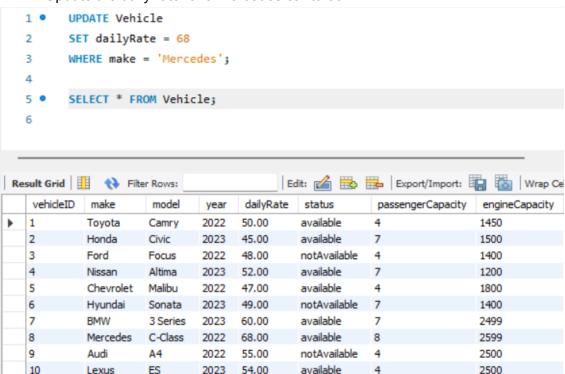
Coding Challenge - Car Rental System - SQL

```
1 ● ○ CREATE TABLE Vehicle ( vehicleID INT PRIMARY KEY,
 2
             make VARCHAR(255),
 3
             model VARCHAR(255),
 4
            year INT,
             dailyRate DECIMAL(10, 2),
 5
             status VARCHAR(20),
 6
             passengerCapacity INT,
 7
             engineCapacity INT );
 8
 9 • ○ CREATE TABLE Customer ( customerID INT PRIMARY KEY,
             firstName VARCHAR(255),
             lastName VARCHAR(255),
11
             email VARCHAR(255),
12
             phoneNumber VARCHAR(15) );
13
14 • ○ CREATE TABLE Lease ( leaseID INT PRIMARY KEY,
            vehicleID INT,
15
             customerID INT,
16
17
             startDate DATE,
             endDate DATE,
18
             type VARCHAR(20),
19
             FOREIGN KEY (vehicleID) REFERENCES Vehicle(vehicleID),
20
             FOREIGN KEY (customerID) REFERENCES Customer(customerID) );
21
23 ● ○ CREATE TABLE Payment (
             paymentID INT PRIMARY KEY,
24
             leaseID INT,
25
26
             paymentDate DATE,
             amount DECIMAL(10, 2),
27
             FOREIGN KEY (leaseID) REFERENCES Lease(leaseID)
28
29
        );
30
   98 14:58:05 INSERT INTO Vehicle VALUES (1, 'Toyota', 'Camry', 2022, 50.00, 'available', 4, 1450), (2, 'Honda', 'Civic', 202...
   99 14:58:05 INSERT INTO Customer VALUES (1, 'John', 'Doe', 'johndoe@example.com', '555-555-5555'), (2, 'Jane', 'Smith'...
  100 14:58:05 INSERT INTO Lease VALUES (1, 1, 1, '2023-01-01', '2023-01-05', 'Daily'), (2, 2, 2, '2023-02-15', '2023-02-28', '...
   101 14:58:05 INSERT INTO Payment VALUES (1, 1, '2023-01-03', 200.00), (2, 2, '2023-02-20', 1000.00), (3, 3, '2023-03-12',...
```

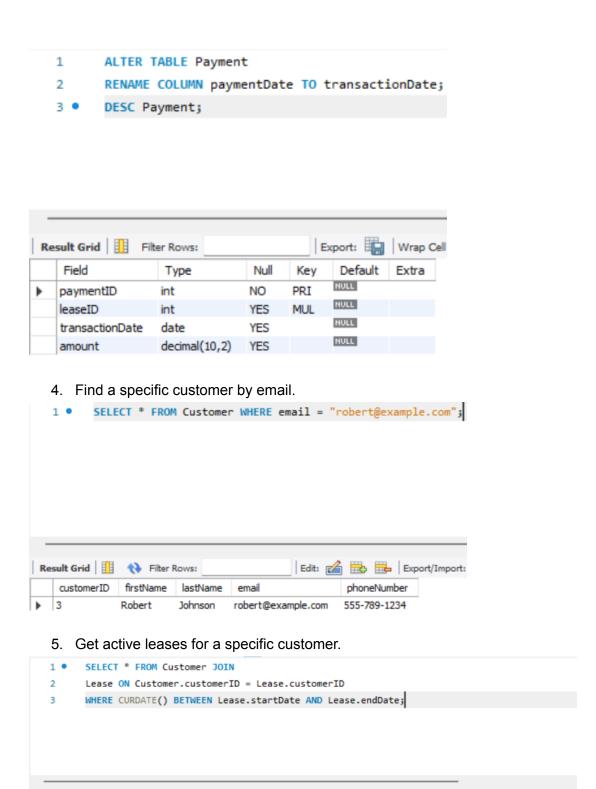
1. Update the daily rate for a Mercedes car to 68.



