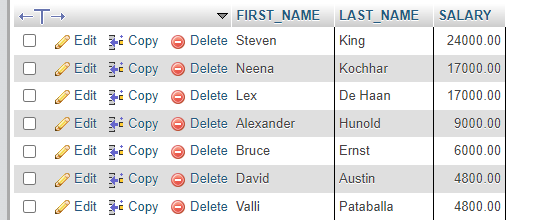
SUBQUERIES

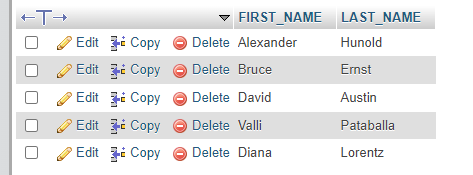
**1.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name) and the salary of the employees who have a higher salary than the employee whose last\_name='Bull'.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, SALARY FROM employees WHERE SALARY > ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) SALARY FROM employees WHERE LAST\_NAME = 'Bull');



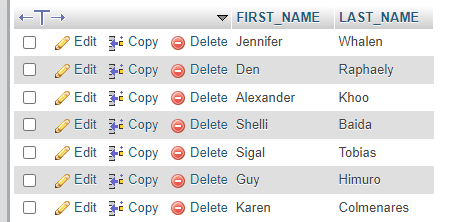
**2.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name) of all employees who works in the IT department.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME FROM employees WHERE DEPARTMENT\_ID = ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DEPARTMENT\_ID FROM departments WHERE DEPARTMENT\_NAME = 'IT');



**3.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name) of the employees who have a manager and worked in a USA based department.

SELECT FIRST\_NAME, LAST\_NAME FROM employees WHERE MANAGER\_ID IS NOT NULL AND DEPARTMENT\_ID IN (SELECT DEPARTMENT\_ID FROM departments WHERE LOCATION\_ID IN (SELECT LOCATION\_ID FROM locations WHERE COUNTRY\_ID = 'US'));



**4.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name) of the employees who are managers.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME FROM employees WHERE EMPLOYEE\_ID [IN](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html%23function_in) ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) MANAGER\_ID FROM employees);



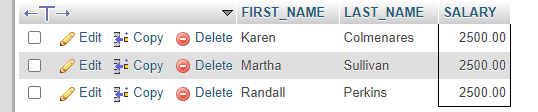
**5.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name), and salary of the employees whose salary is greater than the average salary.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, SALARY FROM employees WHERE SALARY > ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [AVG](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(SALARY) FROM employees);



**6.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) 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.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, SALARY FROM employees AS E WHERE SALARY [IN](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html%23function_in) ( [SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) J.MIN\_SALARY FROM jobs AS J WHERE J.JOB\_ID = E.JOB\_ID );



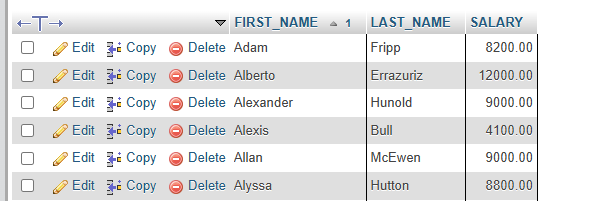
**7.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name), and salary of the employees who earns more than the average salary and works in any of the IT departments.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, SALARY FROM employees WHERE SALARY > ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [AVG](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(SALARY) FROM employeeS) [AND](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html%23operator_and) DEPARTMENT\_ID [IN](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html%23function_in) ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DEPARTMENT\_ID FROM departments WHERE DEPARTMENT\_NAME = 'IT');



**8.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name), and salary of the employees who earns more than the earning of Mr. Bell.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME,LAST\_NAME, SALARY FROM employees WHERE SALARY > ALL([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) SALARY FROM employees WHERE LAST\_NAME = 'Bell') ORDER BY FIRST\_NAME;



