Jordan Thurgood

Bro. Thayne

CSE 210

23 March 2024

Final Project: Open-Ended Project Proposal

For my final project I have chosen to do the open-ended project. My project will be a vehicle rental system for a rental company. It allows the user to rent out different vehicles that are available on the lot to rent. It will also allow them to return the vehicle they rented and know how much the cost was based on the number of miles or hours they recorded on the rented vehicle. The main idea is that each vehicle type will be a class that inherits from the “Vehicle” class that contains information and behaviors that all the vehicles will have in common. From that “Vehicle” class, there will be 2 derived classes: one for on-road and one for off-road vehicles. Those 2 classes will each be parent classes for the vehicles of their type.

Each vehicle will have behaviors, and some of those behaviors will accomplish the same purpose but need to have different approaches since they might deal with hours instead of miles, which is where polymorphism and method overriding will come into play. The program will also provide an estimation for how much the rental will cost before taking the vehicle, and it will also handle the payment transaction upon returning the rental.