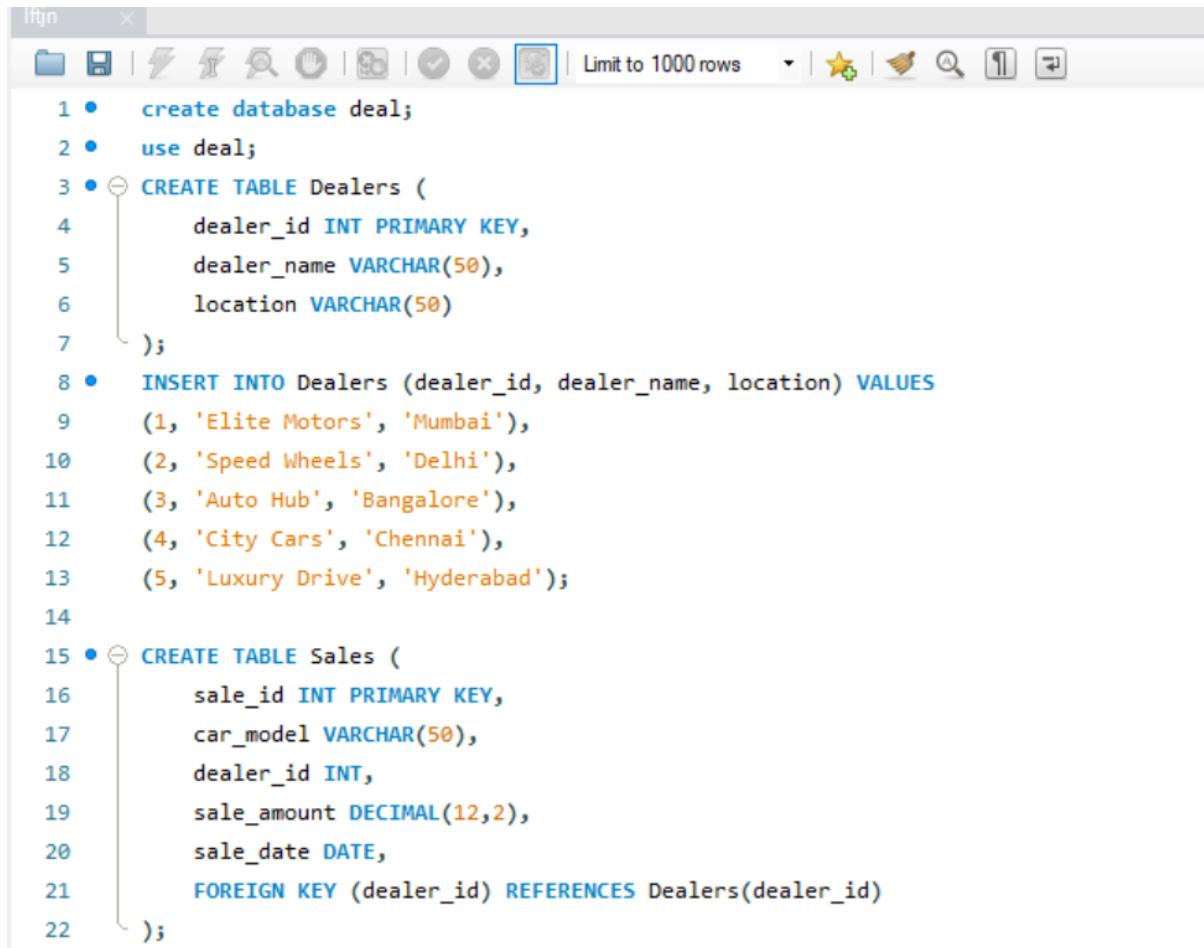


JOINS

LEFT JOIN



The screenshot shows a MySQL Workbench interface with a script editor titled 'ltn'. The code creates a database named 'deal' and two tables, 'Dealers' and 'Sales'. The 'Dealers' table has columns for dealer_id (primary key), dealer_name, and location. The 'Sales' table has columns for sale_id (primary key), car_model, dealer_id, sale_amount, and sale_date. It includes a foreign key constraint linking dealer_id in 'Sales' to 'Dealers'. Data is inserted into 'Dealers' for five dealers: Elite Motors, Speed Wheels, Auto Hub, City Cars, and Luxury Drive.

```
1 •  create database deal;
2 •  use deal;
3 •  CREATE TABLE Dealers (
4      dealer_id INT PRIMARY KEY,
5      dealer_name VARCHAR(50),
6      location VARCHAR(50)
7 );
8 •  INSERT INTO Dealers (dealer_id, dealer_name, location) VALUES
9     (1, 'Elite Motors', 'Mumbai'),
10    (2, 'Speed Wheels', 'Delhi'),
11    (3, 'Auto Hub', 'Bangalore'),
12    (4, 'City Cars', 'Chennai'),
13    (5, 'Luxury Drive', 'Hyderabad');
14
15 •  CREATE TABLE Sales (
16      sale_id INT PRIMARY KEY,
17      car_model VARCHAR(50),
18      dealer_id INT,
19      sale_amount DECIMAL(12,2),
20      sale_date DATE,
21      FOREIGN KEY (dealer_id) REFERENCES Dealers(dealer_id)
22 );
```

```
23 •  INSERT INTO Sales (sale_id, car_model, dealer_id, sale_amount, sale_date) VALUES
24      (101, 'BMW X1', 1, 4200000, '2025-06-12'),
25      (102, 'BMW X5', 2, 8500000, '2025-06-18'),
26      (103, 'BMW 3 Series', 1, 5200000, '2025-07-02'),
27      (104, 'BMW X3', 4, 6400000, '2025-07-10'),
28      (105, 'BMW 7 Series', 2, 12000000, '2025-08-01'),
29      (106, 'BMW X6', 3, 9800000, '2025-08-12');

30
31  ---
32 •  SELECT
33      Dealers.dealer_name,
34      IFNULL(Sales.car_model, 'No Sale') AS car_model
35  FROM Dealers
36  LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id;
37  ---
