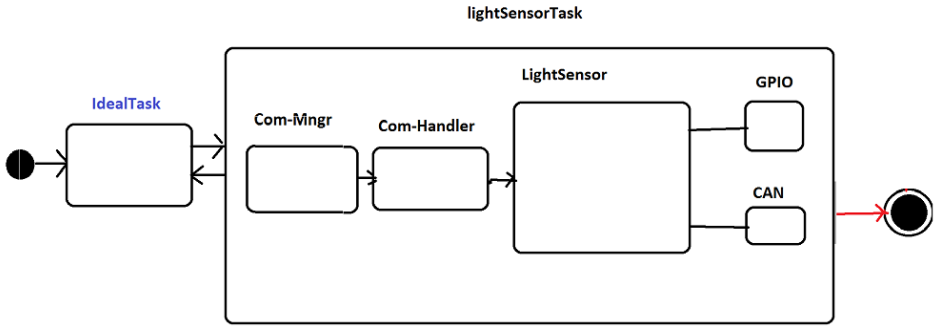
DynamicDesign:

State Machine For Each Component ECU1:

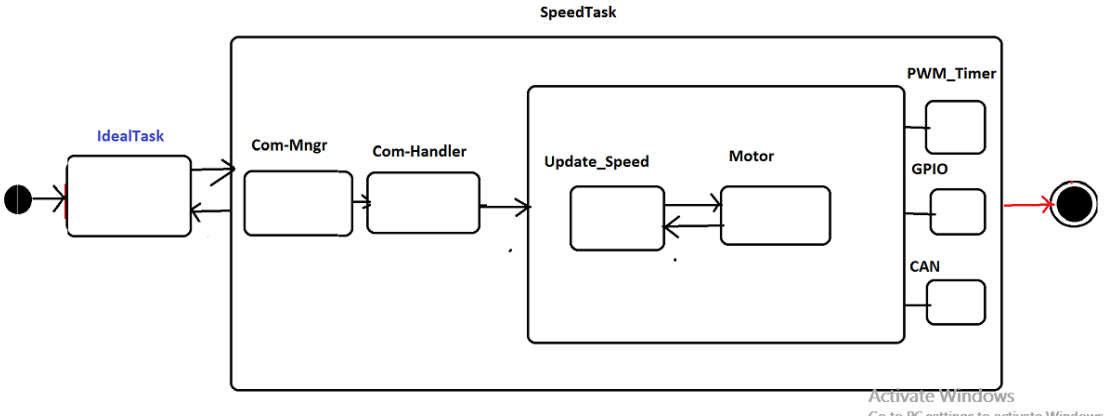
1-Door Sensor



