#### A white jeep parked in front of a blue wall Description automatically generated with medium confidenceGraphical user interface, application Description automatically generatedWeek 4.2:

This weeks focus is on control loops and strategies. Continue to use the system you chose and further analyze the technical specifications for it. It may be necessary to make some assumptions about your system; clearly state any assumptions you make. Include a picture of your system and its technical specifications in your document. Create a word document that presents this information and then answers the following questions:

* Identify input and output control variables for your system

**DI = Engine Control Unit  
AI = Mass Airflow Sensor, O2 Sensor  
DO = Fuel Pump, Injector Unit (valves)**

* Identify and describe a control loop for your system

**Mass Airflow sensor and O2 sensor to Engine Control Unit to Fuel Pump and Injector Unit (valves)**

* Choose one input of your system to fail. How would the system respond?

**If there is little to no air flowing into the combustion chamber then the ECU would attempt to compensate for the difference and lessen the amount of fuel going into the combustion chamber and the engine would soon stop due to the lack of nessecary combustion. Air flow and Fuel flow must both be present and be in range of the air/fuel ratio for continuous engine operation.**