**CODING ASSESSMENT-03**

**CAR RENTING SYSTEM**

**DATABASE CREATION**

Create database CarrentalSystem;

USE CarRentalSystem;

**SQL SCHEMA**

**1.Vehicle Table**

create table Vehicle (

Vehicle\_Id int primary key,

Make varchar(100),

Model varchar(200),

Year int,

Daily\_Rate Decimal(10, 2),

Status enum ('1', '0'),

Passenger\_Capacity int,

Engine\_Capacity int);

**2.Customer Table**

create table Customer (

Customer\_Id int primary key,

First\_Name varchar(100),

Last\_Name varchar(100),

Email varchar(100),

Phone\_Number varchar(20));

**3.Lease Table**

create table Lease (

Lease\_Id int primary key,

Vehicle\_Id int,

Customer\_Id int,

Start\_Date date,

End\_Date date,

type enum('DailyLease', 'MonthlyLease'),

foreign key (vehicle\_Id) references Vehicle(vehicle\_Id),

foreign key (customer\_Id) references Customer(customer\_Id));

**4.Payment Table**

create table Payment (

Payment\_Id int primary key,

Lease\_Id int,

Payment\_Date date,

Amount decimal(10, 2),

foreign key (lease\_Id) references Lease(lease\_Id));

**insert values**

insert into Vehicle values

(1,'Toyota', 'Camry', 2022, 50.00, '1', 4, 1450),

(2,'Honda', 'Civic', 2023, 45.00, '1', 7, 1500),

(3,'Ford', 'Focus', 2022, 48.00, '0', 4, 1400),

(4,'Nissan', 'Altima', 2023, 52.00, '1',7, 1200),

(5,'Chevrolet', 'Malibu', 2022, 47.00,' 1',4, 1800),

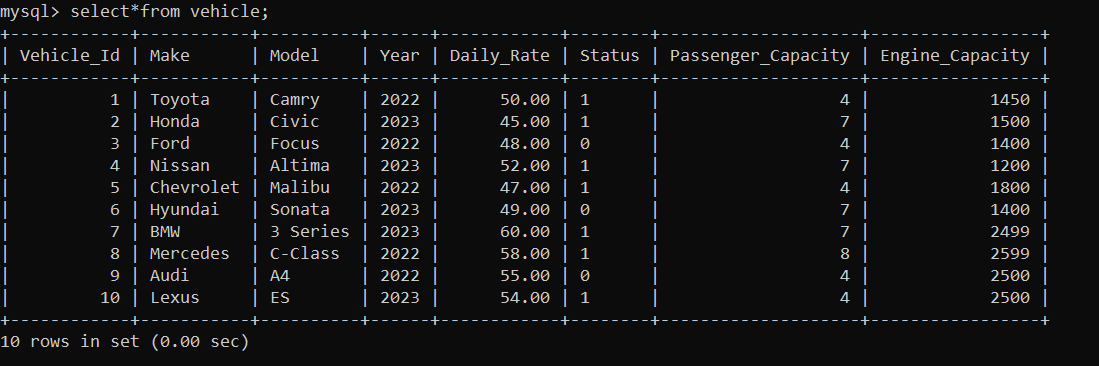
(6,'Hyundai', 'Sonata', 2023, 49.00,'0', 7, 1400),

(7,'BMW', '3 Series', 2023, 60.00, '1', 7, 2499),

(8,'Mercedes', 'C-Class', 2022, 58.00, '1', 8, 2599),

(9,'Audi', 'A4', 2022, 55.00, '0', 4, 2500),

(10,'Lexus', 'ES', 2023, 54.00, '1', 4, 2500);