38 •  SELECT
39      Dealers.dealer_name,
40      IFNULL(Sales.car_model, 'No Sale') AS car_model,
41      IFNULL(CAST(Sales.sale_amount AS CHAR), 'No Sale') AS sale_amount
42  FROM Dealers
43  LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id;
44  ---
```

- **SELECT**

```
Dealers.dealer_name,
IFNULL(Sales.car_model, 'No Sale') AS car_model,
IFNULL(CAST(Sales.sale_amount AS CHAR), 'No Sale') AS sale_amount
FROM Dealers
LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id;
---
```
- **SELECT**

```
Sales.car_model,
Dealers.dealer_name,
Dealers.location
FROM Sales
JOIN Dealers ON Sales.dealer_id = Dealers.dealer_id;
---
```
- **SELECT**

```
Dealers.dealer_name,
Dealers.location
FROM Dealers
LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id
WHERE Sales.sale_id IS NULL;
---
```
- SELECT**

```
Dealers.dealer_name,
Dealers.location
FROM Dealers
LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id
WHERE Sales.sale_id IS NULL;
---
```
- SELECT**

```
Dealers.dealer_name,
SUM(Sales.sale_amount) AS total_sales
FROM Dealers
LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id
GROUP BY Dealers.dealer_name;
---
```
- SELECT**

```
Sales.car_model,
Sales.sale_amount,
Sales.sale_date
FROM Sales
JOIN Dealers ON Sales.dealer_id = Dealers.dealer_id
WHERE Dealers.dealer_name = 'Speed Wheels';
---
```

```
SELECT  
    Dealers.dealer_name,  
    Sales.car_model,  
    Sales.sale_date  
FROM Sales  
JOIN Dealers ON Sales.dealer_id = Dealers.dealer_id  
ORDER BY Sales.sale_date;  
---
```

```
SELECT  
    Dealers.dealer_name,  
    AVG(Sales.sale_amount) AS avg_sale_amount  
FROM Dealers  
JOIN Sales ON Dealers.dealer_id = Sales.dealer_id  
GROUP BY Dealers.dealer_name;  
---
```

```
SELECT  
    Dealers.dealer_name,  
    COUNT(Sales.sale_id) AS cars_sold  
FROM Dealers  
LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id  
GROUP BY Dealers.dealer_name;
```