

Coding Challenge 3- Car Rental System

Provide a SQL script that initializes the database for the Car Rental System

```
mysql> show databases;
+-----+
| Database |
+-----+
| bookingsystem |
| careerhub |
| carrentalsystem |
| couriermanagementsystem |
| hmbank |
| information_schema |
| mysql |
| performance_schema |
| petpals |
| sakila |
| sisdb |
| subquery |
| sys |
| techshop |
| ticketbookingsystem |
| world |
+-----+
16 rows in set (0.00 sec)

mysql> use CarRentalSystem;
Database changed
mysql> |
```

Create tables for Vehicle, Customer, Lease, Payment. Define appropriate primary keys, foreign keys, and constraints.

```
mysql> CREATE TABLE Vehicle(
->   vehicleId INT PRIMARY KEY,
->   make VARCHAR(50) NOT NULL,
->   model VARCHAR(50) NOT NULL,
->   year INT NOT NULL,
->   dailyRate DECIMAL(10, 2) NOT NULL,
->   status BOOLEAN NOT NULL,
->   passengerCapacity INT,
->   engineCapacity INT
-> );
Query OK, 0 rows affected (0.03 sec)

mysql> desc Vehicle;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| vehicleId      | int           | NO   | PRI | NULL    |       |
| make           | varchar(50)   | NO   |     | NULL    |       |
| model          | varchar(50)   | NO   |     | NULL    |       |
| year           | int           | NO   |     | NULL    |       |
| dailyRate      | decimal(10,2) | NO   |     | NULL    |       |
| status         | tinyint(1)    | NO   |     | NULL    |       |
| passengerCapacity | int          | YES  |     | NULL    |       |
| engineCapacity | int           | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)

mysql> |
```

```
mysql> CREATE TABLE Customer(
->   customerId INT PRIMARY KEY,
->   firstName VARCHAR(50) NOT NULL,
->   lastName VARCHAR(50) NOT NULL,
->   email VARCHAR(100),
->   phoneNumber VARCHAR(15)
-> );
Query OK, 0 rows affected (0.03 sec)

mysql> desc Customer;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| customerId     | int           | NO   | PRI | NULL    |       |
| firstName      | varchar(50)   | NO   |     | NULL    |       |
| lastName       | varchar(50)   | NO   |     | NULL    |       |
| email          | varchar(100)  | YES  |     | NULL    |       |
| phoneNumber    | varchar(15)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> |
```

```
mysql> CREATE TABLE Lease(
->     leaseId INT PRIMARY KEY,
->     vehicleId INT,
->     customerId INT,
->     startDate DATE,
->     endDate DATE,
->     type VARCHAR(20),
->     FOREIGN KEY (vehicleId) REFERENCES Vehicle(vehicleId),
->     FOREIGN KEY (customerId) REFERENCES Customer(customerId)
-> );
```

Query OK, 0 rows affected (0.04 sec)

```
mysql> desc Lease;
```

Field	Type	Null	Key	Default	Extra
leaseId	int	NO	PRI	NULL	
vehicleId	int	YES	MUL	NULL	
customerId	int	YES	MUL	NULL	
startDate	date	YES		NULL	
endDate	date	YES		NULL	
type	varchar(20)	YES		NULL	

6 rows in set (0.00 sec)

```
mysql> |
```

```
mysql> CREATE TABLE Payment(
->     paymentId INT PRIMARY KEY,
->     leaseId INT,
->     paymentDate DATE,
->     amount DECIMAL(10, 2),
->     FOREIGN KEY (leaseId) REFERENCES Lease(leaseId)
-> );
```

Query OK, 0 rows affected (0.04 sec)

```
mysql> select * from Payment;
Empty set (0.00 sec)
```

```
mysql> desc Payment;
```

Field	Type	Null	Key	Default	Extra
paymentId	int	NO	PRI	NULL	
leaseId	int	YES	MUL	NULL	
paymentDate	date	YES		NULL	
amount	decimal(10,2)	YES		NULL	

