Lesson 05 Demo 02

Implementing Logical Operators

Objective: To demonstrate the application of logical operators (AND, OR, NOT) in MySQL

Tools required: MySQL

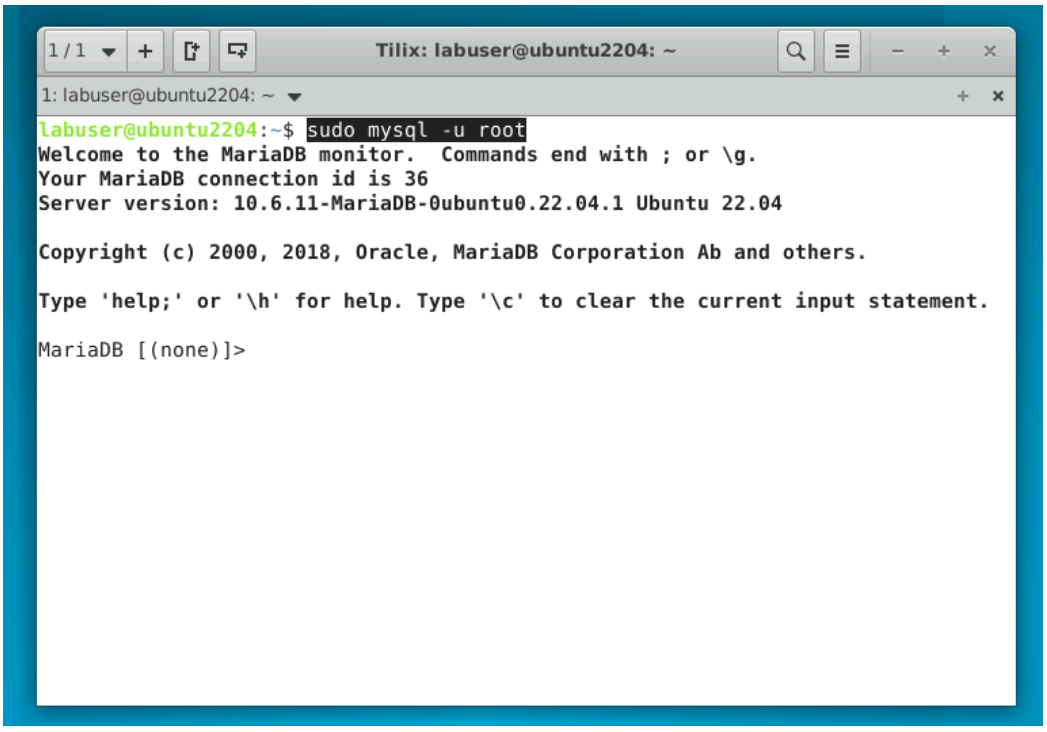
Prerequisites: None

Steps to be followed:

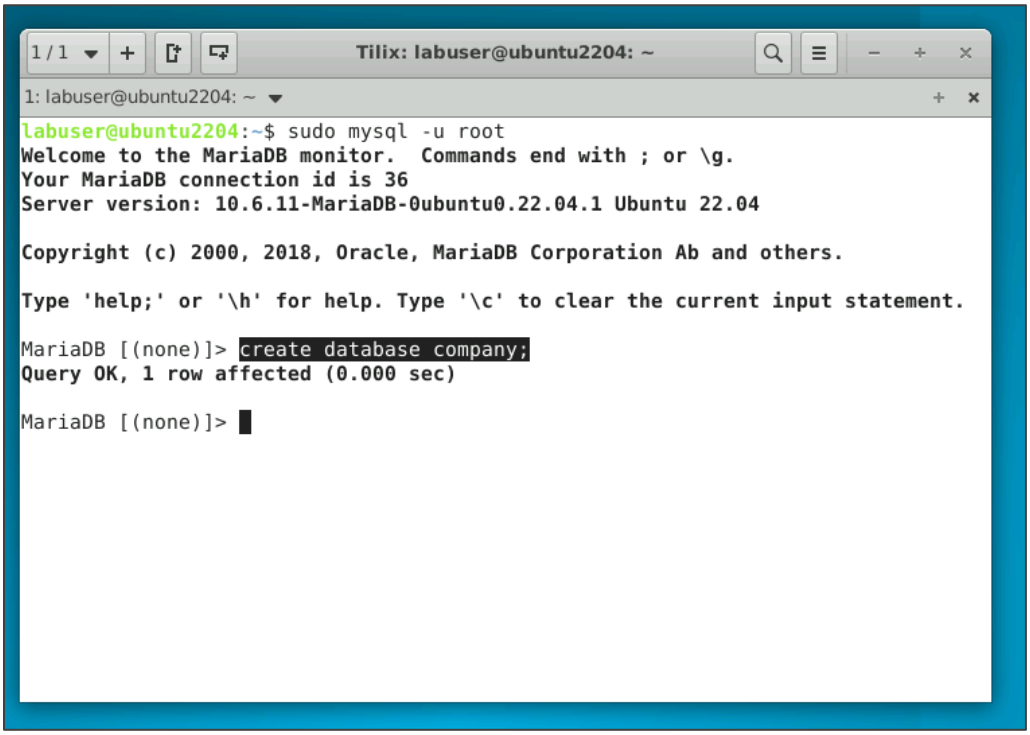
1. Set up a database and table
2. Apply logical operators