2. Delete a specific customer and all associated leases and payments.

```
1 •
       DELETE FROM Payment
2
      WHERE leaseID IN (SELECT leaseID FROM Lease WHERE customerID = 1);
3 •
      DELETE FROM Lease
4
      WHERE customerID = 1;
5 •
       DELETE FROM Customer
6
       WHERE customerID = 1;
 2
             Jane
                        Smith
                                   janesmith@example.com
                                                           555-123-4567
             Robert
                                   robert@example.com
 3
                        Johnson
                                                           555-789-1234
 4
             Sarah
                        Brown
                                   sarah@example.com
                                                           555-456-7890
 5
             David
                                   david@example.com
                                                           555-987-6543
                        Lee
 6
             Laura
                        Hall
                                   laura@example.com
                                                           555-234-5678
 7
             Michael
                        Davis
                                   michael@example.com
                                                           555-876-5432
 8
                        Wilson
                                   emma@example.com
                                                           555-432-1098
             Emma
 9
                                   william@example.com
             William
                        Taylor
                                                           555-321-6547
10
             Olivia
                        Adams
                                   olivia@example.com
                                                           555-765-4321
```

3. Rename the "paymentDate" column in the Payment table to "transactionDate".



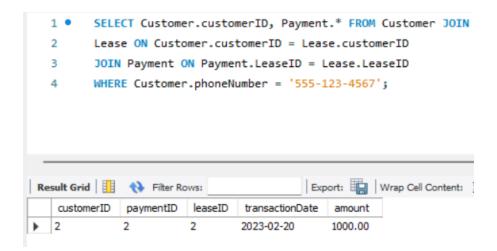
6. Find all payments made by a customer with a specific phone number.

firstName lastName email

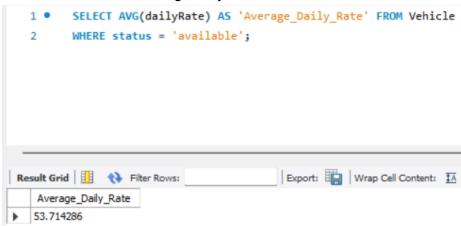
customerID

Export: Wrap Cell Content: IA

phoneNumber leaseID vehideID customerID startDate

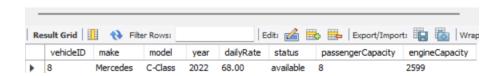


7. Calculate the average daily rate of all available cars.



8. Find the car with the highest daily rate.

1 • SELECT * FROM Vehicle ORDER BY dailyRate DESC LIMIT 1;