Insert values into Customer Table

insert into Customer values

(1,'John', 'Doe', 'johndoe@example.com', '123-456-7890'),

(2,'Jane', 'Smith', 'janesmith@example.com', '987-654-3210'),

(3,'Robert', 'Johnson', 'robert@example.com', '555-123-4567'),

(4,'Sarah', 'Brown', 'sarah.williams@example.com', '789-012-3456'),

(5,'David', 'Lee', 'david.jones@example.com', '111-222-3333'),

(6,'Laura', 'Hall', 'laura@example.com', '123-456-7890'),

(7,'Michael', 'Davis', 'michael@example.com', '987-654-3210'),

(8,'Emma', 'Wilson', 'emma@example.com', '555-123-4567'),

(9,'William', 'Taylor', 'william@example.com', '789-012-3456'),

(10,'Olivia', 'Adams', 'olivia@example.com', '111-222-3333');



Insert values into Lease Table

insert into Lease values

(1, 1,1, '2023-01-01', '2023-01-10', 'DailyLease'),

(2, 2,2, '2023-02-01', '2023-03-01', 'MonthlyLease'),

(3, 3,3, '2023-03-15', '2023-03-30', 'DailyLease'),

(4, 4,4, '2023-04-01', '2023-05-01', 'MonthlyLease'),

(5, 5,5, '2023-05-10', '2023-05-20', 'DailyLease'),

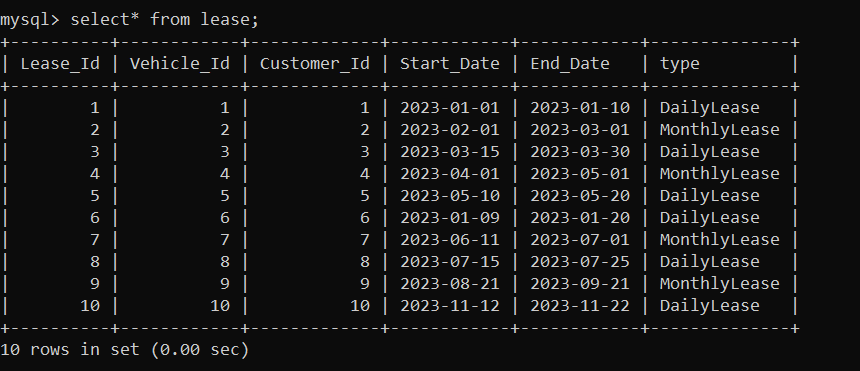
(6, 6,6, '2023-01-09', '2023-01-20', 'DailyLease'),

(7, 7,7, '2023-06-11', '2023-07-01', 'MonthlyLease'),

(8, 8,8, '2023-07-15', '2023-07-25', 'DailyLease'),

(9, 9,9, '2023-08-21', '2023-09-21', 'MonthlyLease'),

(10, 10,10, '2023-11-12', '2023-11-22', 'DailyLease');



