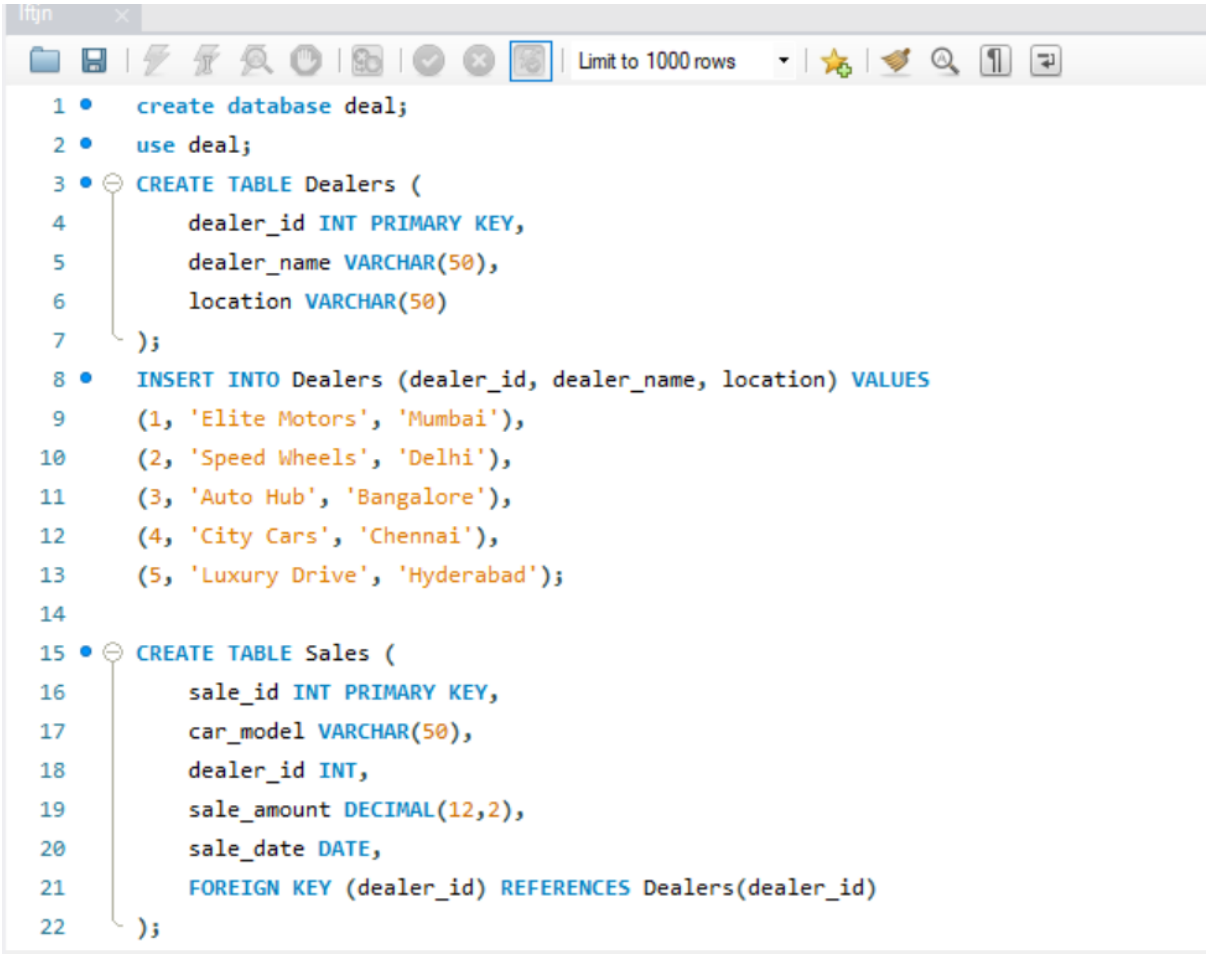
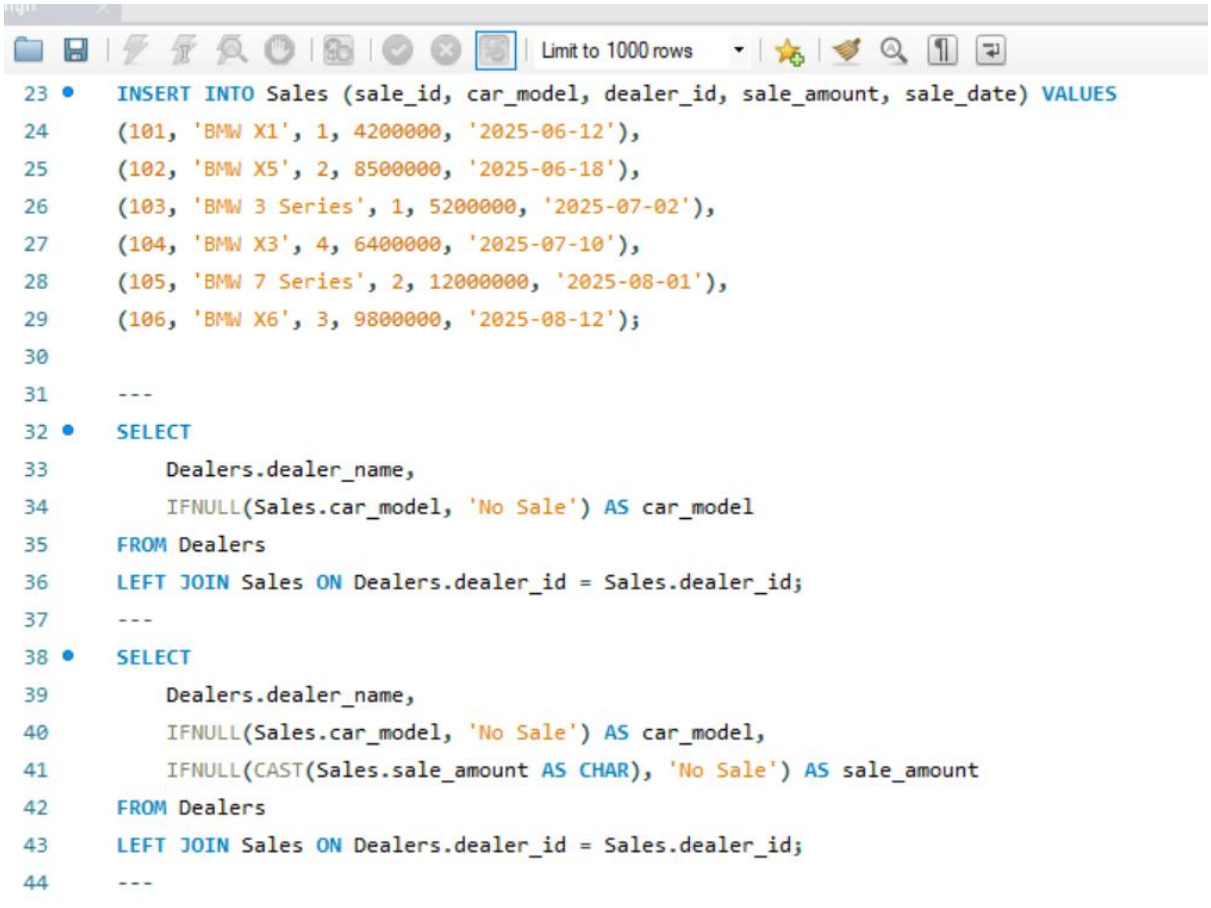
JOINS

