ADF-I Assignment 7 : Inheritance, Polymorphizm (overriding)

Write a Java application - Vehicle System - to manage the list of vehicles with the specification as follows:

1	Creates a **class** named **Vehicle** in package **data.** - Protected fields: **ID, name, brand, speed, weight, price** - Public Constructors: to initialize the above fields. - Methods: - Protected void **accept()** : allow user input data into data fields. validation: [ID, name, brand] is not null. [speed, price] must be greater than zero. - Public void **printInfo()** : used to print details of an vehicle.
2	Create class **Car is derived from Vehicle**, in package **data,** consists of: - Private Field **GPS (y/n)** - Public Constructors to initialize the all fields. - Override methods: - **Protected void accept() :** allow user to input additional details for a Car: invoke method accept() of super class. - **Public void printInfo() :** display all details of an car. - **Public String toString() :** return a string presenting all details of a Car
3	Create class **VehicleCatalog** in package **data** for managing a collection of **Car**: - Fields: [**max, next**] int, **vehicleList –** an array consists of cars - Methods: - **addCar()** - add a new car into system - **displayAll() -** display all cars - **searchByBrand (String *sBrand*) –** search & display car by the brand. - **displayAllGPSCar() -** display all cars having GPS module installed. - **displayHighRankl() -** display all cars having price greater than 50000
4	Create **main** class **Test** in package **ui** that allows user to manage cars accepted into system through the menu system as follows: 1. Add a new car 2. Display all cars 3. Search car by brand name 4. Display all cars having GPS module 5. Display high-rank vehicle 6. Exit