Coding Challenge 4

Certainly! Here are all 18 questions and their corresponding answers:

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

-Query : UPDATE Vehicle SET dailyRate = 68 WHERE make = 'Mercedes';

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

- Example: To delete customer with ID 3:

DELETE FROM Payment WHERE leaseID IN (SELECT leaseID FROM Lease WHERE customerID = 3);

DELETE FROM Lease WHERE customerID = 3;

DELETE FROM Customer WHERE customerID = 3;

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

- Query : ALTER TABLE Payment RENAME COLUMN paymentDate TO transactionDate;

4. Find a specific customer by email

- Query: SELECT \* FROM Customer WHERE email = 'johndoe@example.com';

5. Get active leases for a specific customer

- Query: SELECT \* FROM Lease WHERE customerID = 2 AND endDate >= CURDATE();

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

- Query: `SELECT \* FROM Payment WHERE leaseID IN (SELECT leaseID FROM Lease WHERE customerID = 555-123-4567);

7. Calculate the average daily rate of all available cars

- Query: SELECT AVG(dailyRate) FROM Vehicle WHERE status = 'available';

8. Find the car with the highest daily rate

- Query: SELECT \* FROM Vehicle WHERE dailyRate = (SELECT MAX(dailyRate) FROM Vehicle);

9. Retrieve all cars leased by a specific customer

-Query: SELECT \* FROM Vehicle WHERE carID IN (SELECT carID FROM Lease WHERE customerID = 3);

10. Find the details of the most recent lease

- \*Query: SELECT \* FROM Lease ORDER BY startDate DESC LIMIT 1;

11. List all payments made in the year 2023

- Query:SELECT \* FROM Payment WHERE EXTRACT(YEAR FROM paymentDate) = 2023;

12. Retrieve customers who have not made any payments

- Query:SELECT \* FROM Customer WHERE customerID NOT IN (SELECT DISTINCT customerID FROM Payment);

13. Retrieve Car Details and Their Total Payments

- Query:SELECT v.\*, SUM(p.amount) AS totalPayments FROM Vehicle v LEFT JOIN Lease l ON v.carID = l.carID LEFT JOIN Payment p ON l.leaseID = p.leaseID GROUP BY v.carID;

14. Calculate Total Payments for Each Customer

- Query:SELECT customerID, SUM(amount) AS totalPayments FROM Payment GROUP BY customerID;

15. List Car Details for Each Lease

- Query:SELECT l.\*, v.make, v.model FROM Lease l JOIN Vehicle v ON l.carID = v.carID;

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

- Query: SELECT l.\*, c.firstName, c.lastName, v.make, v.model FROM Lease l JOIN Customer c ON l.customerID = c.customerID JOIN Vehicle v ON l.carID = v.carID WHERE l.endDate >= CURDATE();

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

- Query: SELECT c.customerID, c.firstName, c.lastName, SUM(p.amount) AS totalSpent FROM Customer c JOIN Lease l ON c.customerID = l.customerID JOIN Payment p ON l.leaseID = p.leaseID GROUP BY c.customerID ORDER BY totalSpent DESC LIMIT 1;

18. List All Cars with Their Current Lease Information

- Query: SELECT v.\*, l.startDate, l.endDate FROM Vehicle v LEFT JOIN Lease l ON v.carID = l.carID WHERE l.endDate >= CURDATE() OR l.endDate IS NULL;