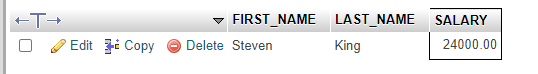
**9.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name), and salary of the employees who earn the same salary as the minimum salary for all departments.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, SALARY FROM employees WHERE SALARY > ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) SALARY FROM employeeS WHERE LAST\_NAME = 'Bell') ORDER BY FIRST\_NAME;



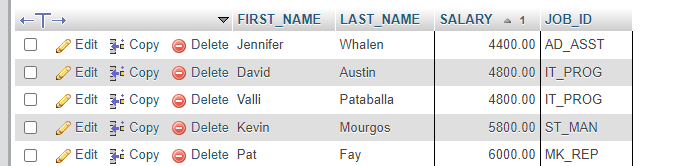
**10.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name), and salary of the employees whose salary is greater than the average salary of each department.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) SALARY FROM employees WHERE SALARY > ALL( [SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [AVG](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(SALARY) FROM employees GROUP BY DEPARTMENT\_ID);



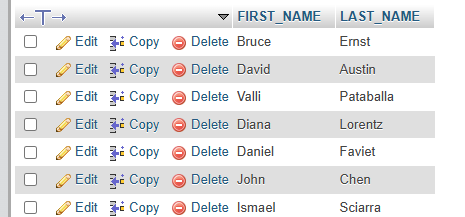
**11.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name) and salary of the employees who earn a salary that is higher than the salary of all the Shipping Clerk (JOB\_ID = 'SH\_CLERK'). Sort the results of the salary of the lowest to highest.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, SALARY,JOB\_ID FROM employees WHERE SALARY > ALL([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) SALARY FROM employees WHERE JOB\_ID = 'SH\_CLERK') ORDER BY SALARY;



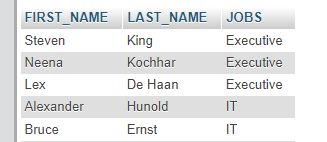
**12.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the name (first\_name, last\_name) of the employees who are not supervisors.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME,LAST\_NAME FROM employees WHERE EMPLOYEE\_ID [NOT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html%23operator_not) [IN](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html%23function_in) ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) MANAGER\_ID FROM employees);



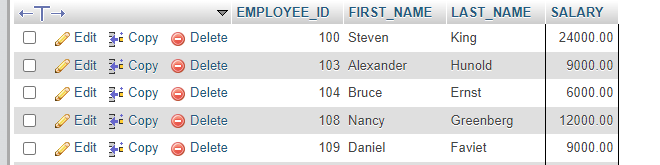
**13.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to display the employee ID, first name, last name, and department names of all employees.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) D.DEPARTMENT\_NAME FROM departments AS D WHERE D.DEPARTMENT\_ID = E.DEPARTMENT\_ID) AS JOBS FROM employees AS E;



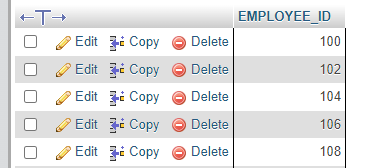
**14.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to display the employee ID, first name, last name, salary of all employees whose salary is above average for their departments.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, SALARY FROM employees AS E WHERE SALARY > ( [SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [AVG](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(SALARY) FROM employees WHERE DEPARTMENT\_ID = E.DEPARTMENT\_ID );



**15.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to fetch even numbered records from employees table.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) EMPLOYEE\_ID FROM employees WHERE [MOD](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/mathematical-functions.html%23function_mod)(EMPLOYEE\_ID,2) = 0;



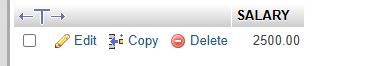
**16.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the 5th maximum salary in the employees table.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DISTINCT SALARY FROM employees ORDER BY SALARY DESC LIMIT 1 OFFSET 4;