Step 1: Set up a database and table

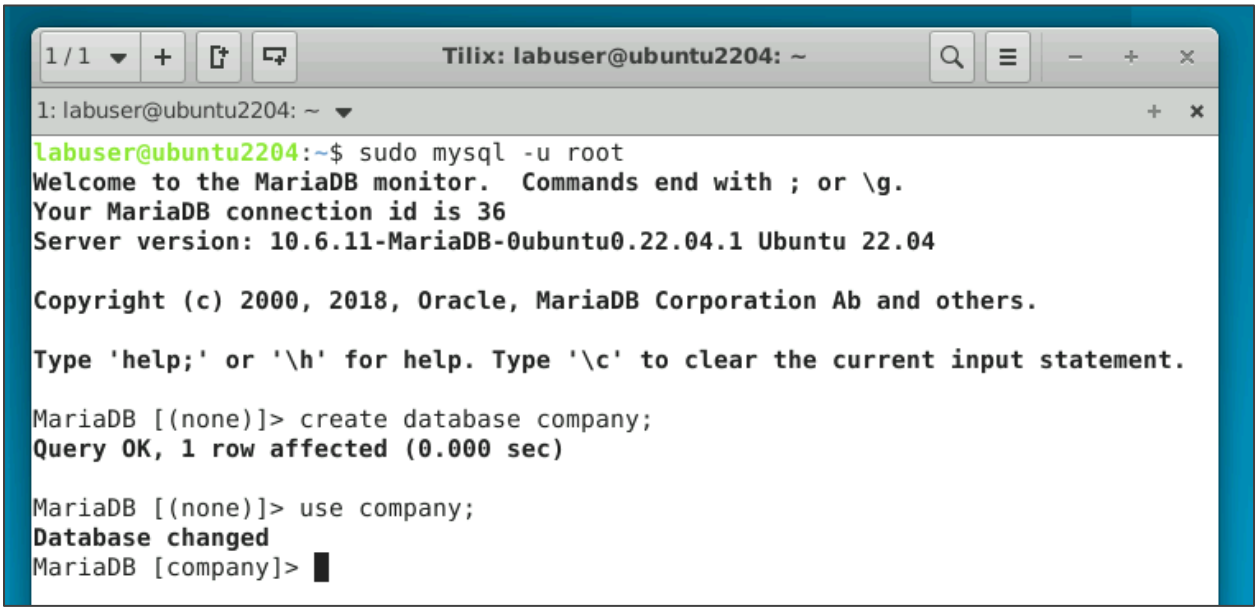
1.1 Open a terminal window and access MySQL as a root user:
sudo mysql -u root



