Hexaware Foundation Training 2025

Project Case Study - Car Rental System (SQL Queries)

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31/03/2025

Database Schema

Database Creation

```
CREATE DATABASE CarRentalSystem;
USE CarRentalSystem;
```

Tables and Schema

Customer Table - Stores customer details.

```
CREATE TABLE Customer (
    customerID INT PRIMARY KEY AUTO_INCREMENT,
    firstName VARCHAR(50) NOT NULL,
    lastName VARCHAR(50) NOT NULL,
    email VARCHAR(100) UNIQUE NOT NULL,
    phoneNumber VARCHAR(15) UNIQUE NOT NULL);
```

Vehicle Table - Stores vehicle details.

```
CREATE TABLE Vehicle (
    vehicleID INT PRIMARY KEY AUTO_INCREMENT,
    make VARCHAR(50),
    model VARCHAR(50),
    year INT,
    dailyRate DECIMAL(10,2),
    status ENUM('available', 'notAvailable'),
    passengerCapacity INT,
    engineCapacity DECIMAL(5,2));
```

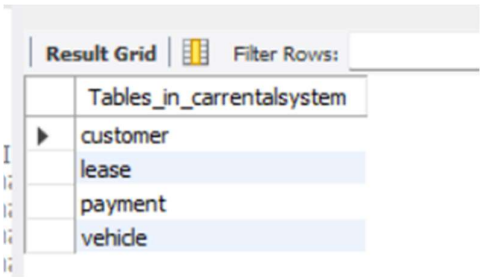
Lease Table - Tracks vehicle leases.

```
CREATE TABLE Lease (
    leaseID INT PRIMARY KEY AUTO_INCREMENT,
    vehicleID INT,
    customerID INT,
    startDate DATE,
    endDate DATE,
    type ENUM('DailyLease', 'MonthlyLease'),
    FOREIGN KEY (vehicleID) REFERENCES Vehicle(vehicleID) ON DELETE
CASCADE,
    FOREIGN KEY (customerID) REFERENCES Customer(customerID) ON DELETE
CASCADE);
```

Payment Table - Manages payment records**.**

```
CREATE TABLE Payment (
    paymentID INT AUTO_INCREMENT PRIMARY KEY,
    leaseID INT,
    amount DECIMAL(10,2),
    paymentDate DATE,
    paymentMethod ENUM('credit card', 'debit card', 'cash', 'online'),
    FOREIGN KEY (leaseID) REFERENCES Lease(leaseID) ON DELETE CASCADE);
```

Show tables; - This shows the number of tables present in the database



Inserting Sample data to all the tables.

- **Customer, Vehicle, Lease, Payment.**
- **Inserted 10 sample records in each table.**

INSERT INTO Customer (firstName, lastName, email, phoneNumber) VALUES

('Riya', 'Salesia', 'riyasalesia@gmail.com', '7974568721'),

('charu', 'latha', 'charulatha@gmail.com', '9123456789'),

('Alia', 'Bhatt', 'aliabhatt@outlook.com', '9125476234'),

('Maya', 'Kapoor', 'maya.kapoor@yahoo.com', '9098765432'),

('Akshay', 'Khanna', 'akshaykhanna@outlook.com', '6759284567'),

('Emma', 'Watson', 'emma.watson@gmail.com', '9657893456'),

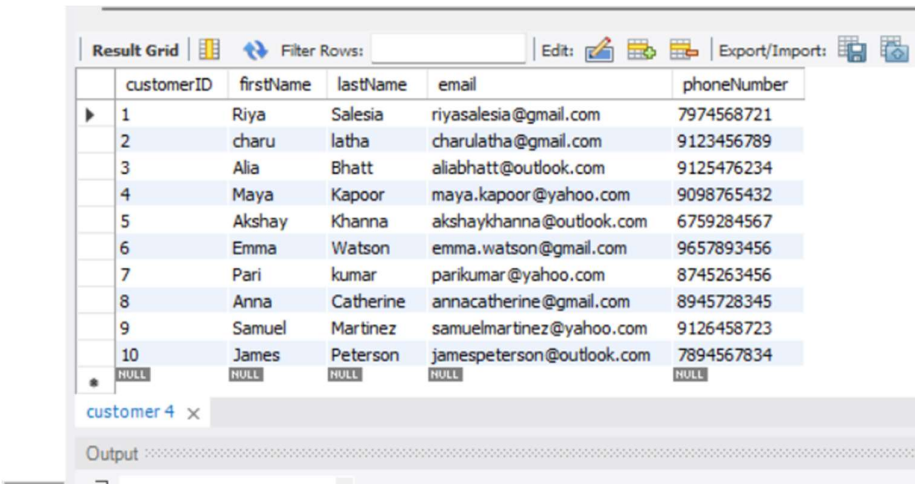
('Pari', 'kumar', 'parikumar@yahoo.com', '8745263456'),