Insert values into Payment Table

insert into Payment values

(1,1,'2023-01-05', 55.00),

(2,2,'2023-02-15', 120.00),

(3,3,'2023-03-20', 70.00),

(4,4,'2023-04-10', 150.00),

(5,5,'2023-05-15', 40.00),

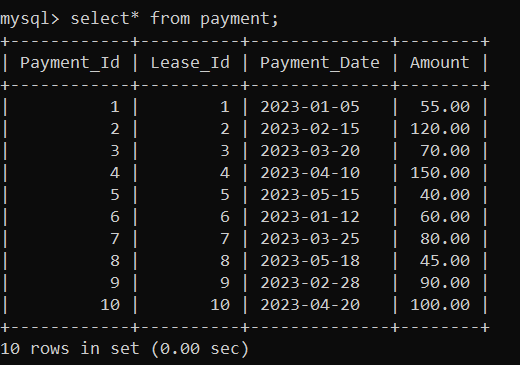
(6,6,'2023-01-12', 60.00),

(7,7,'2023-03-25', 80.00),

(8,8,'2023-05-18', 45.00),

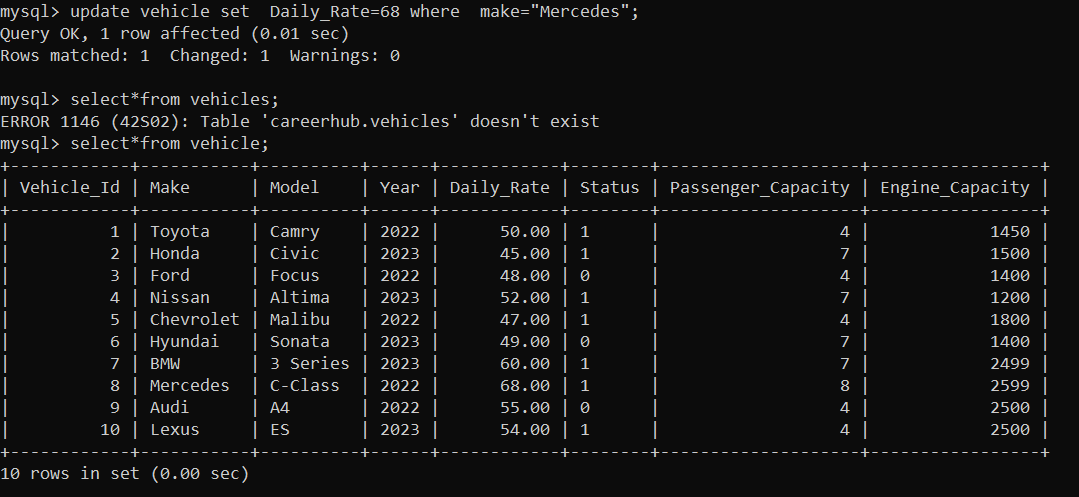
(9,9,'2023-02-28', 90.00),

(10,10,'2023-04-20', 100.00);

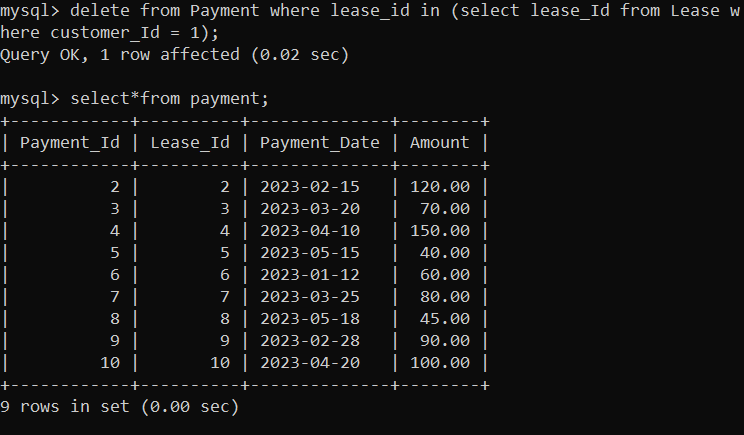


**SQL QUERIES**

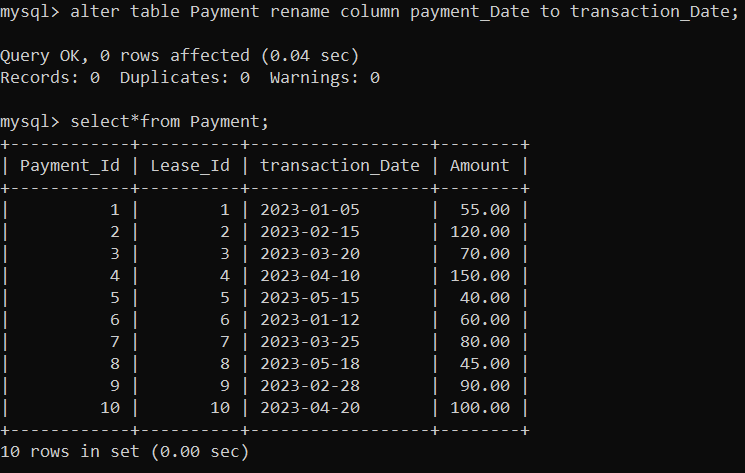
1.update daily rate for a Mercedes car to 68



