Car.java

```java
public class Car {
    private String registrationNumber;
    private String model;
    private double dailyRate;
    private boolean isAvailable;

    public Car(String registrationNumber, String model, double dailyRate) {
        this.registrationNumber = registrationNumber;
        this.model = model;
        this.dailyRate = dailyRate;
        this.isAvailable = true;
    }

    public String getRegistrationNumber() {
        return registrationNumber;
    }

    public String getModel() {
        return model;
    }

    public double getDailyRate() {
        return dailyRate;
    }

    public boolean isAvailable() {
        return isAvailable;
    }

    public void setAvailability(boolean available) {
        this.isAvailable = available;
    }

    @Override
    public String toString() {
        return "Car{" +
                "RegNo='" + registrationNumber + ''' +
                ", Model='" + model + ''' +
                ", Rate=" + dailyRate +
                ", Available=" + isAvailable +
                '}';
    }
}
```

Customer.java

```java
public class Customer {
    private String name;
    private String licenseNumber;

    public Customer(String name, String licenseNumber) {
        this.name = name;
        this.licenseNumber = licenseNumber;
    }
```

```java
    public String getName() {
        return name;
    }

    public String getLicenseNumber() {
        return licenseNumber;
    }

    @Override
    public String toString() {
        return "Customer{" +
                "Name='" + name + ''' +
                ", License='" + licenseNumber + ''' +
                '}';
    }
}
```

Rental.java

```java
public class Rental {
    private Customer customer;
    private Car car;
    private int rentalDays;

    public Rental(Customer customer, Car car, int rentalDays) {
        this.customer = customer;
        this.car = car;
        this.rentalDays = rentalDays;
        this.car.setAvailability(false); // Mark car as rented
    }

    public Customer getCustomer() {
        return customer;
    }

    public Car getCar() {
        return car;
    }

    public int getRentalDays() {
        return rentalDays;
    }

    public double calculateTotalCost() {
        return car.getDailyRate() * rentalDays;
    }

    @Override
    public String toString() {
        return "Rental{" +
                "Customer=" + customer +
                ", Car=" + car +
                ", Days=" + rentalDays +
                ", Total=" + calculateTotalCost() +
                '}';
    }
```

```java
        }
    }
```

Main.java

```java
import java.util.*;

public class Main {
    static ArrayList<Car> cars = new ArrayList<>();
    static ArrayList<Customer> customers = new ArrayList<>();
    static ArrayList<Rental> rentals = new ArrayList<>();
    static Scanner scanner = new Scanner(System.in);

    public static void main(String[] args) {
        int choice;
        do {
            showMenu();
            choice = scanner.nextInt();
            scanner.nextLine(); // Consume newline

            switch (choice) {
                case 1 -> addCar();
                case 2 -> addCustomer();
                case 3 -> rentCar();
                case 4 -> displayRentals();
                case 5 -> searchCar();
                case 6 -> removeCar();
                case 7 -> sortCars();
                case 8 -> displayCars();
                case 0 -> System.out.println("Exiting system. Goodbye!");
                default -> System.out.println("Invalid choice.");
            }
        } while (choice != 0);
    }

    static void showMenu() {
        System.out.println("""

                \n---- Car Rental Menu ----
                1. Add Car
                2. Add Customer
                3. Rent Car
                4. Display All Rentals
                5. Search Car
                6. Remove Car
                7. Sort Cars by Daily Rate
                8. Display All Cars
                0. Exit
                Choose an option:""");
    }

    static void addCar() {
        System.out.print("Enter Car Reg Number: ");
        String reg = scanner.nextLine();
        System.out.print("Enter Car Model: ");
        String model = scanner.nextLine();
        System.out.print("Enter Daily Rate: ");
```

```java
        double rate = scanner.nextDouble();
        scanner.nextLine();

        cars.add(new Car(reg, model, rate));
        System.out.println("Car added successfully!");
    }

    static void addCustomer() {
        System.out.print("Enter Customer Name: ");
        String name = scanner.nextLine();
        System.out.print("Enter License Number: ");
        String license = scanner.nextLine();

        customers.add(new Customer(name, license));
        System.out.println("Customer added.");
    }

    static void rentCar() {
        System.out.print("Enter Customer License Number: ");
        String license = scanner.nextLine();
        Customer customer = null;
        for (Customer c : customers) {
            if (c.getLicenseNumber().equals(license)) {
                customer = c;
                break;
            }
        }
        if (customer == null) {
            System.out.println("Customer not found!");
            return;
        }

        System.out.print("Enter Car Registration Number: ");
        String reg = scanner.nextLine();
        Car car = null;
        for (Car c : cars) {
            if (c.getRegistrationNumber().equals(reg) && c.isAvailable()) {
                car = c;
                break;
            }
        }

        if (car == null) {
            System.out.println("Car not available!");
            return;
        }

        System.out.print("Enter Rental Days: ");
        int days = scanner.nextInt();
        scanner.nextLine();

        rentals.add(new Rental(customer, car, days));
        System.out.println("Car rented successfully!");
    }
```

```java
    static void displayRentals() {
        if (rentals.isEmpty()) {
            System.out.println("No rentals.");
        } else {
            for (Rental r : rentals) {
                System.out.println(r);
            }
        }
    }

    static void searchCar() {
        System.out.print("Enter Car Registration Number: ");
        String reg = scanner.nextLine();
        for (Car c : cars) {
            if (c.getRegistrationNumber().equalsIgnoreCase(reg)) {
                System.out.println(c);
                return;
            }
        }
        System.out.println("Car not found.");
    }

    static void removeCar() {
        System.out.print("Enter Car Reg Number to Remove: ");
        String reg = scanner.nextLine();
        Iterator<Car> iterator = cars.iterator();
        while (iterator.hasNext()) {
            Car c = iterator.next();
            if (c.getRegistrationNumber().equalsIgnoreCase(reg)) {
                iterator.remove();
                System.out.println("Car removed.");
                return;
            }
        }
        System.out.println("Car not found.");
    }

    static void sortCars() {
        cars.sort(Comparator.comparingDouble(Car::getDailyRate));
        System.out.println("Cars sorted by rate.");
    }

    static void displayCars() {
        if (cars.isEmpty()) {
            System.out.println("No cars available.");
        } else {
            for (Car c : cars) {
                System.out.println(c);
            }
        }
    }
}
```