State Machine Diagram for whole Operation of ECU2

Start

Initialize all Hardware

Door Sensor

Speed Sensor

Light Switch

Wait for Status from CAN

If the door is opened while the car is moving

If the car is stopped and the light switch is pressed

Buzzer ON

If the door is closed while the lights were ON, after 3 seconds

If the door is opened while the car is moving

Lights Off

If the car is moving and the light switch is pressed

If the car is stopped and the light switch is pressed

If the car is moving and the light switch is pressed

If the door is opened while the car is stopped

Lights ON

If the door is opened while the car is stopped

Buzzer Off