Assessments -1

Coding Challenges - Car rental System

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

```
mysql> UPDATE Vehicle
-> SET dailyRate = 68
-> WHERE make = 'Mercedes';
Query OK, 1 row affected (0.03 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

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

```
mysql> DELETE FROM Payment
    -> USING Payment
    -> JOIN Lease ON Payment.leaseID = Lease.leaseID
    -> WHERE Lease.customerID = '123';
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> DELETE FROM Lease
    -> WHERE customerID = '123';
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql>
mysql>
mysql>
mysql>
mysql> DELETE FROM Customer
    -> WHERE customerID = '123';
Query OK, 0 rows affected (0.00 sec)
```

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

```
mysql> ALTER TABLE Payment
-> CHANGE COLUMN paymentDate transactionDate varchar(233);
Query OK, 10 rows affected (0.20 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

4) Find a specific customer by email.

customerID			email	phoneNumber
1	John	Doe	johndoe@example.com	555-555-5555

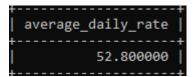
5) Get active leases for a specific customer.

```
mysql> SELECT *
-> FROM Lease
-> WHERE customerID = 1
-> and startDate <= CURDATE()
-> AND endDate >= CURDATE()
-> AND leasertype = 'DailyLease';
Empty set (0.00 sec)
```

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

amount	firstName	lastname	phoneNumber
200.000000000 1000.000000000 75.000000000 1200.00000000 80.00000000 900.00000000 40.00000000 1100.00000000	John Jane Robert Robert Sarah David Michael Emma	Doe Smith Johnson Johnson Brown Lee Davis Wilson Adams	555-555-5555 555-123-4567 555-789-1234 555-789-1234 555-789-1234 555-456-7890 555-987-6543 555-876-5432 555-432-1098

7) Calculate the average daily rate of all available car



8) Find the car with the highest daily rate

vehicleID			dailyrate	 passengerCapacity	
			68.00		

9) Retrieve all cars leased by a specific customer

			. – .	, ,		passengerCapacity	
1	Toyota	Camry	2022	50.00	available		1450

10) Find the details of the most recent lease.

					Leasertype
1	1	1	2021	2017	DailyLease

11) List all payments made in the year 2023.

paymentID	leaseID	transactionDate	amount
1	1	2023-01-01	200.00000000
3	2 3	2023-02-20 2023-03-12	1000.000000000 75.000000000
4	4	2023-04-25	900.00000000
5	5	2023-05-07	60.00000000
6	6	2023-06-18	1200.000000000
7	7	2023-07-03	40.00000000
8	8	2023-08-14	1100.00000000
9	9	2023-09-09	80.00000000
10	10	2023-10-25	1500.00000000

12) Retrieve customers who have not made any payments.

firstName		email	phoneNumber
Laura	Hall	laura@example.com	555-234-5678
William	Taylor	william@example.com	555-321-6547

13) Retrieve Car Details and Their Total Payments

vehicleID	make	model	total_payments
1 2 3 4 5 6 7 8 9	Toyota Honda Ford Nissan Chevrolet Hyundai BMW Mercedes Audi	Camry Civic Focus Altima Malibu Sonata 3 Series C-Class	200.000000000 1000.000000000 155.000000000 2100.000000000 60.000000000 NULL 40.000000000 1100.000000000
10	Lexus	ES	1500.00000000

14) Calculate Total Payments for Each Customer.

customerID	firstName	lastName	total_payments
1 2 3 4 5 6 7 8	John Jane Robert Sarah David Laura Michael Emma	Doe Smith Johnson Brown Lee Hall Davis Wilson Taylor	200.000000000 1000.000000000 1355.000000000 900.00000000 60.00000000 NULL 40.000000000 1100.000000000
10	Olivia	Adams	1500.00000000

15) List Car Details for Each Lease.

leaseID	vehicleID	make	model	cAR_year	dailyrate
1 2 3 9 4 6 5 7 8	1 2 3 3 4 4 4 5 7	Toyota Toyota Honda Ford Ford Nissan Nissan Chevrolet BMW	+ Camry Civic Focus Focus Altima Altima Malibu 3 Series	2022 2023 2022 2022 2023 2023 2022 2023	50.00 45.00 48.00 48.00 52.00 52.00 47.00 60.00
10	10	Lexus	ES	2023	54.00

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

nysql> SELECT Lease.leaseID,Customer.firstName,Customer.lastName,Customer.email,Vehicle.make,Vehicle.model, Vehicle.cAR_year,Vehicle.dailyrate,Lease.startDate,Lease.end
wate FROM Lease JOIN Customer ON Lease.customerID = Customer.customerID JOIN Vehicle ON Lease.vehicleID = Vehicle.vehicleID WHERE Lease.startDate <= CURDATE() AND Lease
endDate >= CURDATE();
impty set (0.00 sec)

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

:	customerID		total_spent
			1500.00000000