('Anna', 'Catherine', 'annacatherine@gmail.com', '8945728345'),

('Samuel', 'Martinez', 'samuelmartinez@yahoo.com', '9126458723'),

('James', 'Peterson', 'jamespeterson@outlook.com', '7894567834');

To show the entire table for customers: select *from customers;



customerID	firstName	lastName	email	phoneNumber
1	Riya	Salesia	riyasalesia@gmail.com	7974568721
2	charu	latha	charulatha@gmail.com	9123456789
3	Alia	Bhatt	aliabhatt@outlook.com	9125476234
4	Maya	Kapoor	maya.kapoor@yahoo.com	9098765432
5	Akshay	Khanna	akshaykhanna@outlook.com	6759284567
6	Emma	Watson	emma.watson@gmail.com	9657893456
7	Pari	kumar	parikumar@yahoo.com	8745263456
8	Anna	Catherine	annacatherine@gmail.com	8945728345
9	Samuel	Martinez	samuelmartinez@yahoo.com	9126458723
10	James	Peterson	jamespeterson@outlook.com	7894567834
NULL	NULL	NULL	NULL	NULL

INSERT INTO Vehicle (make, model, year, dailyRate, status, passengerCapacity, engineCapacity) VALUES

('Toyota', 'Camry', 2022, 50.00, 'available', 5, 2.5),

('Honda', 'Civic', 2021, 45.00, 'available', 5, 2.0),

('Ford', 'Explorer', 2023, 70.00, 'notAvailable', 7, 3.0),

('BMW', 'X5', 2022, 90.00, 'available', 5, 3.0),

('Audi', 'A4', 2021, 80.00, 'notAvailable', 5, 2.0),

('Hyundai', 'Elantra', 2020, 40.00, 'available', 5, 1.8),

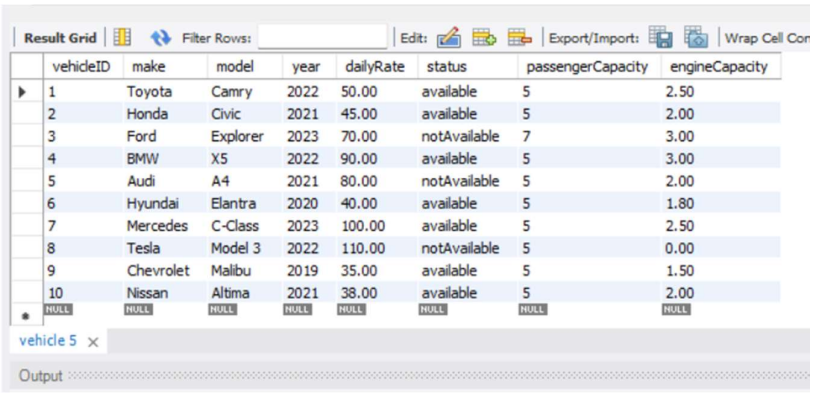
('Mercedes', 'C-Class', 2023, 100.00, 'available', 5, 2.5),

('Tesla', 'Model 3', 2022, 110.00, 'notAvailable', 5, 0.0),

('Chevrolet', 'Malibu', 2019, 35.00, 'available', 5, 1.5),

('Nissan', 'Altima', 2021, 38.00, 'available', 5, 2.0);

To show the entire table for vehicles: select *from vehicles;



vehicleID	make	model	year	dailyRate	status	passengerCapacity	engineCapacity
1	Toyota	Camry	2022	50.00	available	5	2.50
2	Honda	Civic	2021	45.00	available	5	2.00
3	Ford	Explorer	2023	70.00	notAvailable	7	3.00
4	BMW	X5	2022	90.00	available	5	3.00
5	Audi	A4	2021	80.00	notAvailable	5	2.00
6	Hyundai	Elantra	2020	40.00	available	5	1.80
7	Mercedes	C-Class	2023	100.00	available	5	2.50
8	Tesla	Model 3	2022	110.00	notAvailable	5	0.00
9	Chevrolet	Malibu	2019	35.00	available	5	1.50
10	Nissan	Altima	2021	38.00	available	5	2.00
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