4 rows in set (0.00 sec)

```
mysql> |
```

Insert 10 sample values in above tables

```
mysql>
mysql> INSERT INTO Vehicle (vehicleId, make, model, year, dailyRate, status, passengerCapacity, engineCapacity)
-> 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);
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> select * from Vehicle;
```

vehicleId	make	model	year	dailyRate	status	passengerCapacity	engineCapacity
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

```
10 rows in set (0.00 sec)

mysql>
```

```
mysql>
mysql> INSERT INTO Customer(customerId, firstName, lastName, email, phoneNumber)
-> VALUES
-> (1, 'John', 'Doe', 'johndoe@example.com', '555-555-5555'),
-> (2, 'Jane', 'Smith', 'janesmith@example.com', '555-123-4567'),
-> (3, 'Robert', 'Johnson', 'robert@example.com', '555-789-1234'),
-> (4, 'Sarah', 'Brown', 'sarah@example.com', '555-456-7890'),
-> (5, 'David', 'Lee', 'david@example.com', '555-987-6543'),
-> (6, 'Laura', 'Hall', 'laura@example.com', '555-234-5678'),
-> (7, 'Michael', 'Davis', 'michael@example.com', '555-876-5432'),
-> (8, 'Emma', 'Wilson', 'emma@example.com', '555-432-1098'),
-> (9, 'William', 'Taylor', 'william@example.com', '555-321-6547'),
-> (10, 'Olivia', 'Adams', 'olivia@example.com', '555-765-4321');
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> select * from Customer;
```

customerId	firstName	lastName	email	phoneNumber
1	John	Doe	johndoe@example.com	555-555-5555
2	Jane	Smith	janesmith@example.com	555-123-4567
3	Robert	Johnson	robert@example.com	555-789-1234
4	Sarah	Brown	sarah@example.com	555-456-7890
5	David	Lee	david@example.com	555-987-6543
6	Laura	Hall	laura@example.com	555-234-5678
7	Michael	Davis	michael@example.com	555-876-5432
8	Emma	Wilson	emma@example.com	555-432-1098
9	William	Taylor	william@example.com	555-321-6547
10	Olivia	Adams	olivia@example.com	555-765-4321

```
10 rows in set (0.00 sec)
```

```
mysql>
mysql> INSERT INTO Lease (leaseId, vehicleId, customerId, startDate, endDate, type)
-> VALUES
-> (1, 1, 1, '2023-01-01', '2023-01-05', 'Daily'),
-> (2, 2, 2, '2023-02-15', '2023-02-28', 'Monthly'),
-> (3, 3, 3, '2023-03-10', '2023-03-15', 'Daily'),
-> (4, 4, 4, '2023-04-20', '2023-04-30', 'Monthly'),
-> (5, 5, 5, '2023-05-05', '2023-05-10', 'Daily'),
-> (6, 4, 3, '2023-06-15', '2023-06-30', 'Monthly'),
-> (7, 7, 7, '2023-07-01', '2023-07-10', 'Daily'),
-> (8, 8, 8, '2023-08-12', '2023-08-15', 'Monthly'),
-> (9, 3, 3, '2023-09-07', '2023-09-10', 'Daily'),
-> (10, 10, 10, '2023-10-10', '2023-10-31', 'Monthly');
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> select * from Lease;
+-----+-----+-----+-----+-----+-----+
| leaseId | vehicleId | customerId | startDate | endDate | type |
+-----+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 2023-01-01 | 2023-01-05 | Daily |
| 2 | 2 | 2 | 2023-02-15 | 2023-02-28 | Monthly |
| 3 | 3 | 3 | 2023-03-10 | 2023-03-15 | Daily |
| 4 | 4 | 4 | 2023-04-20 | 2023-04-30 | Monthly |
| 5 | 5 | 5 | 2023-05-05 | 2023-05-10 | Daily |
| 6 | 4 | 3 | 2023-06-15 | 2023-06-30 | Monthly |
| 7 | 7 | 7 | 2023-07-01 | 2023-07-10 | Daily |
| 8 | 8 | 8 | 2023-08-12 | 2023-08-15 | Monthly |
| 9 | 3 | 3 | 2023-09-07 | 2023-09-10 | Daily |
| 10 | 10 | 10 | 2023-10-10 | 2023-10-31 | Monthly |
+-----+-----+-----+-----+-----+-----+
```

