<u>Coding Challenge - Car Rental System – SQL</u> (Satyendra Singh Rathore)

Tasks:

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

```
92 -- 1
93 • update vehicle set dailyRate=68.00 where make='Mercedes';
94
```

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

```
95
       DELETE FROM payment
96 •
     97
           SELECT leaseID
98
           FROM lease
99
100
           WHERE customerID = 3
101
       );
102
       DELETE FROM lease
104
       WHERE customerID = 3;
105
106 •
       DELETE FROM customer
107
       WHERE customerID = 3;
```

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

```
109 -- 3

110 • ALTER TABLE payment

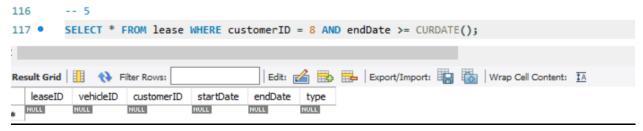
111 RENAME COLUMN paymentDate TO transactionDate;

112
```

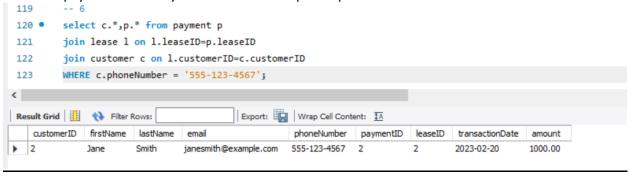
4. Find a specific customer by email.

```
113
114 •
        select * from customer where email='sarah@example.com';
                                        Edit: 🚄 🖶 | Export/Import: 📳 🐻 | Wrap Cell Content: 🔣
firstName
                      lastName
                                               phoneNumber
   customerID
                     Brown
                                               555-456-7890
            Sarah
                              sarah@example.com
 NULL
            NULL
                     NULL
```

5. Get active leases for a specific customer.

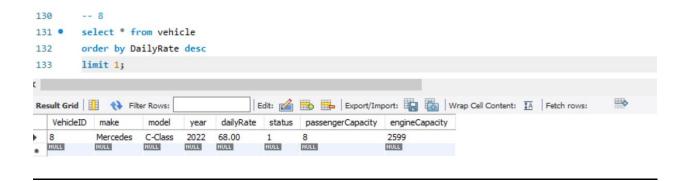


6. Find all payments made by a customer with a specific phone number.

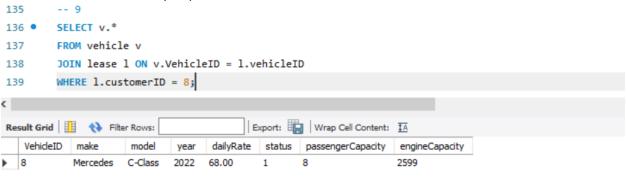


7. Calculate the average daily rate of all available cars.

8. Find the car with the highest daily rate.



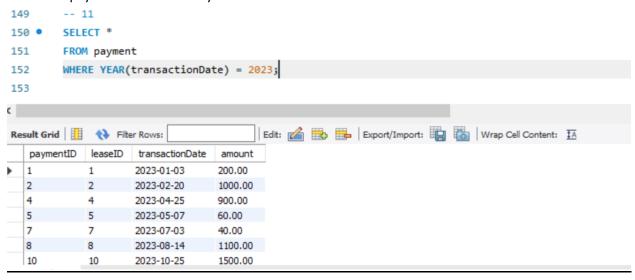
9. Retrieve all cars leased by a specific customer.



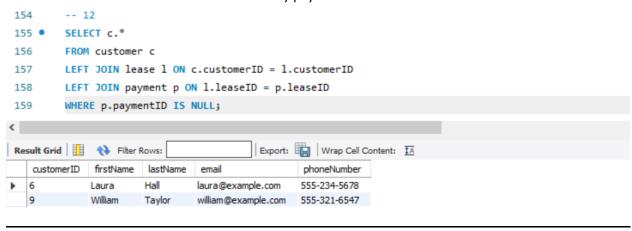
10. Find the details of the most recent lease.

```
141
       -- 10
142 •
       SELECT *
       FROM lease
     144
145
           SELECT MAX(endDate)
           FROM lease
146
147
       );
                                     | Edit: 🚄 📆 🖶 | Export/Import: 🟢 🌄 | Wrap Cell Content: 🔣
leaseID vehicleID customerID startDate
                                     endDate
                                               type
                                    2023-10-31
                 10
NULL
                           2023-10-10
                                              Monthly
 HULL
         NULL
                          NULL
                                    NULL
                                              NULL
```