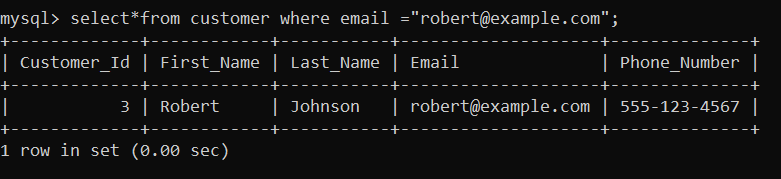
2. Delete a specific customer and all associated leases and payments.



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



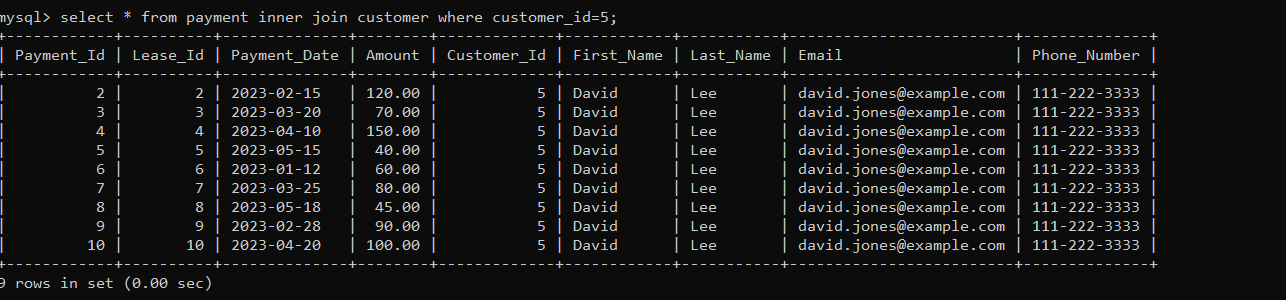
4. Find a specific customer by email



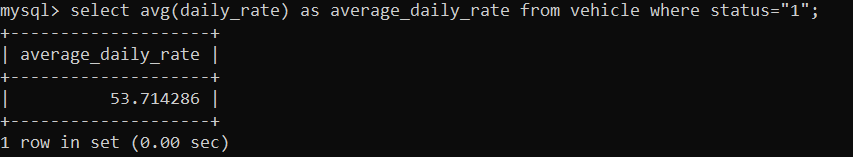
5. Active leases for a specific customerc



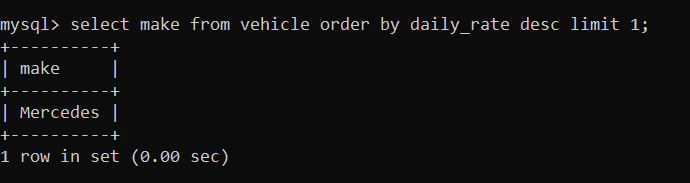
6. Find all payments made by a customer with a specific phone number.



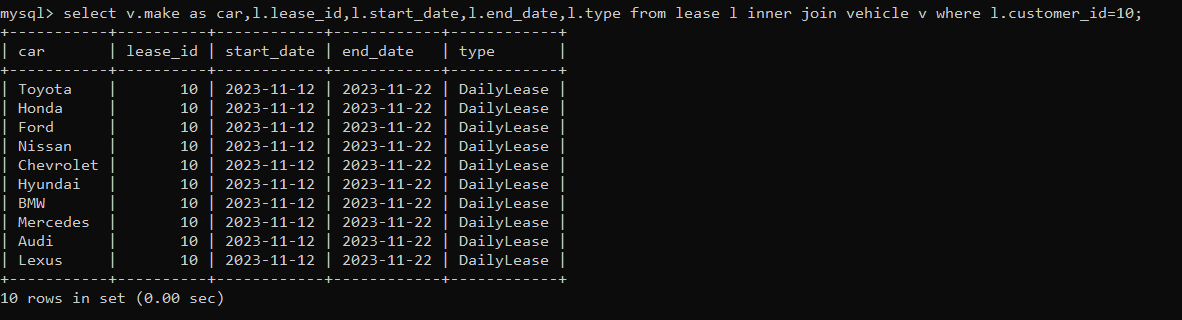
7. average daily rate of all available cars



