

1)

```
Query OK, 0 rows affected (0.34 sec)

mysql> CREATE TABLE employees (
    ->     emp_id INT PRIMARY KEY,
    ->     last_name VARCHAR(100),
    ->     dept_num INT,
    ->     FOREIGN KEY (dept_num) REFERENCES departments(dept_num)
    -> );
Query OK, 0 rows affected (0.09 sec)

mysql> INSERT INTO departments (dept_num, dept_name) VALUES
    -> (1, 'Human Resources'),
    -> (2, 'Finance'),
    -> (3, 'Engineering'),
    -> (4, 'Marketing');
Query OK, 4 rows affected (0.14 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> INSERT INTO employees (emp_id, last_name, dept_num) VALUES
    -> (101, 'Smith', 1),
    -> (102, 'Johnson', 2),
    -> (103, 'Williams', 3),
    -> (104, 'Jones', 4),
    -> (105, 'Brown', 1);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> SELECT e.last_name, e.dept_num, d.dept_name
    -> FROM employees e
    -> JOIN departments d ON e.dept_num = d.dept_num;
+-----+-----+-----+
| last_name | dept_num | dept_name |
+-----+-----+-----+
| Smith     |      1 | Human Resources |
| Brown     |      1 | Human Resources |
| Johnson   |      2 | Finance          |
| Williams  |      3 | Engineering      |
| Jones     |      4 | Marketing         |
+-----+-----+-----+
5 rows in set (0.08 sec)
```

2)

```
mysql> CREATE DATABASE company;
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> -- Switch to the new database
Query OK, 0 rows affected (0.00 sec)

mysql> USE company;
Database changed
mysql>
mysql> -- Create the locations table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE locations (
    ->     loc_id INT PRIMARY KEY,
    ->     city VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> -- Create the departments table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE departments (
    ->     dept_id INT PRIMARY KEY,
    ->     dept_name VARCHAR(50),
    ->     loc_id INT,
    ->     FOREIGN KEY (loc_id) REFERENCES locations(loc_id)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> -- Create the jobs table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE jobs (
    ->     job_id INT PRIMARY KEY,
    ->     job_title VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.02 sec)
```

```
--> (90, 'Engineering', 2);
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Insert data into jobs table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO jobs (job_id, job_title) VALUES
--> (1, 'Manager'),
--> (2, 'Sales Representative'),
--> (3, 'Engineer');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Insert data into employees table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO employees (emp_id, first_name, last_name, job_id, dept_id) VALUES
--> (1, 'John', 'Doe', 1, 80),
--> (2, 'Jane', 'Smith', 2, 80),
--> (3, 'Jim', 'Brown', 3, 90);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT DISTINCT jobs.job_title, d.dept_name, l.city
--> FROM jobs
--> JOIN employees e ON jobs.job_id = e.job_id
--> JOIN departments d ON e.dept_id = d.dept_id
--> JOIN locations l ON d.loc_id = l.loc_id
--> WHERE d.dept_id = 80;
+-----+-----+-----+
| job_title | dept_name | city    |
+-----+-----+-----+
| Manager   | Sales     | New York |
| Sales Representative | Sales     | New York |
+-----+-----+-----+
2 rows in set (0.07 sec)
```

3)

```
mysql> CREATE DATABASE company;
Query OK, 1 row affected (0.00 sec)
      USE company;
Database changed
mysql> -- Create locations table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE locations (
    ->     location_id INT PRIMARY KEY,
    ->     city VARCHAR(50) NOT NULL
    -> );
Query OK, 0 rows affected (0.09 sec)

mysql>
mysql> -- Create departments table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE departments (
    ->     department_id INT PRIMARY KEY,
    ->     department_name VARCHAR(50) NOT NULL,
    ->     location_id INT,
    ->     FOREIGN KEY (location_id) REFERENCES locations(location_id)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> -- Create employees table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY,
    ->     last_name VARCHAR(50) NOT NULL,
    ->     department_id INT,
    ->     commission DECIMAL(10, 2),
    ->     FOREIGN KEY (department_id) REFERENCES departments(department_id)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> -- Insert sample data into locations table
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> -- Insert sample data into locations table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO locations (location_id, city) VALUES
-> (1, 'New York'),
-> (2, 'Los Angeles'),
-> (3, 'Chicago');
Query OK, 3 rows affected (0.05 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Insert sample data into departments table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO departments (department_id, department_name, location_id) VALUES
-> (101, 'Sales', 1),
-> (102, 'Marketing', 2),
-> (103, 'IT', 3);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Insert sample data into employees table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO employees (employee_id, last_name, department_id, commission) VALUES
-> (1, 'Smith', 101, 500.00),
-> (2, 'Johnson', 102, NULL),
-> (3, 'Williams', 101, 1000.00),
-> (4, 'Brown', 103, 300.00),
-> (5, 'Jones', 102, NULL);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> SELECT e.last_name, d.department_name, l.location_id, l.city
-> FROM employees e
-> JOIN departments d ON e.department_id = d.department_id
-> JOIN locations l ON d.location_id = l.location_id
-> WHERE e.commission IS NOT NULL;
+-----+-----+-----+-----+
| last_name | department_name | location_id | city      |

