MySQL JOINS - Exercises, Practice, Solution

https://www.w3resource.com/mysql-exercises/join-exercises/

1. Write a query to find the addresses (location_id, street_address, city, state_province, country_name) of all the departments.

Use NATURAL JOIN.

```
SELECT location_id, street_address, city, state_province, country_name FROM
 locations NATURAL JOIN countries;
```

2. Write a query to find the name (first_name, last name), department ID and name of all the employees

```
SELECT first_name, last_name, E.DEPARTMENT_ID, D.DEPARTMENT_NAME FROM emplo
yees AS E INNER JOIN departments AS D ON E.DEPARTMENT_ID = D.DEPARTMENT_ID;
```

3. Write a query to find the name (first_name, last_name), job, department ID and name of the employees who works in London

```
SELECT first_name, last_name, E.DEPARTMENT_ID, D.DEPARTMENT_NAME, J.JOB_TIT
LE FROM employees AS E INNER JOIN departments AS D ON E.DEPARTMENT_ID = D.D
EPARTMENT_ID INNER JOIN jobs AS J ON J.JOB_ID = E.JOB_ID INNER JOIN locatio
ns AS L ON L.LOCATION_ID = D.LOCATION_ID WHERE L.CITY = 'LONDON';
```

4. Write a query to find the employee id, name (last_name) along with their manager_id and name (last_name).

```
SELECT E.EMPLOYEE_ID, E.LAST_NAME, M.EMPLOYEE_ID, M.LAST_NAME FROM employee
s AS E INNER JOIN employees AS M ON E.MANAGER_ID = M.EMPLOYEE_ID;
```

5. Write a query to find the name (first_name, last_name) and hire date of the employees who was hired after 'Jones'

```
SELECT E1.FIRST_NAME, E1.LAST_NAME, E1.HIRE_DATE FROM employees AS E1 INNER
 JOIN employees AS E2 ON E2.LAST_NAME = 'Jones' WHERE E1.HIRE_DATE > E2.HIR
E_DATE;
```

6. Write a query to get the department name and number of employees in the department.

```
SELECT D.DEPARTMENT_ID, D.DEPARTMENT_NAME, COUNT(*) AS employeeCount FROM d
epartments AS D INNER JOIN employees AS E ON D.DEPARTMENT_ID = E.DEPARTMENT
_ID GROUP BY D.DEPARTMENT_ID, D.DEPARTMENT_NAME;
```

7. Write a query to find the employee ID, job title, number of days between ending date and starting date for all jobs in department 90.

```
SELECT E.EMPLOYEE_ID, E.FIRST_NAME, (JH.END_DATE - JH.START_DATE) AS DAYS F
ROM employees AS E INNER JOIN jobs AS J ON E.JOB_ID = J.JOB_ID INNER JOIN j
ob_history AS JH ON E.EMPLOYEE_ID = JH.EMPLOYEE_ID AND J.JOB_ID = JH.JOB_ID
 WHERE JH.department_id=90;
```

8. Write a query to display the department ID and name and first name of manager.

```
SELECT D.DEPARTMENT_ID, D.DEPARTMENT_NAME, E.FIRST_NAME AS MANAGER_NAME FRO
M departments AS D INNER JOIN employees AS E ON D.MANAGER_ID = E.EMPLOYEE_I
D;
```

9. Write a query to display the department name, manager name, and city.

```
SELECT D.DEPARTMENT_ID, D.DEPARTMENT_NAME, E.FIRST_NAME AS MANAGER_NAME, L.
CITY FROM departments AS D INNER JOIN employees AS E ON D.MANAGER_ID = E.EM
PLOYEE_ID INNER JOIN locations AS L ON D.LOCATION_ID = L.LOCATION_ID;
```

10. Write a query to display the job title and average salary of employees.

```
SELECT J.JOB_TITLE, AVG(E.SALARY) AS AVGSALARY FROM employees AS E INNER JO
IN jobs AS J ON E.JOB_ID = J.JOB_ID GROUP BY J.JOB_TITLE;
```

11. Write a query to display job title, employee name, and the difference between salary of the employee and minimum salary for the job

```
SELECT J.JOB_TITLE, E.FIRST_NAME, E.SALARY - J.MIN_SALARY AS DIFFSALARY FRO
M employees AS E INNER JOIN jobs AS J ON E.JOB_ID = J.JOB_ID;
```

12. Write a query to display the job history that were done by any employee who is currently drawing more than 10000 of salary.

```
SELECT first_name, last_name, hire_date, salary, (DATEDIFF(now(), hire_date
))/365 Experience FROM departments d JOIN employees e ON (d.manager_id = e.
employee_id) WHERE (DATEDIFF(now(), hire_date))/365>15;
```

13. Write a query to display department name, name (first_name, last_name), hire date, salary of the manager for all managers whose experience is more than 15 years.

```
SELECT first_name, last_name, hire_date, salary, (DATEDIFF(now(), hire_date
))/365 Experience FROM departments d JOIN employees e ON (d.manager_id = e.
employee_id) WHERE (DATEDIFF(now(), hire_date))/365>15;
```