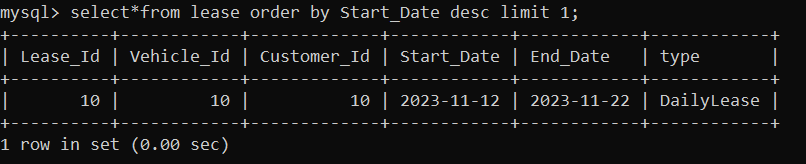
8. car with the highest daily rate



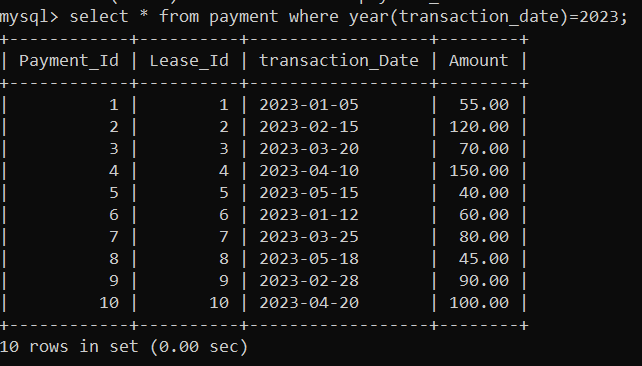
9. Retrieve all cars leased by a specific customer.