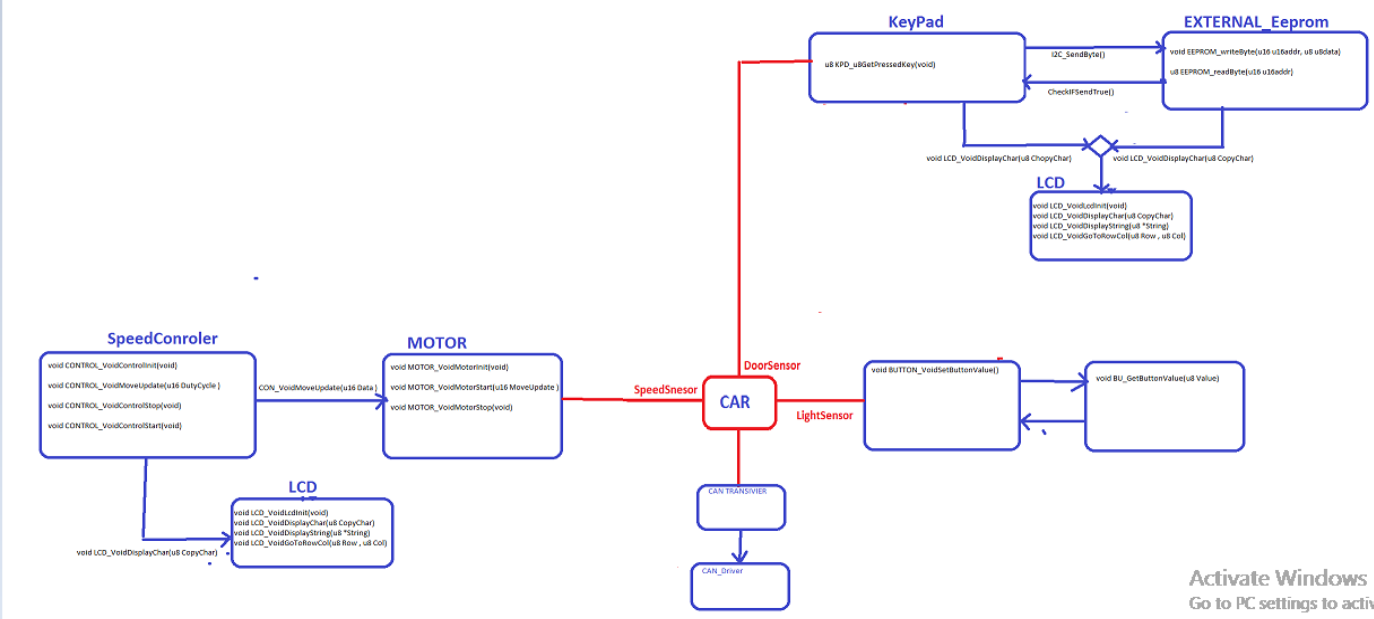
2-LightSensor



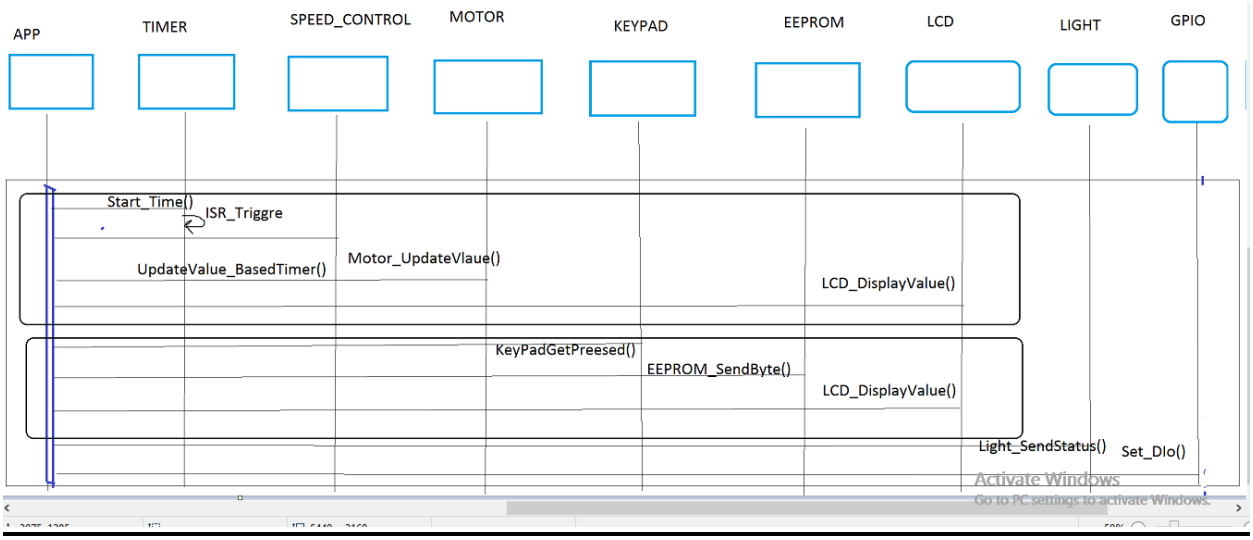
3-SpeedSensor



Ecu1 Operation