INSERT INTO Lease (vehicleID, customerID, startDate, endDate, type) VALUES

(1, 1, '2025-04-01', '2025-04-05', 'DailyLease'),

(2, 2, '2025-04-10', '2025-05-10', 'MonthlyLease'),

(3, 3, '2025-03-15', '2025-03-30', 'MonthlyLease'),

(4, 4, '2025-04-05', '2025-04-12', 'DailyLease'),

(5, 5, '2025-04-08', '2025-05-08', 'MonthlyLease'),

(6, 6, '2025-04-20', '2025-04-25', 'DailyLease'),

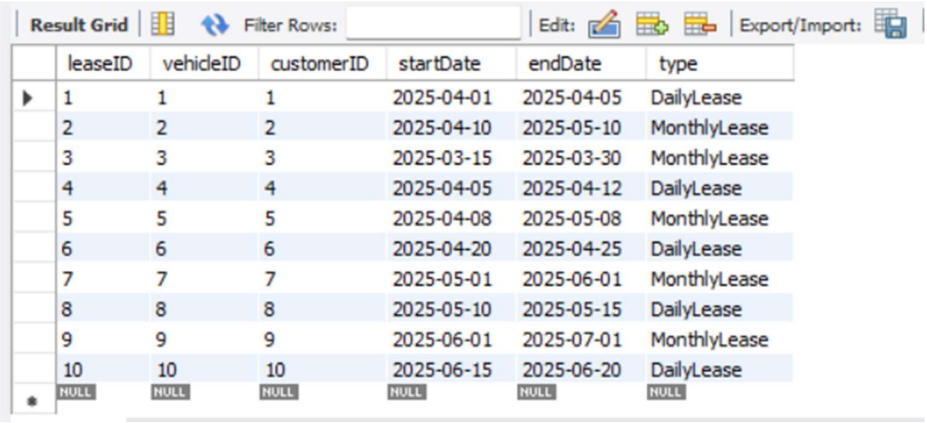
(7, 7, '2025-05-01', '2025-06-01', 'MonthlyLease'),

(8, 8, '2025-05-10', '2025-05-15', 'DailyLease'),

(9, 9, '2025-06-01', '2025-07-01', 'MonthlyLease'),

(10, 10, '2025-06-15', '2025-06-20', 'DailyLease');

To show the entire table for lease: select *from lease;



leaseID	vehicleID	customerID	startDate	endDate	type
1	1	1	2025-04-01	2025-04-05	DailyLease
2	2	2	2025-04-10	2025-05-10	MonthlyLease
3	3	3	2025-03-15	2025-03-30	MonthlyLease
4	4	4	2025-04-05	2025-04-12	DailyLease
5	5	5	2025-04-08	2025-05-08	MonthlyLease
6	6	6	2025-04-20	2025-04-25	DailyLease
7	7	7	2025-05-01	2025-06-01	MonthlyLease
8	8	8	2025-05-10	2025-05-15	DailyLease
9	9	9	2025-06-01	2025-07-01	MonthlyLease
10	10	10	2025-06-15	2025-06-20	DailyLease
NULL	NULL	NULL	NULL	NULL	NULL

INSERT INTO Payment (leaseID, paymentDate, amount) VALUES

(1, '2025-04-01', 200.00),

(2, '2025-04-10', 1350.00),

(3, '2025-03-15', 2100.00),

(4, '2025-04-05', 630.00),

(5, '2025-04-08', 2400.00),

(6, '2025-04-20', 500.00),

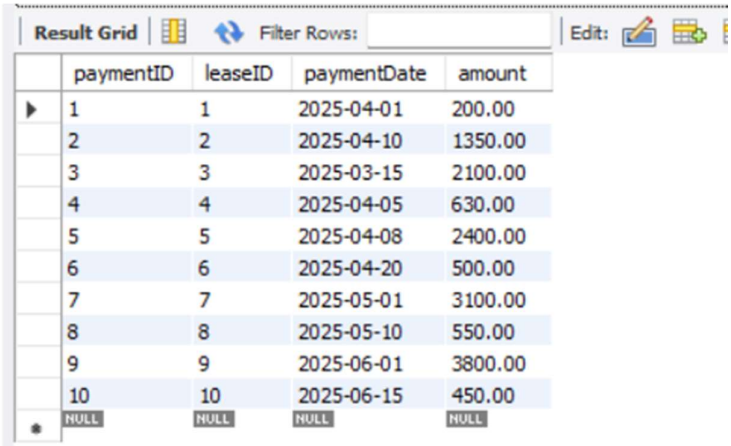
(7, '2025-05-01', 3100.00),

(8, '2025-05-10', 550.00),

(9, '2025-06-01', 3800.00),

(10, '2025-06-15', 450.00);

To show the entire table for payment: select *from payment;



paymentID	leaseID	paymentDate	amount
1	1	2025-04-01	200.00
2	2	2025-04-10	1350.00
3	3	2025-03-15	2100.00
4	4	2025-04-05	630.00
5	5	2025-04-08	2400.00
6	6	2025-04-20	500.00
7	7	2025-05-01	3100.00
8	8	2025-05-10	550.00
9	9	2025-06-01	3800.00
10	10	2025-06-15	450.00
NULL	NULL	NULL	NULL