1.2 Create a new database named **company**:
create database company;

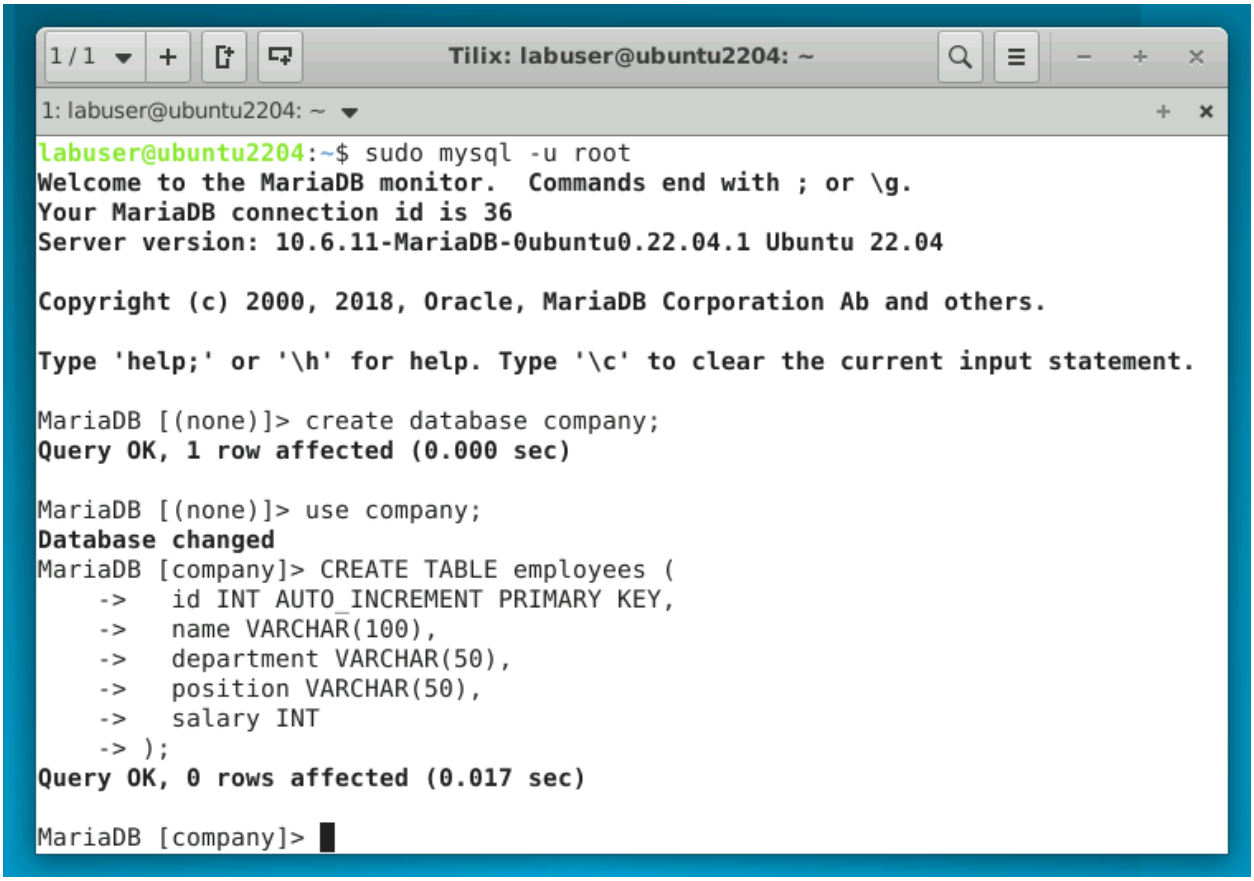


1.3 Select the **company** database:
use company;



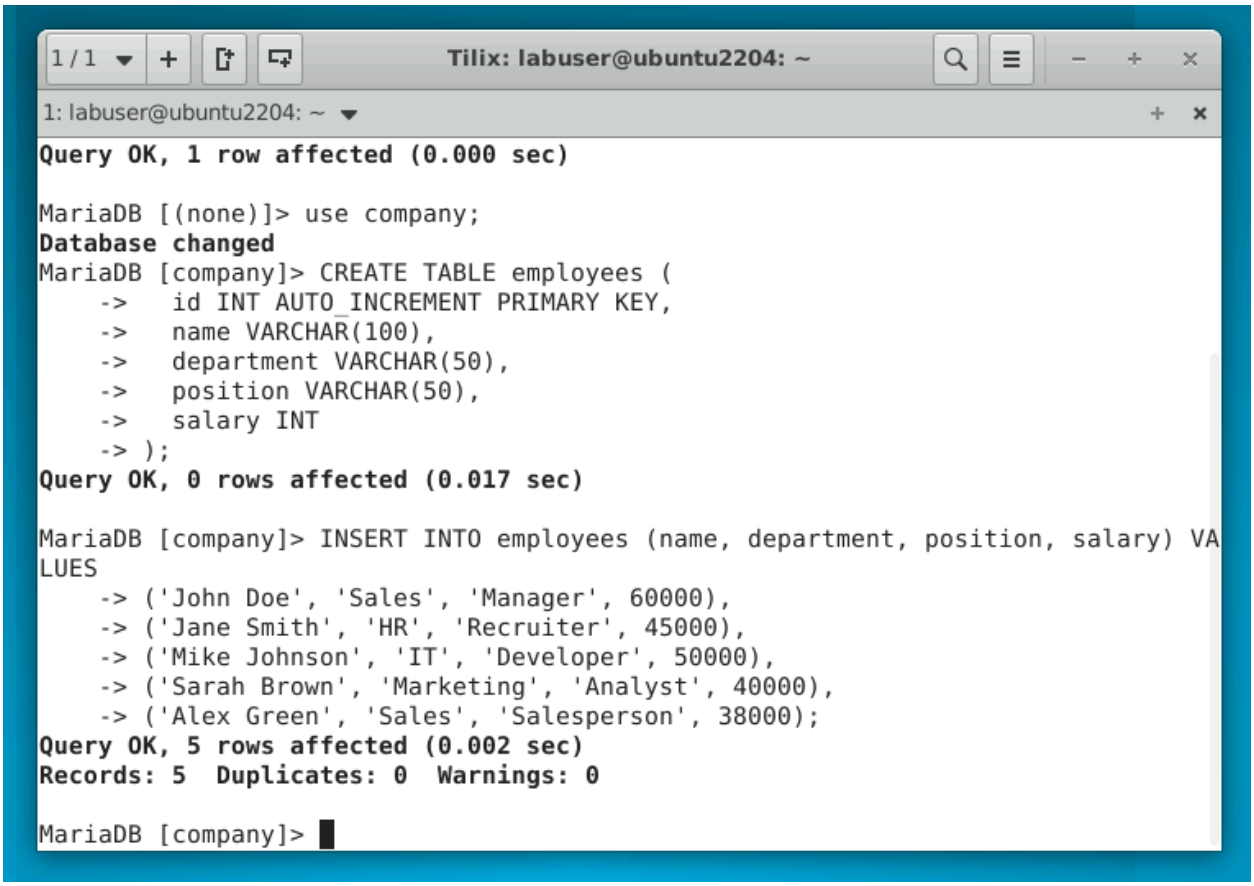
1.4 Create an **employees** table with relevant fields:

```
CREATE TABLE employees (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100),
  department VARCHAR(50),
  position VARCHAR(50),