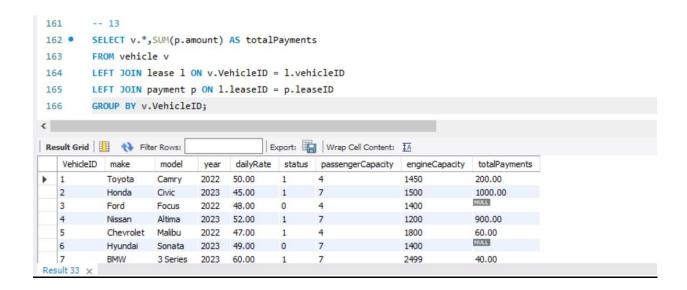
11. List all payments made in the year 2023.



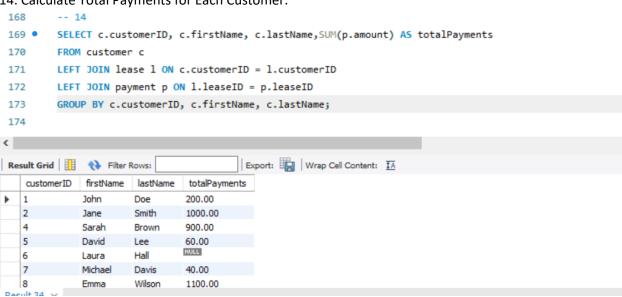
12. Retrieve customers who have not made any payments.



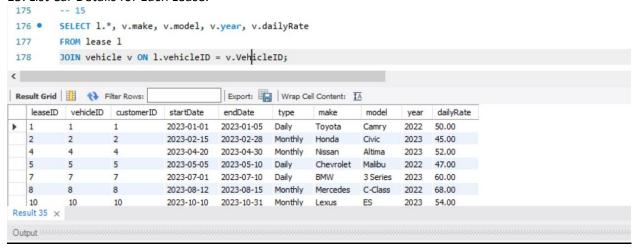
13. Retrieve Car Details and Their Total Payments.



14. Calculate Total Payments for Each Customer.



15. List Car Details for Each Lease.



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

```
180 -- 16

181 • SELECT l.*, c.firstName, c.lastName, c.email, c.phoneNumber, v.make, v.model, v.year, v.dailyRate

182 FROM lease l

183 JOIN customer c ON l.customerID = c.customerID

184 JOIN vehicle v ON l.vehicleID = v.VehicleID

185 WHERE l.endDate >= CURDATE();

Result Grid  Filter Rows:

| Export: | Wrap Cell Content: IA

| LeaseID | vehicleID | customerID | startDate | endDate | type | firstName | lastName | email | phoneNumber | make | model | year | dailyRate
```

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

```
187
         -- 17
        SELECT c.customerID, c.firstName, c.lastName, SUM(p.amount) AS totalAmountSpent
188 •
189
        FROM customer c
190
        LEFT JOIN lease 1 ON c.customerID = 1.customerID
        LEFT JOIN payment p ON l.leaseID = p.leaseID
191
192
        GROUP BY c.customerID, c.firstName, c.lastName
193
        ORDER BY totalAmountSpent DESC
194
        LIMIT 1;
                                                                                 -
Export: Wrap Cell Content: TA Fetch rows:
                               totalAmountSpent
   customerID
             firstName
                      lastName
10
                      Adams
             Olivia
                               1500.00
```

```
196 -- 18
197 • SELECT v.*, 1.*
198
      FROM vehicle v
199 LEFT JOIN lease 1 ON v.VehicleID = 1.vehicleID
200 WHERE 1.endDate >= CURDATE() OR 1.endDate IS NULL;
<
Export: Wrap Cell Content: TA
  VehicleID make model year dailyRate status passengerCapacity engineCapacity leaseID vehicleID customerID startDate endDate type

3 Ford Foors 2022 48:00 0 4 14:00 10011 10011 10011 10011 10011 10011
           Ford
                   Focus
                         2022 48.00
                                                            1400
                                                                                                                 NULL
        Hyundai Sonata 2023 49.00 0 7
                                                                        NULL
                                                                               NULL
                                                                                      NULL
                                                                                                 NULL
                                                                                                         NULL
  6
                                                           1400
                                                                        NULL
                                                                               NULL
                                                                                       NULL
                                                                                                 NULL
                                                                                                         NULL
                                                                                                                 NULL
9
                                                            2500
           Audi A4 2022 55.00
                                     0
                                             4
```