10 rows in set (0.00 sec)

```
mysql> |
```

```
mysql> INSERT INTO Payment (paymentId, leaseId, paymentDate, amount)
-> VALUES
-> (1, 1, '2023-01-03', 200.00),
-> (2, 2, '2023-02-20', 1000.00),
-> (3, 3, '2023-03-12', 75.00),
-> (4, 4, '2023-04-25', 900.00),
-> (5, 5, '2023-05-07', 60.00),
-> (6, 6, '2023-06-18', 1200.00),
-> (7, 7, '2023-07-03', 40.00),
-> (8, 8, '2023-08-14', 1100.00),
-> (9, 9, '2023-09-09', 80.00),
-> (10, 10, '2023-10-25', 1500.00);
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> select * from Payment;
+-----+-----+-----+-----+
| paymentId | leaseId | paymentDate | amount |
+-----+-----+-----+-----+
| 1 | 1 | 2023-01-03 | 200.00 |
| 2 | 2 | 2023-02-20 | 1000.00 |
| 3 | 3 | 2023-03-12 | 75.00 |
| 4 | 4 | 2023-04-25 | 900.00 |
| 5 | 5 | 2023-05-07 | 60.00 |
| 6 | 6 | 2023-06-18 | 1200.00 |
| 7 | 7 | 2023-07-03 | 40.00 |
| 8 | 8 | 2023-08-14 | 1100.00 |
| 9 | 9 | 2023-09-09 | 80.00 |
| 10 | 10 | 2023-10-25 | 1500.00 |
+-----+-----+-----+-----+
```

10 rows in set (0.00 sec)

```
mysql> |
```

Update daily rate for Mercedes car to 68.

```
mysql> UPDATE Vehicle
-> SET dailyRate = 68
-> WHERE make = 'Mercedes';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from Vehicle;
```

vehicleId	make	model	year	dailyRate	status	passengerCapacity	engineCapacity
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	68.00	1	8	2599
9	Audi	A4	2022	55.00	0	4	2500
10	Lexus	ES	2023	54.00	1	4	2500

10 rows in set (0.00 sec)

```
mysql> |
```

Rename paymentDate column in the payment table to transactionDate.

```
mysql>
mysql> ALTER TABLE Payment
-> CHANGE COLUMN paymentDate transactionDate DATE;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> select * from Payment;
```

paymentId	leaseId	transactionDate	amount
1	1	2023-01-03	200.00
2	2	2023-02-20	1000.00
3	3	2023-03-12	75.00
4	4	2023-04-25	900.00
5	5	2023-05-07	60.00
6	6	2023-06-18	1200.00
7	7	2023-07-03	40.00
8	8	2023-08-14	1100.00
9	9	2023-09-09	80.00
10	10	2023-10-25	1500.00

10 rows in set (0.00 sec)

```
mysql> |
```

Find specific customer by email.

```
mysql> SELECT *
-> FROM Customer
-> WHERE email = 'sarah@example.com';
```

customerId	firstName	lastName	email	phoneNumber
4	Sarah	Brown	sarah@example.com	555-456-7890

1 row in set (0.00 sec)

```
mysql> |
```

Get active leases for specific customer

```
mysql> SELECT Lease.*, Vehicle.make, Vehicle.model
-> FROM Lease
-> JOIN Vehicle ON Lease.vehicleId = Vehicle.vehicleId
-> WHERE Lease.customerId = 1
-> AND Lease.endDate >= CURDATE();
Empty set (0.00 sec)
```

```
mysql> |
```

