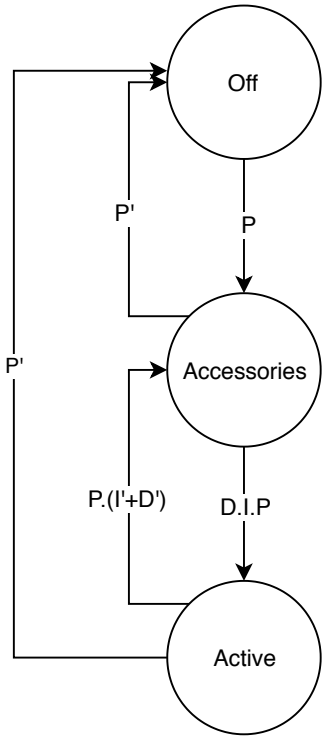
UBC Supermileage Electric Urban High Level State Diagram



P = Power
D = Dead man switch
I = Ignition button

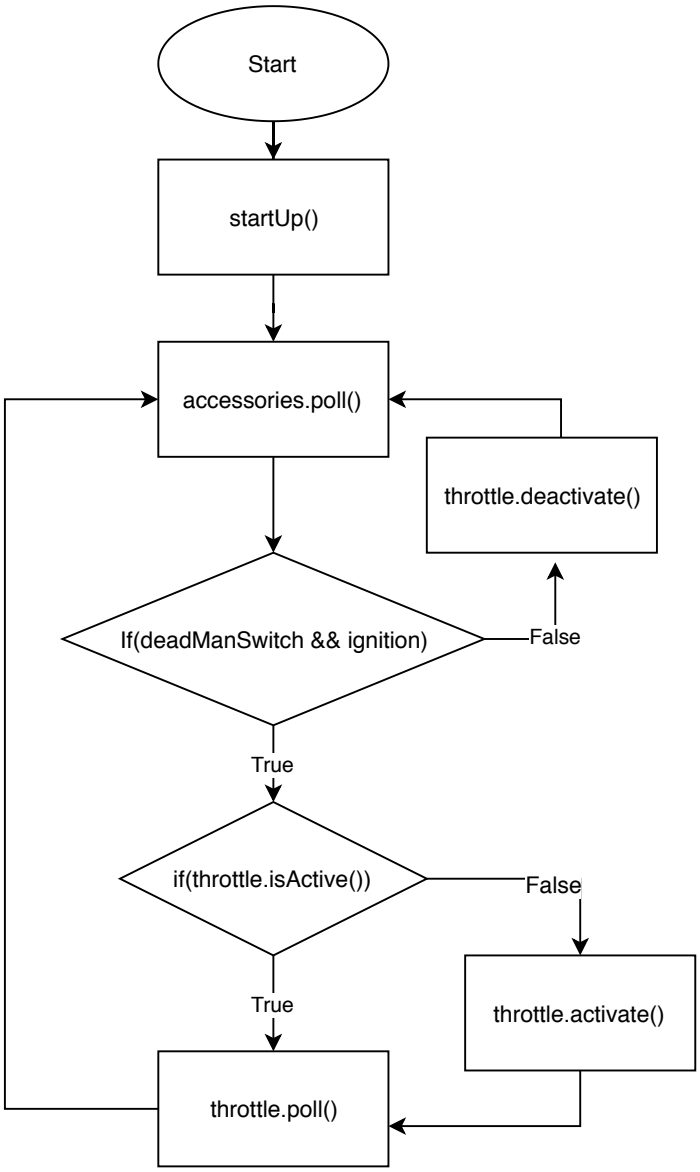
Binary Logic:
and: .
or: +
not: '

Off state: All vehicle power is shut off

Accessories State: All vehicle accessories working, the motor is in a deactivate state, the car will not move

Active State: Accessories state plus throttle active and responsive to drivers input

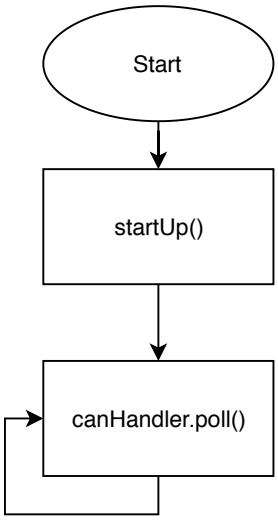
Steering wheel controller flow diagram



Poll(): Checks for an input update, and handles it accordingly (CAN message)
* Not using interrupts to avoid any blocking code to increase safety,
  and vehicle responsiveness

throttle.poll(): Creates and sends a CAN message with the voltage from the throttle potentiometer. This message is then handled by the motor controller at the rear of the vehicle

Motor controller flow diagram



canHandler.poll(): Handles all can messages for accessories and throttle, sets pwm for motor depending on throttle message data

Software UML