  salary INT
);
```



1.5 Insert data into the **employees** table:

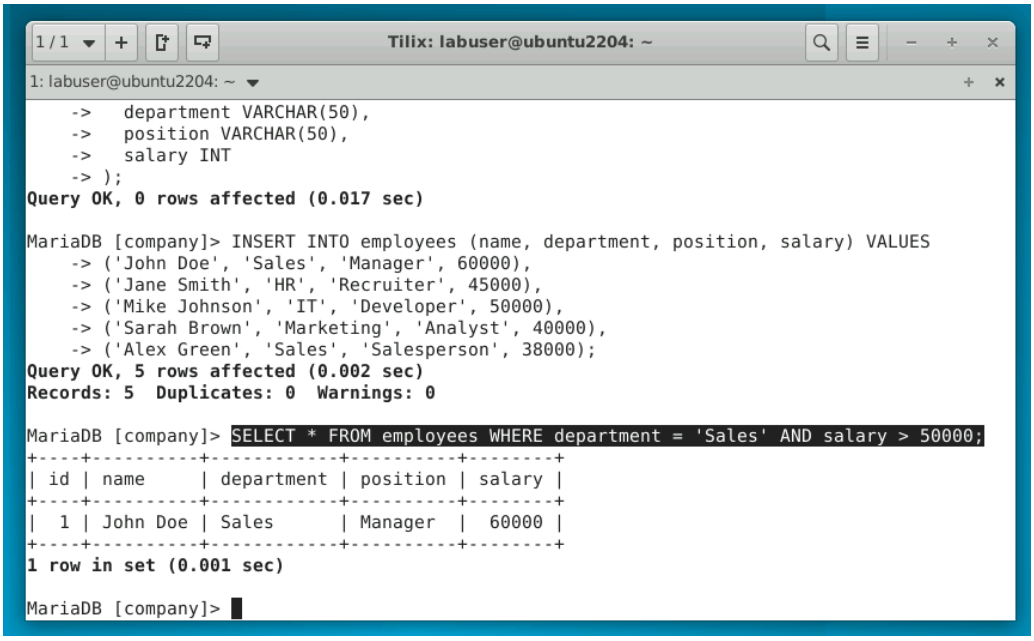
```
INSERT INTO employees (name, department, position, salary) VALUES
('John Doe', 'Sales', 'Manager', 60000),
('Jane Smith', 'HR', 'Recruiter', 45000),
('Mike Johnson', 'IT', 'Developer', 50000),
('Sarah Brown', 'Marketing', 'Analyst', 40000),
('Alex Green', 'Sales', 'Salesperson', 38000);
```