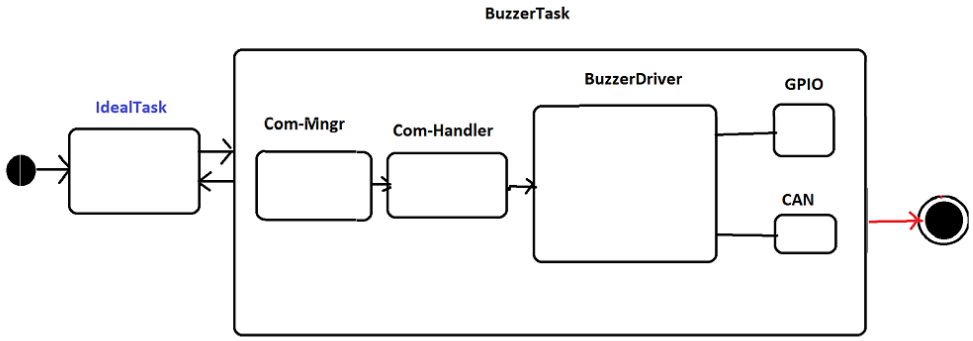


Sequance Digrame for ECU1;

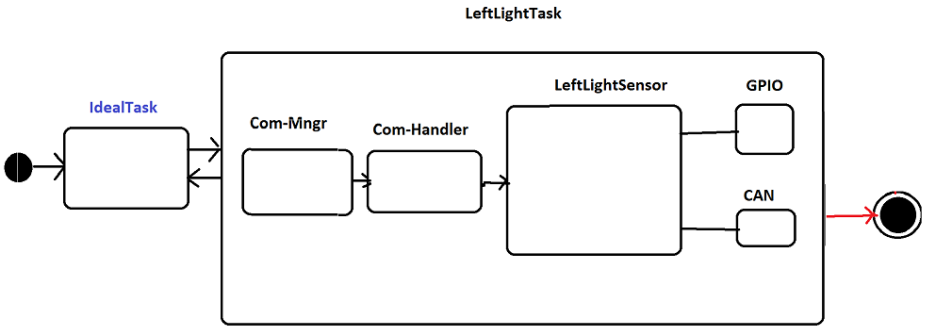


State Machine For Each Component ECU2:

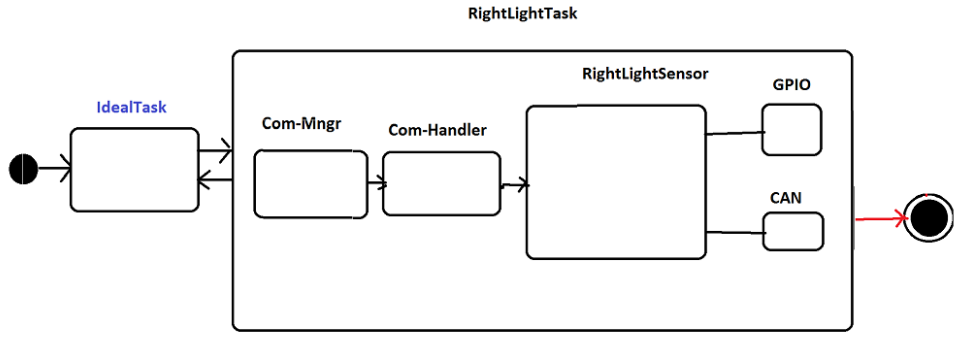
1-BUZZERSensor



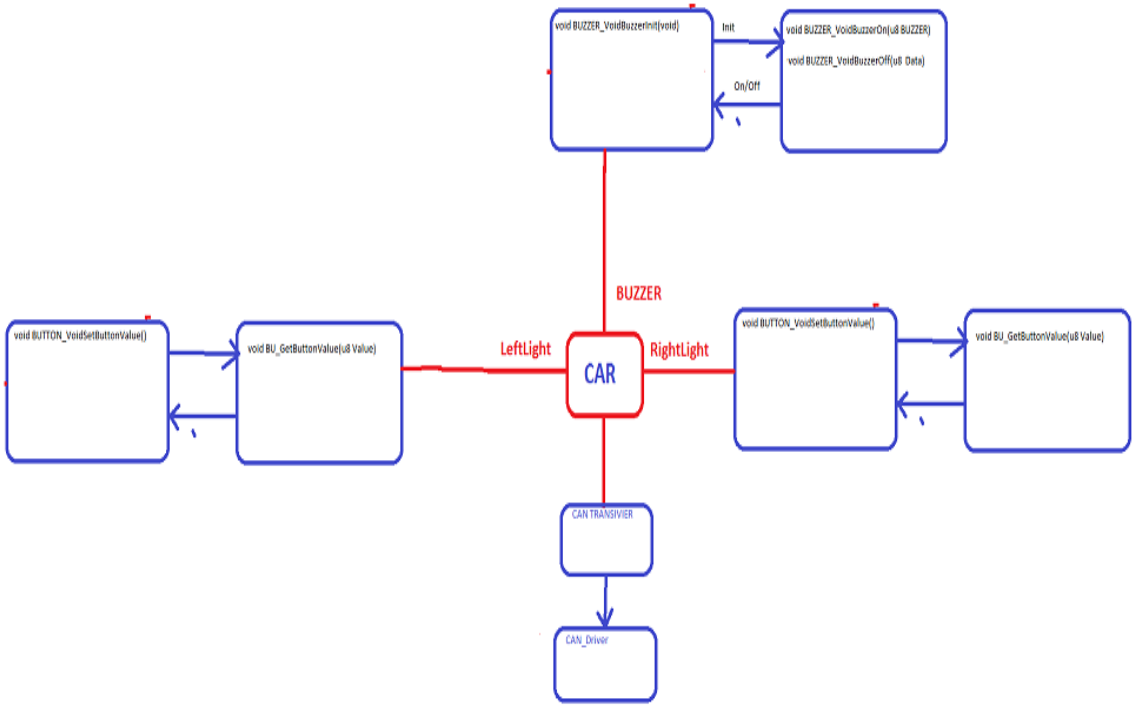
2-LL



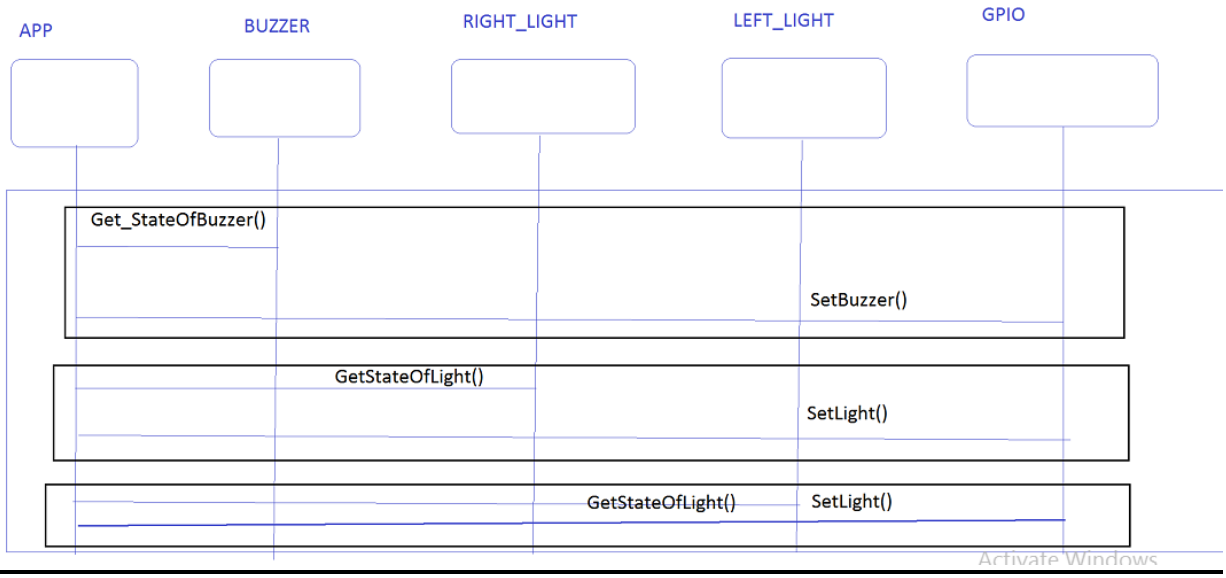
3-RL



Ecu2 Operation



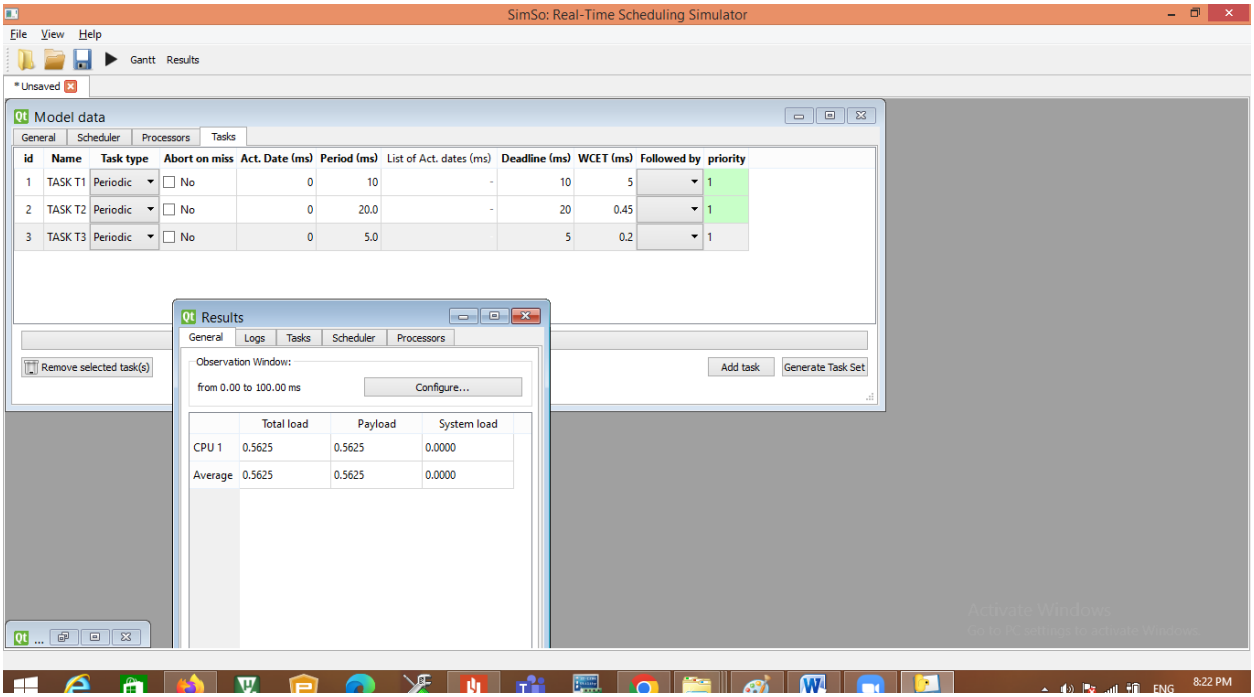
Sequance Digrame for ECU2



CPU LOAD For ECU1&ECU2

U=((5/10) +(0.45/20) + (0.2/5))*100

=56.25%



BUS LOAD

CAN Can send max data bit per 1 time 64 bit

1-Assuse Door State message will take 64bit every 10ms = 6.4kbps

2-Assuse Light state message will take 64 bit every 20ms = 3.2kps

3-Assuse Speed state message will take 64 bit every 5ms = 12.8kbps

Total kbps is 22.4kbps

At 250kpbs →(22.4/250)→ 8.96%

At 500kpbs →4.48%

At 1Mbps →2.28%