LEFT JOIN




```sql
create database deal;
use deal;
CREATE TABLE Dealers (
    dealer_id INT PRIMARY KEY,
    dealer_name VARCHAR(50),
    location VARCHAR(50)
);
INSERT INTO Dealers (dealer_id, dealer_name, location) VALUES
(1, 'Elite Motors', 'Mumbai'),
(2, 'Speed Wheels', 'Delhi'),
(3, 'Auto Hub', 'Bangalore'),
(4, 'City Cars', 'Chennai'),
(5, 'Luxury Drive', 'Hyderabad');

CREATE TABLE Sales (
    sale_id INT PRIMARY KEY,
    car_model VARCHAR(50),
    dealer_id INT,
    sale_amount DECIMAL(12,2),
    sale_date DATE,
    FOREIGN KEY (dealer_id) REFERENCES Dealers(dealer_id)
);
```


Limit to 1000 rows
INSERT INTO Sales (sale_id, car_model, dealer_id, sale_amount, sale_date) VALUES
(101, 'BMW X1', 1, 4200000, '2025-06-12'),
(102, 'BMW X5', 2, 8500000, '2025-06-18'),
(103, 'BMW 3 Series', 1, 5200000, '2025-07-02'),
(104, 'BMW X3', 4, 6400000, '2025-07-10'),
(105, 'BMW 7 Series', 2, 12000000, '2025-08-01'),
(106, 'BMW X6', 3, 9800000, '2025-08-12');

SELECT
Dealers.dealer_name,
IFNULL(Sales.car_model, 'No Sale') AS car_model
FROM Dealers
LEFT JOIN Sales ON Dealers.dealer_id = Sales.dealer_id;

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;

```sql
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;
```