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

```
mysql> SELECT Payment.*, Lease.*, Customer.*
-> FROM Payment
-> JOIN Lease ON Payment.leaseId=Lease.leaseId
-> JOIN Customer ON Lease.customerId=Customer.customerId
-> WHERE Customer.phoneNumber='555-789-1234';
```

paymentId	leaseId	transactionDate	amount	leaseId	vehicleId	customerId	startDate	endDate	type	customerId	firstName	lastName	email	phoneNumber
3	3	2023-03-12	75.00	3	3	3	2023-03-10	2023-03-15	Daily	3	Robert	Johnson	robert@example.com	555-789-1234
6	6	2023-06-18	1200.00	6	4	3	2023-06-15	2023-06-30	Monthly	3	Robert	Johnson	robert@example.com	555-789-1234
9	9	2023-09-09	80.00	9	3	3	2023-09-07	2023-09-10	Daily	3	Robert	Johnson	robert@example.com	555-789-1234

```
3 rows in set (0.00 sec)
mysql> |
```

Calculate average daily rate of all available cars

```
mysql> SELECT AVG(dailyRate) AS averageDailyRate
-> FROM Vehicle
-> WHERE status =1;
```

```
+-----+
| averageDailyRate |
+-----+
|          53.714286 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> |
```

find car with highest daily rate

```
mysql> SELECT *
-> FROM Vehicle
-> ORDER BY dailyRate DESC
-> LIMIT 1;
+-----+-----+-----+-----+-----+-----+-----+-----+
| vehicleId | make   | model | year | dailyRate | status | passengerCapacity | engineCapacity |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 8         | Mercedes | C-Class | 2022 | 68.00    | 1      | 8                 | 2599           |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> |
```

retrieve all cars leased by specific customer

```
mysql>
mysql> SELECT Vehicle.*
-> FROM Vehicle
-> JOIN Lease ON Vehicle.vehicleId = Lease.vehicleId
-> WHERE Lease.customerId = 1;
+-----+-----+-----+-----+-----+-----+-----+-----+
| vehicleId | make   | model | year | dailyRate | status | passengerCapacity | engineCapacity |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1         | Toyota | Camry | 2022 | 50.00    | 1      | 4                 | 1450           |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> |
```

find details of most recent lease

```
mysql> SELECT *
-> FROM Lease
-> ORDER BY startDate DESC
-> LIMIT 1;
+-----+-----+-----+-----+-----+-----+
| leaseId | vehicleId | customerId | startDate | endDate   | type   |
+-----+-----+-----+-----+-----+-----+
| 10      | 10        | 10         | 2023-10-10 | 2023-10-31 | Monthly |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> |
```


retrieve customers who have not made any payments

```
mysql>
mysql> SELECT Customer.*
      -> FROM Customer
      -> LEFT JOIN Lease ON Customer.customerId = Lease.customerId
      -> LEFT JOIN Payment ON Lease.leaseId = Payment.leaseId
      -> WHERE Payment.paymentId IS NULL;
```

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

```
2 rows in set (0.00 sec)

mysql> |
```

retrieve car details and their total payments

```
mysql> SELECT
      -> Vehicle.vehicleId,
      -> Vehicle.make,
      -> Vehicle.model,
      -> SUM(Payment.amount) AS totalPayments
      -> FROM Vehicle
      -> JOIN Lease ON Vehicle.vehicleId=Lease.vehicleId
      -> JOIN Payment ON Lease.leaseId=Payment.leaseId
      -> GROUP BY Vehicle.vehicleId,Vehicle.make,Vehicle.model;
```

vehicleId	make	model	totalPayments
1	Toyota	Camry	200.00
2	Honda	Civic	1000.00
3	Ford	Focus	155.00
4	Nissan	Altima	2100.00
5	Chevrolet	Malibu	60.00
7	BMW	3 Series	40.00
8	Mercedes	C-Class	1100.00
10	Lexus	ES	1500.00

```
8 rows in set (0.00 sec)

mysql> |
```

Calculate total payments for each customer

```
mysql> SELECT
->   Customer.customerId,
->   Customer.firstName,
->   SUM(Payment.amount) AS totalPayments
-> FROM Customer
-> JOIN Lease ON Customer.customerId=Lease.customerId
-> JOIN Payment ON Lease.leaseId=Payment.leaseId
-> GROUP BY Customer.customerId, Customer.firstName, Customer.lastName;
```

customerId	firstName	totalPayments
1	John	200.00
2	Jane	1000.00
3	Robert	1355.00
4	Sarah	900.00
5	David	60.00
7	Michael	40.00
8	Emma	1100.00
10	Olivia	1500.00

