

# Database exercise:

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Import the db.sql database to run the queries.

From this website:

<https://www.w3resource.com/mysql-exercises/>

## Select

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1. Write a query to display the names (first\_name, last\_name) using alias name "First Name", "Last Name". Go to the editor
2. Write a query to get unique department ID from employee table. Go to the editor
3. Write a query to get all employee details from the employee table order by first name, descending. Go to the editor
4. Write a query to get the names (first\_name, last\_name), salary, PF of all the employees (PF is calculated as 15% of salary). Go to the editor
5. Write a query to get the employee ID, names (first\_name, last\_name), salary in ascending order of salary. Go to the editor
6. Write a query to get the total salaries payable to employees. Go to the editor
7. Write a query to get the maximum and minimum salary from employees table. Go to the editor
8. Write a query to get the average salary and number of employees in the employees table. Go to the editor
9. Write a query to get the number of employees working with the company. Go to the editor
10. Write a query to get the number of jobs available in the employees table. Go to the editor
11. Write a query to get all first name from employees table in upper case. Go to the editor
12. Write a query to get the first 3 characters of first name from employees table. Go to the editor
13. Write a query to calculate  $171 \times 214 + 625$ . Go to the editor
14. Write a query to get the names (for example Ellen Abel, Sundar Ande etc.) of all the employees from employees table. Go to the editor
15. Write a query to get first name from employees table after removing white spaces from both side. Go to the editor
16. Write a query to get the length of the employee names (first\_name, last\_name) from employees table. Go to the editor
17. Write a query to check if the first\_name fields of the employees table contains numbers. Go to the editor
18. Write a query to select first 10 records from a table. Go to the editor

## Sort

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1. Write a query to display the name (first\_name, last\_name) and salary for all employees whose salary is not in the range \$10,000 through \$15,000. Go to the editor
2. Write a query to display the name (first\_name, last\_name) and department ID of all employees in departments 30 or 100 in ascending order. Go to the editor
3. Write a query to display the name (first\_name, last\_name) and salary for all employees whose salary is not in the range \$10,000 through \$15,000 and are in department 30 or 100. Go to the editor
4. Write a query to display the name (first\_name, last\_name) and hire date for all employees who were hired in 1987. Go to the editor
5. Write a query to display the first\_name of all employees who have both "b" and "c" in their first name. Go to the editor
6. Write a query to display the last name, job, and salary for all employees whose job is that of a Programmer or a Shipping Clerk, and whose salary is not equal to \$4,500, \$10,000, or \$15,000. Go to the editor
7. Write a query to display the last name of employees whose names have exactly 6 characters. Go to the editor
8. Write a query to display the last name of employees having 'e' as the third character. Go to the editor
9. Write a query to display the jobs/designations available in the employees table. Go to the editor
10. Write a query to display the name (first\_name, last\_name), salary and PF (15% of salary) of all employees. Go to the editor
11. Write a query to select all record from employees where last name in 'BLAKE', 'SCOTT', 'KING' and 'FORD'. Go to the editor

## Aggregate Functions and Group by [14 exercises with solution]

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1. Write a query to list the number of jobs available in the employees table. Go to the editor
2. Write a query to get the total salaries payable to employees. Go to the editor
3. Write a query to get the minimum salary from employees table. Go to the editor
4. Write a query to get the maximum salary of an employee working as a Programmer. Go to the editor
5. Write a query to get the average salary and number of employees working the department 90. Go to the editor
6. Write a query to get the highest, lowest, sum, and average salary of all employees. Go to the editor
7. Write a query to get the number of employees with the same job. Go to the editor