Step 2: Apply logical operators

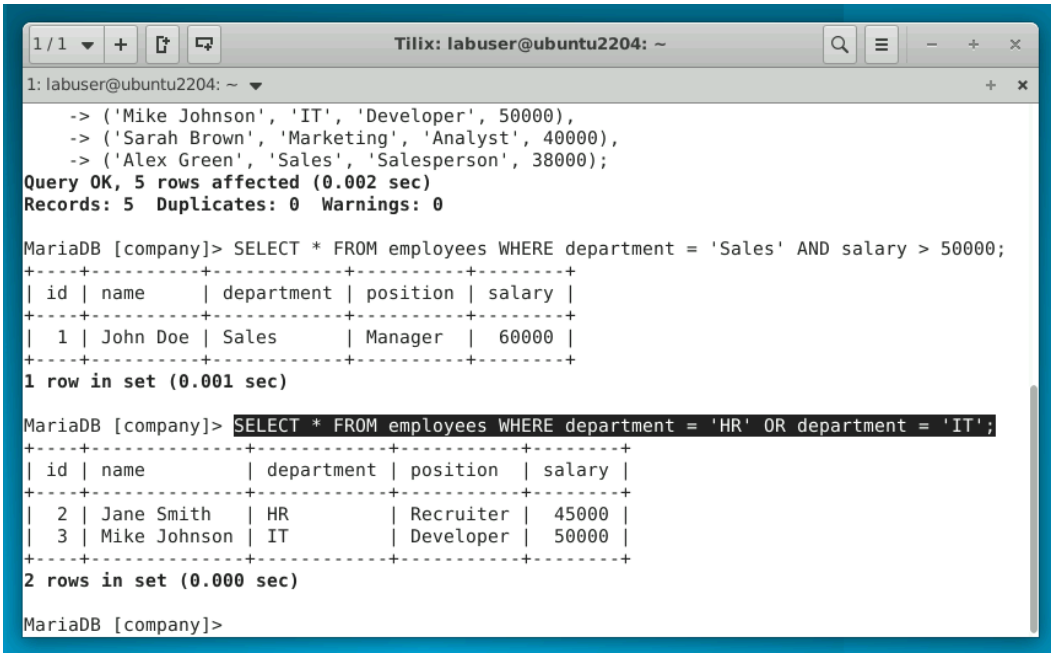
2.1 Execute the following query to find employees in the **Sales** department with a salary over **50000:**

SELECT * FROM employees WHERE department = 'Sales' AND salary > 50000;