8 rows in set (0.00 sec)

```
mysql> |
```

retrieve details of active leases with customer and car information

```
mysql> SELECT
->   Lease.leaseId,
->   Customer.customerId,
->   Customer.firstName,
->   Customer.lastName,
->   Customer.email,
->   Customer.phoneNumber,
->   Vehicle.vehicleId,
->   Vehicle.make,
->   Vehicle.model,
->   Vehicle.year,
->   Lease.startDate,
->   Lease.endDate
-> FROM Lease
-> JOIN Customer ON Lease.customerId = Customer.customerId
-> JOIN Vehicle ON Lease.vehicleId = Vehicle.vehicleId
-> WHERE Lease.endDate >= CURDATE();
```

Empty set (0.00 sec)

```
mysql> |
```

list all cars with their current lease information

```
mysql> SELECT
-> Vehicle.vehicleId,
-> Vehicle.make,
-> Vehicle.model,
-> Vehicle.year,
-> Vehicle.dailyRate,
-> Lease.leaseId,
-> Lease.startDate,
-> Lease.endDate,
-> Customer.customerId,
-> Customer.firstName,
-> Customer.lastName,
-> Customer.email,
-> Customer.phoneNumber
-> FROM Vehicle
-> LEFT JOIN Lease ON Vehicle.vehicleId = Lease.vehicleId
-> LEFT JOIN Customer ON Lease.customerId = Customer.customerId;
```

	vehicleId	make	model	year	dailyRate	leaseId	startDate	endDate	customerId	firstName	lastName	email	phoneNumber
1	1	Toyota	Camry	2022	50.00	1	2023-01-01	2023-01-05	1	John	Doe	johndoe@example.com	555-555-5555
2	2	Honda	Civic	2023	45.00	2	2023-02-15	2023-02-28	2	Jane	Smith	janesmith@example.com	555-123-4567
3	3	Ford	Focus	2022	48.00	3	2023-03-10	2023-03-15	3	Robert	Johnson	robert@example.com	555-789-1234
4	4	Ford	Focus	2022	48.00	9	2023-09-07	2023-09-10	3	Robert	Johnson	robert@example.com	555-789-1234
5	5	Nissan	Altima	2023	52.00	4	2023-04-20	2023-04-30	4	Sarah	Brown	sarah@example.com	555-456-7890
6	6	Nissan	Altima	2023	52.00	6	2023-06-15	2023-06-30	3	Robert	Johnson	robert@example.com	555-789-1234
7	7	Chevrolet	Malibu	2022	47.00	5	2023-05-05	2023-05-10	5	David	Lee	david@example.com	555-987-6543
8	8	Hyundai	Sonata	2023	49.00	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
9	9	BMW	3 Series	2023	60.00	7	2023-07-01	2023-07-10	7	Michael	Davis	michael@example.com	555-876-5432
10	10	Mercedes	C-Class	2022	68.00	8	2023-08-12	2023-08-15	8	Emma	Wilson	emma@example.com	555-432-1098
11	11	Audi	A4	2022	55.00	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
12	12	Lexus	ES	2023	54.00	10	2023-10-10	2023-10-31	10	Olivia	Adams	olivia@example.com	555-765-4321

12 rows in set (0.00 sec)