8. Write a query to get the difference between the highest and lowest salaries. Go to the editor
9. Write a query to find the manager ID and the salary of the lowest-paid employee for that manager. Go to the editor
10. Write a query to get the department ID and the total salary payable in each department. Go to the editor
11. Write a query to get the average salary for each job ID excluding programmer. Go to the editor
12. Write a query to get the total salary, maximum, minimum, average salary of employees (job ID wise), for department ID 90 only. Go to the editor
13. Write a query to get the job ID and maximum salary of the employees where maximum salary is greater than or equal to \$4000. Go to the editor
14. Write a query to get the average salary for all departments employing more than 10 employees. Go to the editor

## MySQL Subquery [22 exercises with solution]

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1. Write a query to find the name (first\_name, last\_name) and the salary of the employees who have a higher salary than the employee whose last\_name='Bull'. Go to the editor
2. Write a query to find the name (first\_name, last\_name) of all employees who works in the IT department. Go to the editor
3. Write a query to find the name (first\_name, last\_name) of the employees who have a manager and worked in a USA based department. Go to the editor
4. Write a query to find the name (first\_name, last\_name) of the employees who are managers. Go to the editor
5. Write a query to find the name (first\_name, last\_name), and salary of the employees whose salary is greater than the average salary.
6. Write a query to find the name (first\_name, last\_name), and salary of the employees whose salary is equal to the minimum salary for their job grade. Go to the editor
7. Write a query to find the name (first\_name, last\_name), and salary of the employees who earns more than the average salary and works in any of the IT departments. Go to the editor
8. Write a query to find the name (first\_name, last\_name), and salary of the employees who earns more than the earning of Mr. Bell. Go to the editor
9. Write a query to find the name (first\_name, last\_name), and salary of the employees who earn the same salary as the minimum salary for all departments. Go to the editor
10. Write a query to find the name (first\_name, last\_name), and salary of the employees whose salary is greater than the average salary of all departments. Go to the editor
11. Write a query to find the name (first\_name, last\_name) and salary of the employees who earn a salary that is higher than the salary of all the Shipping Clerk (JOB\_ID = 'SH\_CLERK'). Sort the results of the salary of the lowest to highest. Go to the editor

12. Write a query to find the name (first\_name, last\_name) of the employees who are not supervisors. Go to the editor
13. Write a query to display the employee ID, first name, last name, and department names of all employees. Go to the editor
14. Write a query to display the employee ID, first name, last name, salary of all employees whose salary is above average for their departments. Go to the editor
15. Write a query to fetch even numbered records from employees table. Go to the editor
16. Write a query to find the 5th maximum salary in the employees table. Go to the editor
17. Write a query to find the 4th minimum salary in the employees table. Go to the editor
18. Write a query to select last 10 records from a table. Go to the editor
19. Write a query to list the department ID and name of all the departments where no employee is working. Go to the editor
20. Write a query to get 3 maximum salaries. Go to the editor
21. Write a query to get 3 minimum salaries. Go to the editor
22. Write a query to get nth max salaries of employees. Go to the editor

## MySQL Joins [13 exercises with solution]

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1. Write a query to find the addresses (location\_id, street\_address, city, state\_province, country\_name) of all the departments. Go to the editor  
Hint : Use NATURAL JOIN.
2. Write a query to find the name (first\_name, last\_name), department ID and name of all the employees. Go to the editor
3. Write a query to find the name (first\_name, last\_name), job, department ID and name of the employees who works in London. Go to the editor
4. Write a query to find the employee id, name (last\_name) along with their manager\_id and name (last\_name). Go to the editor
5. Write a query to find the name (first\_name, last\_name) and hire date of the employees who was hired after 'Jones'. Go to the editor
6. Write a query to get the department name and number of employees in the department. Go to the editor
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. Go to the editor
8. Write a query to display the department ID and name and first name of manager. Go to the editor
9. Write a query to display the department name, manager name, and city. Go to the editor
10. Write a query to display the job title and average salary of employees. Go to the editor
11. Write a query to display job title, employee name, and the difference between salary of the employee and minimum salary for the job. Go to the editor
12. Write a query to display the job history that were done by any employee who is currently drawing more than 10000 of salary. Go to the editor

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. Go to the editor