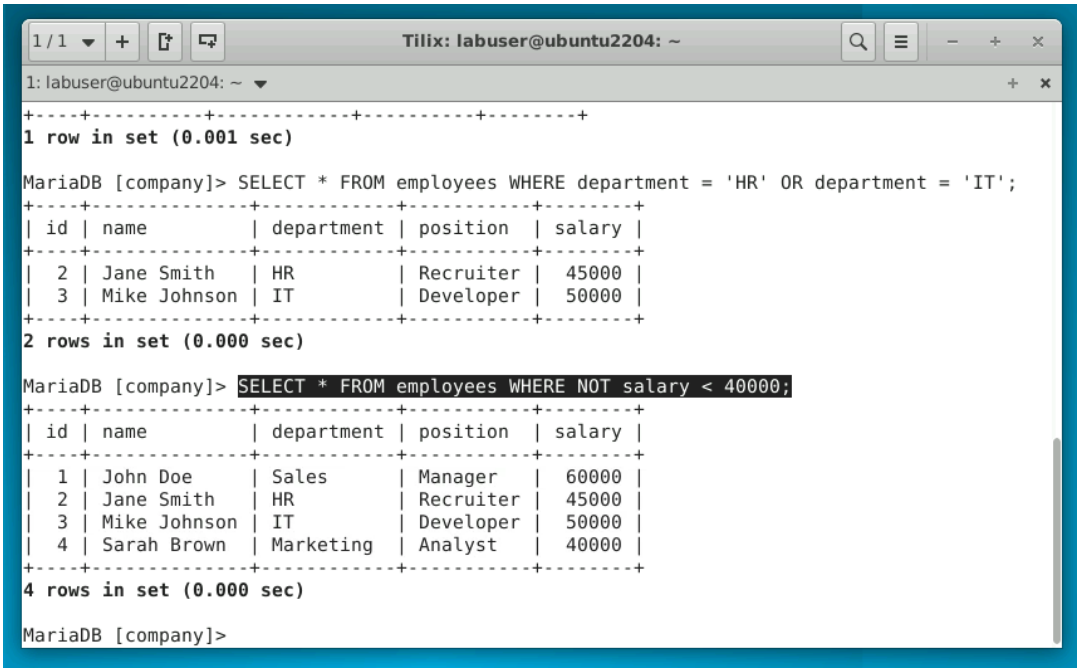
2.2 Find employees either in **HR** or **IT** departments:

SELECT * FROM employees WHERE department = 'HR' OR department = 'IT';



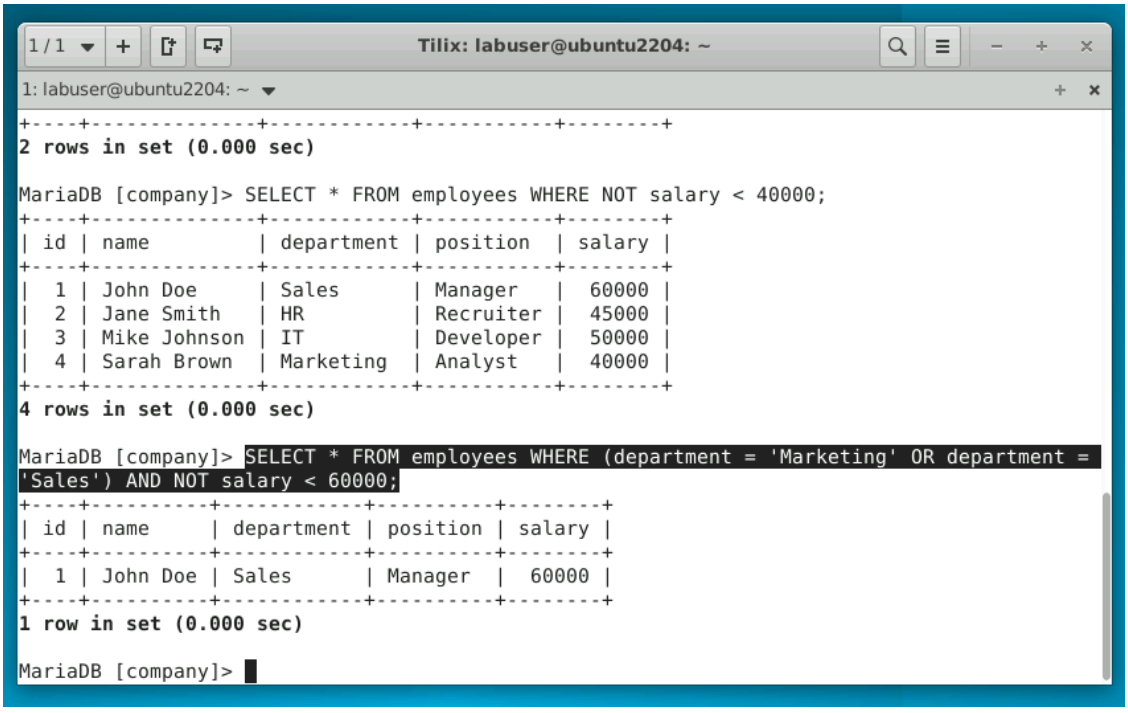
2.3 Find employees with salaries not less than **40000**:

SELECT * FROM employees WHERE NOT salary < 40000;

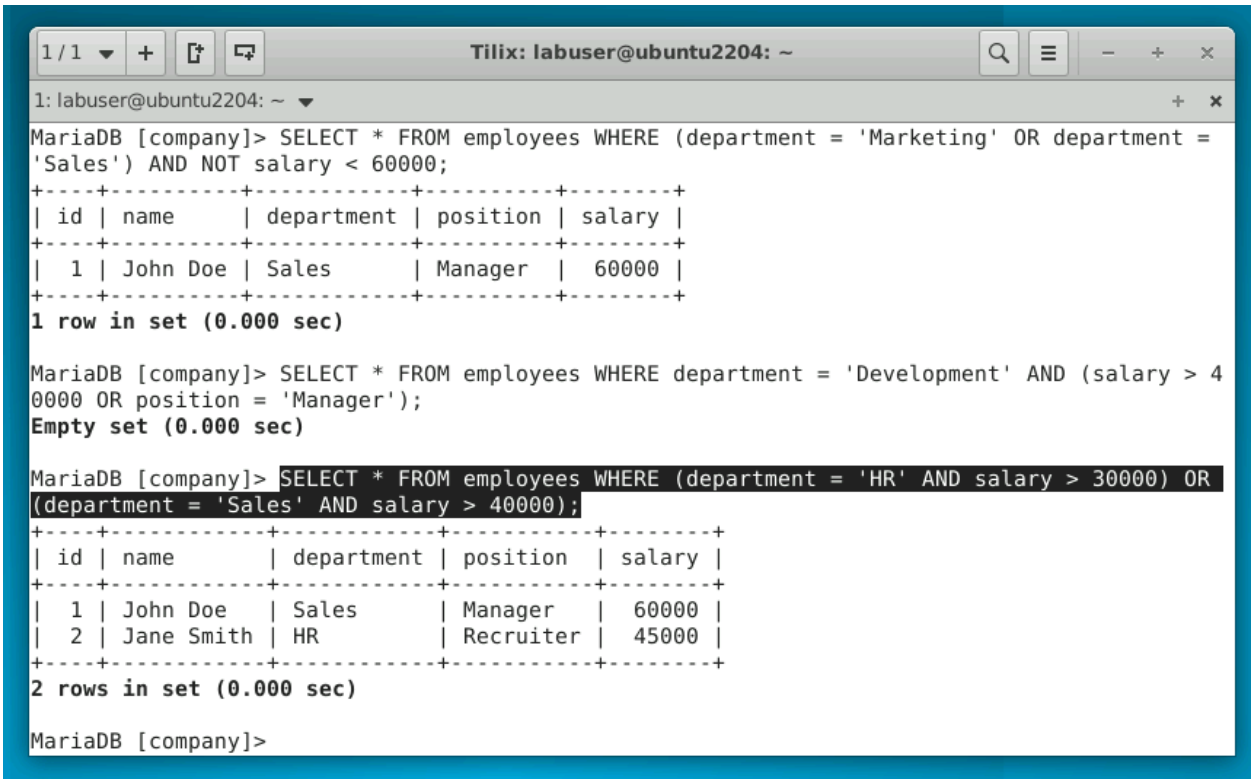


2.4 Find employees in either **Marketing** or **Sales** with salaries not less than **60000**:

SELECT * FROM employees WHERE (department = 'Marketing' OR department = 'Sales') AND NOT salary < 60000;



2.5 Find employees in **HR** with salaries above **30000** or in **Sales** with salaries above **40000**:
SELECT * FROM employees WHERE (department = 'HR' AND salary > 30000) OR (department = 'Sales' AND salary > 40000);



By following these steps, you have successfully set up a database and a table in MySQL, populated it with sample data, and applied various logical operators to extract specific information based on complex criteria.