```

```

mysql>
mysql> -- Insert sample data into departments table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO departments (department_id, department_name, location_id) VALUES
    -> (101, 'Sales', 1),
    -> (102, 'Marketing', 2),
    -> (103, 'IT', 3);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Insert sample data into employees table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO employees (employee_id, last_name, department_id, commission) VALUES
    -> (1, 'Smith', 101, 500.00),
    -> (2, 'Johnson', 102, NULL),
    -> (3, 'Williams', 101, 1000.00),
    -> (4, 'Brown', 103, 300.00),
    -> (5, 'Jones', 102, NULL);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> SELECT e.last_name, d.department_name, l.location_id, l.city
    -> FROM employees e
    -> JOIN departments d ON e.department_id = d.department_id
    -> JOIN locations l ON d.location_id = l.location_id
    -> WHERE e.commission IS NOT NULL;
+-----+-----+-----+-----+
| last_name | department_name | location_id | city      |
+-----+-----+-----+-----+
| Smith     | Sales          | 1           | New York |
| Williams  | Sales          | 1           | New York |
| Brown     | IT             | 3           | Chicago   |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>

```

4)

```

mysql> CREATE DATABASE company_db;
Query OK, 1 row affected (0.01 sec)

mysql> USE company_db;
Database changed
mysql>
mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY,
    ->     first_name VARCHAR(50),
    ->     last_name VARCHAR(50),
    ->     department_id INT,
    ->     hire_date DATE
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE departments (
    ->     department_id INT PRIMARY KEY,
    ->     department_name VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO departments (department_id, department_name) VALUES
    -> (1, 'Sales'),
    -> (2, 'Engineering'),
    -> (3, 'HR'),
    -> (4, 'Marketing');
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> INSERT INTO employees (employee_id, first_name, last_name, department_id, hire_date) VALUES
    -> (1, 'John', 'Smith', 1, '2020-01-15'),
    -> (2, 'Alice', 'Johnson', 2, '2019-03-12'),
    -> (3, 'Robert', 'Brown', 3, '2018-07-23'),
    -> (4, 'Jessica', 'Davis', 4, '2021-11-03'),
    -> (5, 'Laura', 'Wilson', 1, '2022-04-20');
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> SELECT e.last_name, d.department_name
    -> FROM employees e

```

```
-->     last_name VARCHAR(50),
-->     department_id INT,
-->     hire_date DATE
--> );
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE departments (
-->     department_id INT PRIMARY KEY,
-->     department_name VARCHAR(50)
--> );
Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO departments (department_id, department_name) VALUES
--> (1, 'Sales'),
--> (2, 'Engineering'),
--> (3, 'HR'),
--> (4, 'Marketing');
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> INSERT INTO employees (employee_id, first_name, last_name, department_id, hire_date) VALUES
--> (1, 'John', 'Smith', 1, '2020-01-15'),
--> (2, 'Alice', 'Johnson', 2, '2019-03-12'),
--> (3, 'Robert', 'Brown', 3, '2018-07-23'),
--> (4, 'Jessica', 'Davis', 4, '2021-11-03'),
--> (5, 'Laura', 'Wilson', 1, '2022-04-20');
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> SELECT e.last_name, d.department_name
--> FROM employees e
--> JOIN departments d ON e.department_id = d.department_id
--> WHERE LOWER(e.last_name) LIKE '%a%';
+-----+-----+
| last_name | department_name |
+-----+-----+
| Davis    | Marketing      |
+-----+-----+
1 row in set (0.04 sec)

mysql>
```