10. details of the most recent lease



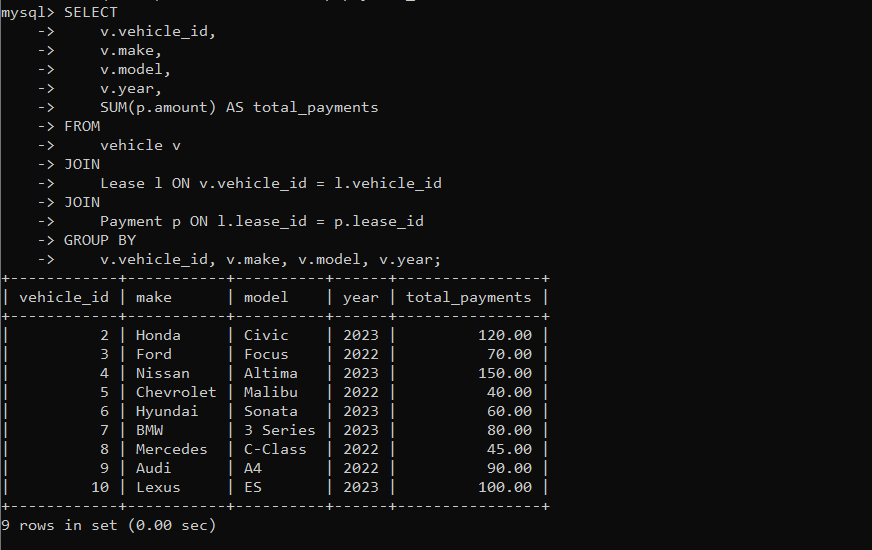
11. all payments made in the year 2023



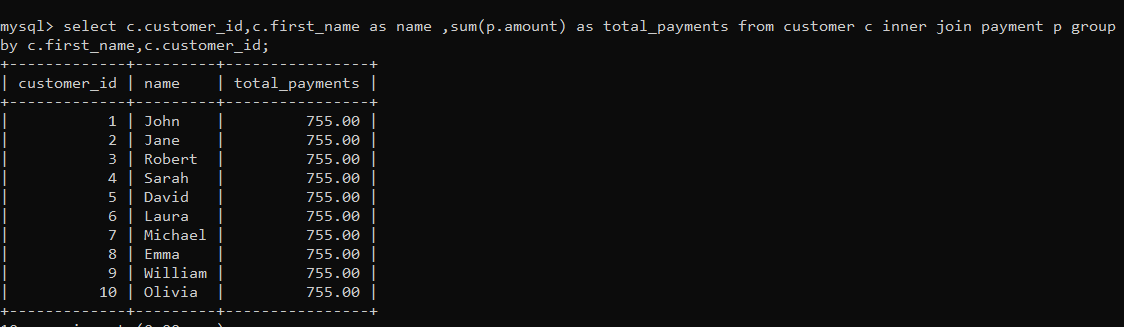
12. customers who have not made any payments



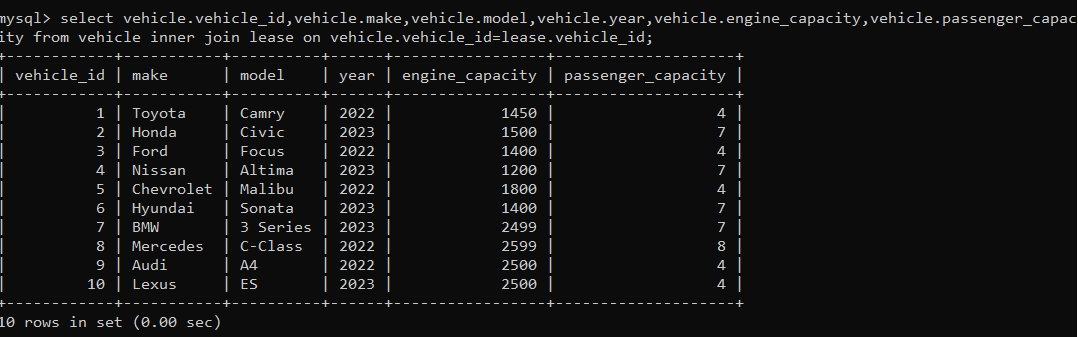
13. Retrieve Car Details and Their Total Payments.



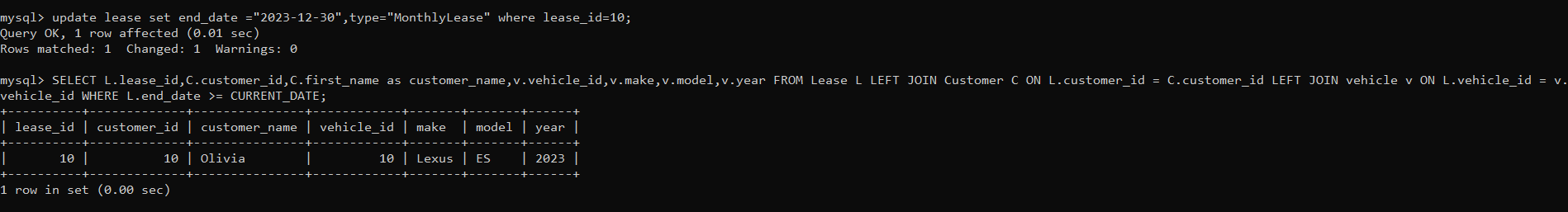
14. Calculate Total Payments for Each Customer.



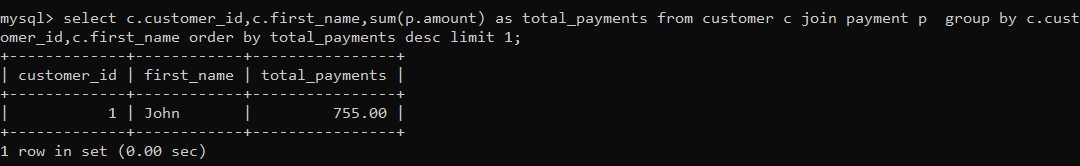
15.List Car Details for Each Lease.



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



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



18.List All Cars with Their Current Lease Information.

