

Session-3 Lab

1. Create a base class called Vehicle with the following methods:

- void start(): This method should print "Vehicle started." Create two subclasses of Vehicle called Car and Motorcycle. Override the start() method in each subclass to provide a specific implementation:

- Car: Print "Car started."

- Motorcycle: Print "Motorcycle started." Create a class called Garage with a method named serviceVehicle(Vehicle vehicle). Inside this method, call the start() method of the provided vehicle object and print "Vehicle serviced." In the Main class, create instances of Car and Motorcycle. Create an instance of the Garage class. Call the serviceVehicle() method of the Garage class with instances of both Car and Motorcycle.

2. Create a class called Student. Inside the Student class, implement the following instance variables (fields):

- String name

- int age

- String department Implement the following constructors in the Student class:

- A default constructor that initializes the name to "Unknown", age to 20, and department to "Unassigned".

- A constructor that takes two parameters: name and age, and initializes the department to "IT".

- A constructor that takes three parameters: name, age, and department. In the Main class, create instances of the Student class using each constructor. Print out the details of each student, including their name, age, and department.