5)

```
mysql>
mysql> CREATE TABLE locations (
    ->     location_id INT PRIMARY KEY,
    ->     city VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE departments (
    ->     department_id INT PRIMARY KEY,
    ->     department_name VARCHAR(100),
    ->     location_id INT,
    ->     FOREIGN KEY (location_id) REFERENCES locations(location_id)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE jobs (
    ->     job_id INT PRIMARY KEY,
    ->     job_title VARCHAR(100)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY,
    ->     last_name VARCHAR(50),
    ->     job_id INT,
    ->     department_id INT,
    ->     FOREIGN KEY (job_id) REFERENCES jobs(job_id),
    ->     FOREIGN KEY (department_id) REFERENCES departments(department_id)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> INSERT INTO locations (location_id, city) VALUES
    -> (1, 'Toronto'),
    -> (2, 'New York');
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> INSERT INTO departments (department_id, department_name, location_id) VALUES
    -> (1, 'HR', 1),
    -> (2, 'Engineering', 2),
    -> (3, 'Finance', 1);
```

```
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> INSERT INTO departments (department_id, department_name, location_id) VALUES
    -> (1, 'HR', 1),
    -> (2, 'Engineering', 2),
    -> (3, 'Finance', 1);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> INSERT INTO jobs (job_id, job_title) VALUES
    -> (1, 'Manager'),
    -> (2, 'Engineer'),
    -> (3, 'Accountant');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> INSERT INTO employees (employee_id, last_name, job_id, department_id) VALUES
    -> (1, 'Smith', 1, 1),
    -> (2, 'Johnson', 2, 2),
    -> (3, 'Williams', 3, 3),
    -> (4, 'Jones', 2, 1);
Query OK, 4 rows affected (0.00 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> SELECT e.last_name, j.job_title, d.department_id, d.department_name
    -> FROM employees e
    -> JOIN jobs j ON e.job_id = j.job_id
    -> JOIN departments d ON e.department_id = d.department_id
    -> JOIN locations l ON d.location_id = l.location_id
    -> WHERE l.city = 'Toronto';
+-----+-----+-----+-----+
| last_name | job_title | department_id | department_name |
+-----+-----+-----+-----+
| Smith     | Manager   |             1 | HR           |
| Jones     | Engineer  |             1 | HR           |
| Williams  | Accountant|             3 | Finance      |
+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql>
```

6)

```

mysql> create database company_db;
Query OK, 1 row affected (0.02 sec)

mysql> use company_db;
Database changed
mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY,
    ->     last_name VARCHAR(50),
    ->     manager_id INT,
    ->     FOREIGN KEY (manager_id) REFERENCES employees(employee_id)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO employees (employee_id, last_name, manager_id) VALUES
    -> (1, 'Smith', NULL),      -- Top-level manager
    -> (2, 'Johnson', 1),
    -> (3, 'Williams', 1),
    -> (4, 'Jones', 2),
    -> (5, 'Brown', 2),
    -> (6, 'Davis', 3);
Query OK, 6 rows affected (0.00 sec)
Records: 6 Duplicates: 0 Warnings: 0

mysql> SELECT e.last_name AS Employee, e.employee_id AS "Emp#", m.last_name AS Manager, e.manager_id AS "Mgr#"
    -> FROM employees e
    -> LEFT JOIN employees m ON e.manager_id = m.employee_id;
+-----+-----+-----+
| Employee | Emp# | Manager | Mgr# |
+-----+-----+-----+
| Smith    | 1   | NULL   | NULL  |
| Johnson  | 2   | Smith   | 1    |
| Williams | 3   | Smith   | 1    |
| Jones    | 4   | Johnson | 2    |
| Brown    | 5   | Johnson | 2    |
| Davis    | 6   | Williams| 3    |
+-----+-----+-----+
6 rows in set (0.01 sec)

