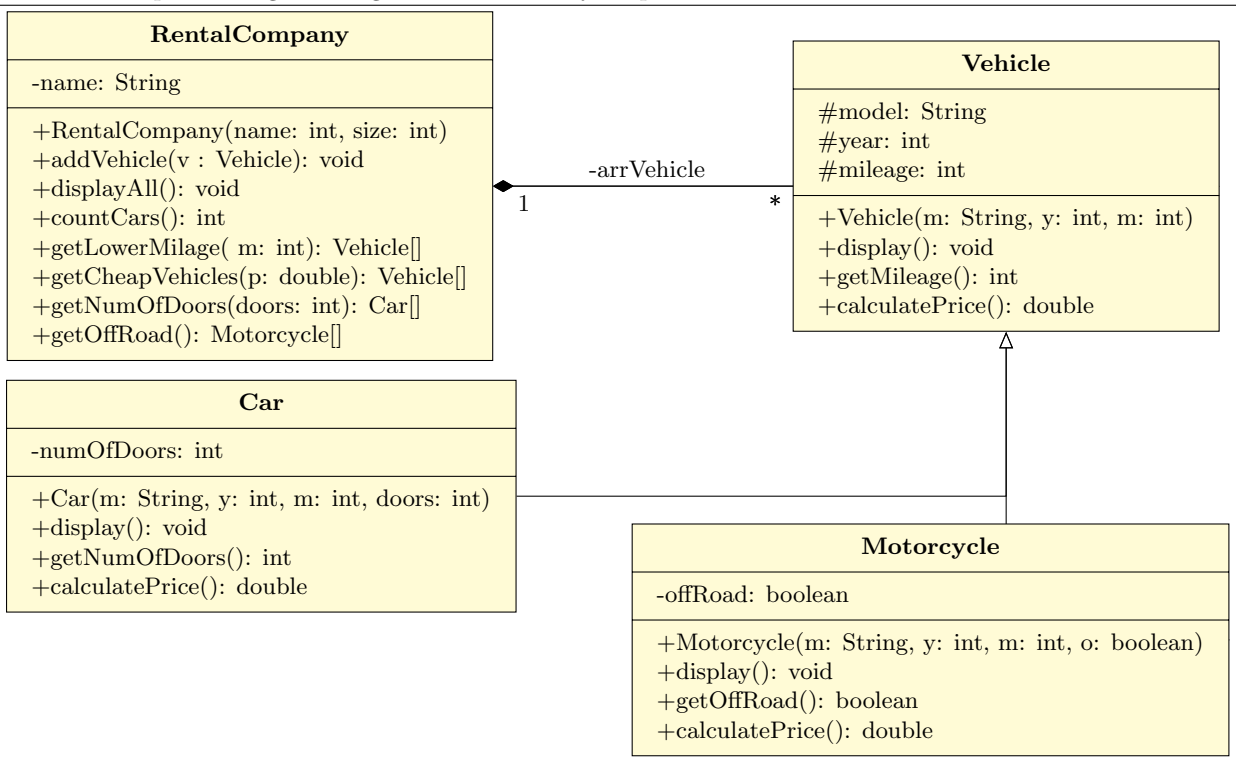

➤ ***Vehicle*** class:

- ❍ Attributes:
  - ● ***model:*** the name of the vehicle model.
  - ● ***year:*** the vehicle year of make.
  - ● ***mileage:*** the vehicle mileage.
- ❍ Methods:
  - ■ ***Vehicle(m: String, y: int, m: int):*** constructor.
  - ■ ***display():*** this method display all the attributes of the vehicle.
  - ■ ***calculatePrice():*** this method calculates and returns the price of the vehicle as the following:

	Base rental price	Made year	Mileage	Discount
Vehicle	500	-20 * (current year - year of make)	<100,000	0%
			>= 100,000	10%
Car	500	-20 * (current year - year of make)	<100,000	0%
			>= 100,000	15%
Motorcycle	500	-10 * (current year - year of make)	<50,000	5%
			>= 50,000	20%

➤ ***Car*** class:

- ❍ Attributes:
  - ● ***numOfDoors:*** the number of doors on the car.
- ❍ Methods:
  - ■ ***Car(m: String, y: int, m: int, doors: int):*** constructor.
  - ■ ***display():*** this method display all the attributes of the car.
  - ■ ***getNumOfDoors():*** this method returns the number of the doors on the car.

➤ ***Motorcycle*** class:

- ❍ Attributes:
  - ● ***offRoad:*** is the motorcycle designed for off-road driving or not.

- Methods:
  - ***Motorcycle(m: String, y: int, m: int, o: boolean):*** constructor.
  - ***display():*** this method display all the attributes of the motorcycle.
  - ***isOffRoad():*** this method returns true if the motorcycle is off-road or not.

➤ ***RentalCompany*** class:

- Attributes:
  - ***name:*** is the name of the rental company.
- Methods:
  - ***RentalCompany(name: String, size: int):*** constructor.
  - ***addVehicle(v: Vehicle):*** this method adds a vehicle to the company. A vehicle can be of type Vehicle, type Car or type Motorcycle.
  - ***displayAll():*** Display all vehicles and their attributes along with their price.
  - ***countCars():*** this method returns the number of all cars in the company.
  - ***getLowerMileage(m: int):*** this method returns an array of all vehicles with mileage less than m.
  - ***getCheapVehicles(p: double):*** this method returns an array of all vehicles with price less than or equal to p.
  - ***getNumOfDoors(doors: int):*** this method returns an array of all cars with doors equal to doors.
  - ***getOffRoad():*** this method returns an array all off-road motorcycles.

Write a class ***Main*** with a main method doing the following:

- Create the 6 objects as follows:
  - Car: model = "BMW", year = 2020, mileage = 1500, number of doors = 4
  - Car: model = "Toyota", year = 2010, mileage = 150000, number of doors = 4
  - Car: model = "Ferarri", year = 2008, mileage = 12000, number of doors = 2
  - Motorcycle: model = "Yamaha", year = 2019, mileage = 1500, off-road = no
  - Motorcycle: name = "Honda", year = 2005, mileage = 550000, off-road = yes
  - Motorcycle: name = "BMW", year = 2009, mileage = 79000, off-road = yes
- Create the rental company "My Company"with size 10.
- Add the previously crated objects to the company.
- Display all the vehicle in the rental company.
- Display the number of cars in the company.
- Display all vehicle cheaper than 300 SR.
- Display all cars with 4 doors.
- Display all off-road motorcycles.