Delete a specific customer and all associated leases and payments

```
mysql> DELETE FROM Payment
-> WHERE leaseId IN (SELECT leaseId FROM Lease WHERE customerId = 2);
Query OK, 1 row affected (0.01 sec)

mysql> DELETE FROM Lease
-> WHERE customerId =2;
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM Customer
-> WHERE customerId =2;
Query OK, 1 row affected (0.01 sec)

mysql> Select * from Customer;
```

	customerId	firstName	lastName	email	phoneNumber
1	1	John	Doe	johndoe@example.com	555-555-5555
2	3	Robert	Johnson	robert@example.com	555-789-1234
3	4	Sarah	Brown	sarah@example.com	555-456-7890
4	5	David	Lee	david@example.com	555-987-6543
5	6	Laura	Hall	laura@example.com	555-234-5678
6	7	Michael	Davis	michael@example.com	555-876-5432
7	8	Emma	Wilson	emma@example.com	555-432-1098
8	9	William	Taylor	william@example.com	555-321-6547
9	10	Olivia	Adams	olivia@example.com	555-765-4321

9 rows in set (0.00 sec)

```
mysql> |
```

List all payments made in the year 2023.

```
mysql> SELECT *
-> FROM Payment
-> WHERE YEAR(transactionDate)=2023;
```

paymentId	leaseId	transactionDate	amount
1	1	2023-01-03	200.00
3	3	2023-03-12	75.00
4	4	2023-04-25	900.00
5	5	2023-05-07	60.00
6	6	2023-06-18	1200.00
7	7	2023-07-03	40.00
8	8	2023-08-14	1100.00
9	9	2023-09-09	80.00
10	10	2023-10-25	1500.00

9 rows in set (0.00 sec)

```
mysql> |
```

List Car Details for Each Lease

```
mysql>
mysql> SELECT
-> Lease.leaseId,
-> Vehicle.vehicleId,
-> Vehicle.make,
-> Vehicle.model,
-> Vehicle.year,
-> Vehicle.dailyRate,
-> Customer.customerId,
-> Customer.firstName,
-> Customer.lastName,
-> Customer.email,
-> Customer.phoneNumber,
-> Lease.startDate,
-> Lease.endDate
-> FROM Lease
-> JOIN Vehicle ON Lease.vehicleId = Vehicle.vehicleId
-> JOIN Customer ON Lease.customerId = Customer.customerId;
```

leaseId	vehicleId	make	model	year	dailyRate	customerId	firstName	lastName	email	phoneNumber	startDate	endDate
1	1	Toyota	Camry	2022	50.00	1	John	Doe	john.doe@example.com	555-555-5555	2023-01-01	2023-01-05
3	3	Ford	Focus	2022	48.00	3	Robert	Johnson	robert@example.com	555-789-1234	2023-03-10	2023-03-15
4	4	Nissan	Altima	2023	52.00	4	Sarah	Brown	sarah@example.com	555-456-7890	2023-04-20	2023-04-30
5	5	Chevrolet	Malibu	2022	47.00	5	David	Lee	david@example.com	555-987-6543	2023-05-05	2023-05-10
6	4	Nissan	Altima	2023	52.00	3	Robert	Johnson	robert@example.com	555-789-1234	2023-06-15	2023-06-30
7	7	BMW	3 Series	2023	60.00	7	Michael	Davis	michael@example.com	555-876-5432	2023-07-01	2023-07-10
8	8	Mercedes	C-Class	2022	68.00	8	Emma	Wilson	emma@example.com	555-432-1098	2023-08-12	2023-08-15
9	3	Ford	Focus	2022	48.00	3	Robert	Johnson	robert@example.com	555-789-1234	2023-09-07	2023-09-10
10	10	Lexus	ES	2023	54.00	10	Olivia	Adams	olivia@example.com	555-765-4321	2023-10-10	2023-10-31

9 rows in set (0.00 sec)

```
mysql> |
```

Find the Customer Who Has Spent the Most on Leases.

```
mysql> SELECT
->   C.customerId,
->   C.firstName,
->   C.lastName,
->   C.email,
->   C.phoneNumber,
->   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,
->   C.firstName,
->   C.lastName,
->   C.email,
->   C.phoneNumber
-> ORDER BY totalSpent DESC
-> LIMIT 1;
+-----+-----+-----+-----+-----+-----+
| customerId | firstName | lastName | email | phoneNumber | totalSpent |
+-----+-----+-----+-----+-----+-----+
| 10 | Olivia | Adams | olivia@example.com | 555-765-4321 | 1500.00 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> |
```