```

7)

```

mysql> use company;
Database changed
mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY,
    ->     first_name VARCHAR(50),
    ->     last_name VARCHAR(50),
    ->     manager_id INT,
    ->     FOREIGN KEY (manager_id) REFERENCES employees(employee_id)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO employees (employee_id, first_name, last_name, manager_id) VALUES
    -> (1, 'Steven', 'King', NULL),  -- King has no manager
    -> (2, 'Neena', 'Kochhar', 1),
    -> (3, 'Lex', 'De Haan', 1),
    -> (4, 'Alexander', 'Hunold', 2),
    -> (5, 'Bruce', 'Ernst', 2);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> SELECT
    ->     emp.last_name,
    ->     emp.employee_id,
    ->     mgr.last_name AS manager_last_name,
    ->     mgr.employee_id AS manager_id
    -> FROM
    ->     employees emp
    -> LEFT JOIN
    ->     employees mgr ON emp.manager_id = mgr.employee_id
    -> ORDER BY
    ->     emp.employee_id;
+-----+-----+-----+-----+
| last_name | employee_id | manager_last_name | manager_id |
+-----+-----+-----+-----+
| King     | 1           | NULL            | NULL       |
| Kochhar  | 2           | King            | 1          |
| De Haan  | 3           | King            | 1          |
| Hunold   | 4           | Kochhar         | 2          |
| Ernst    | 5           | Kochhar         | 2          |
+-----+-----+-----+-----+

```

8)

```
mysql> CREATE TABLE employees (
->     id INT AUTO_INCREMENT PRIMARY KEY,
->     last_name VARCHAR(50),
->     department_id INT,
->     name VARCHAR(50)
-> );
Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO employees (last_name, department_id, name)
-> VALUES
-> ('Smith', 1, 'John Smith'),
-> ('Johnson', 1, 'Jane Johnson'),
-> ('Williams', 2, 'Will Williams'),
-> ('Brown', 2, 'Charlie Brown'),
-> ('Jones', 3, 'Mia Jones');
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> SELECT
->     emp.last_name AS "Employee Last Name",
->     emp.department_id AS "Department Number",
->     related_emp.name AS "Related Employee Name"
-> FROM
->     employees emp
-> JOIN
->     employees related_emp
-> ON
->     emp.department_id = related_emp.department_id
-> ORDER BY
->     emp.last_name;
+-----+-----+-----+
| Employee Last Name | Department Number | Related Employee Name |
+-----+-----+-----+
| Brown              |                 | 2 | Will Williams      |
| Brown              |                 | 2 | Charlie Brown       |
| Johnson            |                 | 1 | John Smith          |
| Johnson            |                 | 1 | Jane Johnson         |
| Jones               |                 | 3 | Mia Jones           |
| Smith               |                 | 1 | John Smith          |
| Smith               |                 | 1 | Jane Johnson         |
+-----+-----+-----+
```

9)

```
mysql> use company
Database changed
mysql> -- Create departments table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE departments (
    ->     department_id INT PRIMARY KEY,
    ->     department_name VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> -- Create employees table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY,
    ->     last_name VARCHAR(50),
    ->     job_id VARCHAR(10),
    ->     department_id INT,
    ->     salary DECIMAL(10, 2),
    ->     FOREIGN KEY (department_id) REFERENCES departments(department_id)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> -- Create job_grades table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE job_grades (
    ->     grade VARCHAR(2) PRIMARY KEY,
    ->     lowest_salary DECIMAL(10, 2),
    ->     highest_salary DECIMAL(10, 2)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql>
mysql> -- Insert data into departments table
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> INSERT INTO departments (department_id, department_name) VALUES
    -> (10, 'Administration'),
    -> (20, 'Marketing'),
    -> (30, 'Purchasing');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Insert data into employees table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO employees (employee_id, last_name, job_id, department_id, salary) VALUES
    -> (1, 'Smith', 'AD_PRES', 10, 20000),
    -> (2, 'Johnson', 'MK_MAN', 20, 15000),
    -> (3, 'Williams', 'PU_CLERK', 30, 3000);
Query OK, 3 rows affected (0.00 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Insert data into job_grades table
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO job_grades (grade, lowest_salary, highest_salary) VALUES
    -> ('A', 10000, 20000),
    -> ('B', 5000, 9999),
    -> ('C', 3000, 4999),
    -> ('D', 1000, 2999);
Query OK, 4 rows affected (0.00 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> SELECT
    ->     e.last_name AS "Name",
    ->     e.job_id AS "Job",
    ->     d.department_name AS "Department Name",
    ->     e.salary AS "Salary",
    ->     jg.grade AS "Grade"
    -> FROM employees e
    -> JOIN departments d ON e.department_id = d.department_id
    -> JOIN job_grades jg ON e.salary BETWEEN jg.lowest_salary AND jg.highest_salary;
```

```

mysql> SELECT
    ->     e.last_name AS "Name",
    ->     e.job_id AS "Job",
    ->     d.department_name AS "Department Name",
    ->     e.salary AS "Salary",
    ->     jg.grade AS "Grade"
    -> FROM employees e
    -> JOIN departments d ON e.department_id = d.department_id
    -> JOIN job_grades jg ON e.salary BETWEEN jg.lowest_salary AND jg.highest_salary;
+-----+-----+-----+-----+-----+
| Name | Job   | Department Name | Salary | Grade |
+-----+-----+-----+-----+-----+
| Smith | AD_PRES | Administration | 20000.00 | A      |
| Johnson | MK_MAN | Marketing | 15000.00 | A      |
| Williams | PU_CLERK | Purchasing | 3000.00 | C      |
+-----+-----+-----+-----+-----+
3 rows in set (0.03 sec)

mysql> |

