MODULE 1 UML DIAGRAM

The UML class diagram depicts a simple inheritance hierarchy consisting of an abstract class named "Vehicle" at the top, two concrete classes named "Car" and "Bicycle" inheriting from it, and another abstract class named "MotorVehicle" that is a subclass of "Vehicle".

The "Vehicle" class has two attributes, "numWheels" and "color", both of which are inherited by its subclasses. It also has two methods, "drive()" and "stop()", which are abstract and must be implemented by its subclasses.

The "MotorVehicle" class adds another attribute, "engineSize", and overrides the "drive()" method to provide a default implementation. It also introduces a new abstract method, "refuel()", which its subclasses must implement.

The "Car" class adds a new attribute, "numDoors", and implements the abstract "drive()" and "stop()" methods inherited from its superclass. It also implements the "refuel()" method inherited from "MotorVehicle".

The "Bicycle" class adds a new attribute, "numGears", and implements the abstract "drive()" and "stop()" methods inherited from its superclass.

Text

Description automatically generated with medium confidenceOverall, the UML class diagram demonstrates the basic principles of inheritance and abstract classes in object-oriented programming.