9. Retrieve all cars leased by a specific customer.



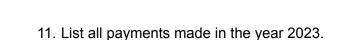
Edit: 🚄 🖶 🖶 Expor

type

Monthly

endDate

2023-10-31



10

customerID

startDate

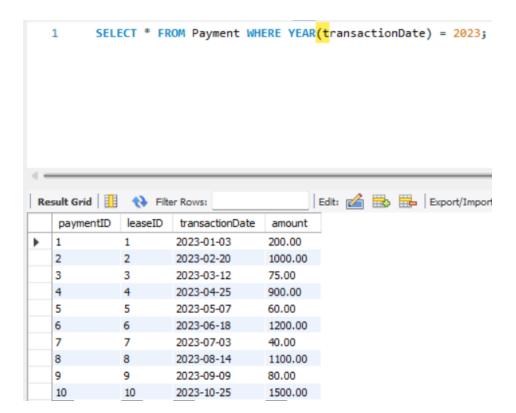
2023-10-10

10

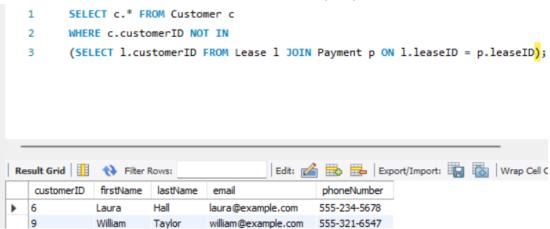
vehideID

leaseID

10



12. Retrieve customers who have not made any payments.



13. Retrieve Car Details and Their Total Payments.

```
SELECT v.vehicleID, COALESCE(SUM(p.amount), 0) AS 'Total Payment' FROM Vehicle v
  1
        LEFT JOIN Lease 1 ON v.vehicleID = 1.vehicleID
  2
  3
        LEFT JOIN Payment p ON p.leaseID = 1.leaseID
        GROUP BY v.vehicleID;
                                       Export: Wrap Cell Content: IA
Total
   vehideID
           Payment
           200.00
           1000.00
  2
           155.00
  3
  4
           2100.00
  5
           60.00
  6
           0.00
           40.00
  8
           1100.00
  9
           0.00
  10
           1500.00
```

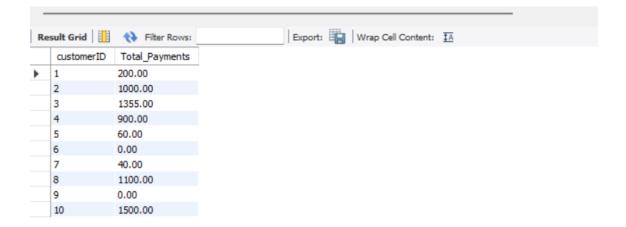
14. Calculate Total Payments for Each Customer.

```
SELECT c.customerID, COALESCE(SUM(amount), 0) AS "Total_Payments" FROM Customer c

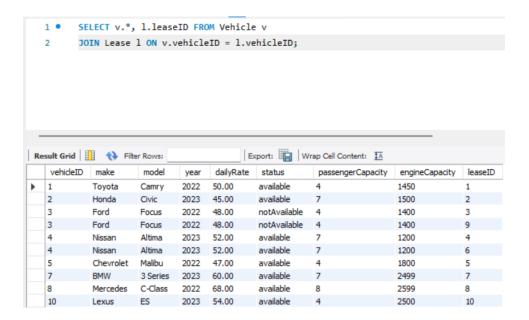
LEFT JOIN Lease 1 ON c.customerID = l.customerID

LEFT JOIN Payment p ON p.leaseID = l.leaseID

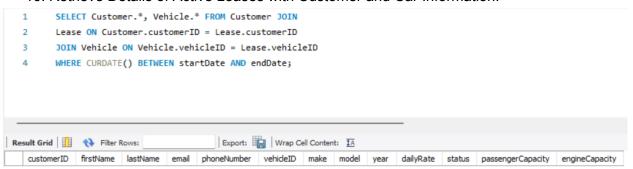
GROUP BY c.customerID;
```



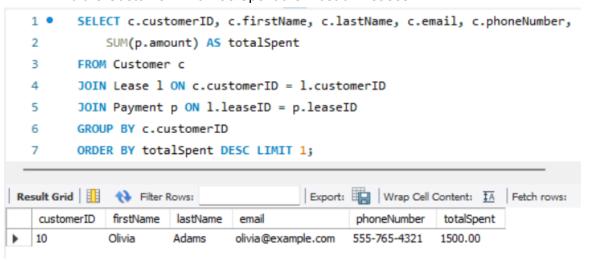
15. List Car Details for Each Lease.



16. Retrieve Details of Active Leases with Customer and Car Information.



17. Find the Customer Who Has Spent the Most on Leases.



18. List All cars with their current lease information.