```

10)

```

mysql> use company_db;
Database changed
mysql> -- Step 2: Create the Database
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE DATABASE company_db;
ERROR 1007 (HY000): Can't create database 'company_db'; database exists
mysql> USE company_db;
Database changed
mysql>
mysql> -- Step 3: Create the Employees Table
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY AUTO_INCREMENT,
    ->     last_name VARCHAR(50),
    ->     hire_date DATE
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> -- Step 4: Insert Sample Data
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO employees (last_name, hire_date) VALUES
    -> ('Davies', '2022-01-15'),
    -> ('Smith', '2022-02-10'),
    -> ('Johnson', '2022-03-05'),
    -> ('Brown', '2022-01-10'),
    -> ('Taylor', '2022-04-22');
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Step 5: Execute the Query
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT e.last_name AS "Name", e.hire_date
    -> FROM employees e
    -> WHERE e.hire_date > (SELECT hire_date FROM employees WHERE last_name = 'Davies');

```

```

mysql> SELECT
->     e1.last_name AS "Employee",
->     e1.hire_date AS "Emp Hired",
->     e2.last_name AS "Manager",
->     e2.hire_date AS "Mgr Hired"
-> FROM
->     employee e1
-> JOIN
->     employee e2 ON e1.manager_id = e2.employee_id
-> WHERE
->     e1.hire_date < e2.hire_date
-> ORDER BY
->     e1.last_name;
Empty set (0.00 sec)

mysql> SELECT
->     e1.last_name AS "Employee",
->     e1.hire_date AS "Emp Hired",
->     e2.last_name AS "Manager",
->     e2.hire_date AS "Mgr Hired"
-> FROM
->     employee e1
-> JOIN
->     employee e2 ON e1.manager_id = e2.employee_id
-> WHERE
->     e1.hire_date < e2.hire_date
-> ORDER BY
->     e1.last_name;
Empty set (0.00 sec)

mysql> Employee | Emp Hired | Manager | Mgr Hired
-> -----|-----|-----|-----
-> Jones  | 2022-06-10 | Brown   | 2021-05-30
-> Garcia | 2022-07-15 | Brown   | 2021-05-30
-> Johnson | 2023-02-20 | Smith   | 2022-01-15
-> Williams | 2023-03-25 | Smith   | 2022-01-15

```

11)

```
mysql> CREATE TABLE employees (
    ->     employee_id INT PRIMARY KEY AUTO_INCREMENT,
    ->     last_name VARCHAR(50),
    ->     hire_date DATE
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> -- Step 4: Insert Sample Data
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO employees (last_name, hire_date) VALUES
    -> ('Davies', '2022-01-15'),
    -> ('Smith', '2022-02-10'),
    -> ('Johnson', '2022-03-05'),
    -> ('Brown', '2022-01-10'),
    -> ('Taylor', '2022-04-22');
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql>
mysql> -- Step 5: Execute the Query
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT e.last_name AS "Name", e.hire_date
    -> FROM employees e
    -> WHERE e.hire_date > (SELECT hire_date FROM employees WHERE last_name = 'Davies');
+-----+-----+
| Name   | hire_date |
+-----+-----+
| Smith  | 2022-02-10 |
| Johnson | 2022-03-05 |
| Taylor  | 2022-04-22 |
+-----+-----+
3 rows in set (0.02 sec)

mysql>
```