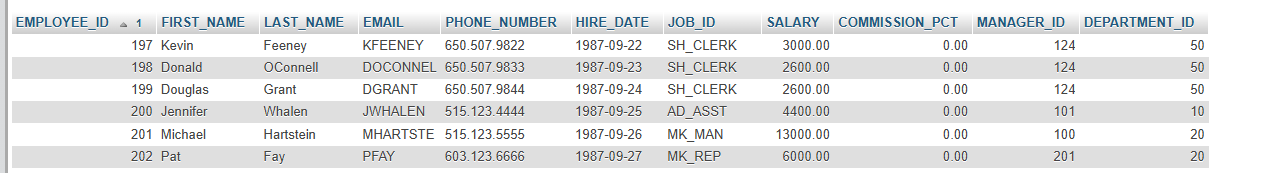
**17.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to find the 4th minimum salary in the employees table.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DISTINCT SALARY FROM employees ORDER BY SALARY LIMIT 1 OFFSET 3;



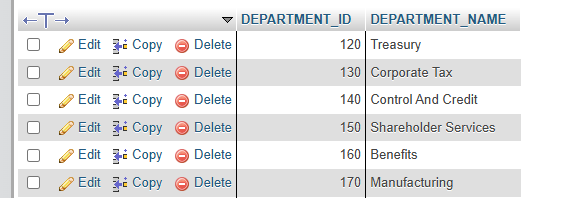
**18.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to select last 10 records from a table.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) \* FROM ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) \* FROM employees ORDER BY EMPLOYEE\_ID DESC LIMIT 10) SUB ORDER BY EMPLOYEE\_ID;



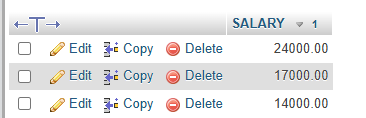
**19.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to list the department ID and name of all the departments where no employee is working.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DEPARTMENT\_ID, DEPARTMENT\_NAME FROM departments WHERE DEPARTMENT\_ID [NOT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html%23operator_not) [IN](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html%23function_in) ([SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DEPARTMENT\_ID FROM employees);



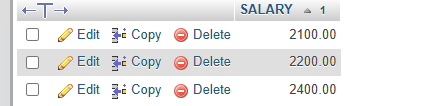
**20.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to get 3 maximum salaries.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DISTINCT SALARY FROM employees ORDER BY SALARY DESC LIMIT 3;



**21.** Write a [MySQL](https://www.w3resource.com/mysql-exercises/subquery-exercises/) query to get 3 minimum salaries.

[SELECT](http://localhost:8080/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DISTINCT SALARY FROM employees ORDER BY SALARY LIMIT 3;



**22 .** Write a MySQL query to get nth maximum salaries of employees.

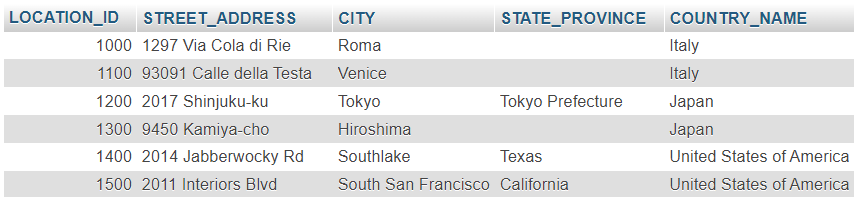
SELECT DISTINCT salary FROM employees ORDER BY salary DESC LIMIT 1 OFFSET n-1;

**NOTE :** OUTPUT SHOULD DEPEND UPON **Nth** VALUE.

Assignment No. 6

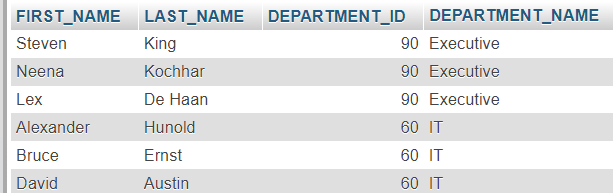
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to find the addresses (location\_id, street\_address, city, state\_province, country\_name) of all the departments.  
   Hint : Use NATURAL JOIN.

Ans:- SELECT L.LOCATION\_ID, L.STREET\_ADDRESS, L.CITY, L.STATE\_PROVINCE, C.COUNTRY\_NAME FROM locations AS L NATURAL JOIN countries AS C;



1. Write a MySQL query to find the name (first\_name, last name), department ID and name of all the employees.

Ans:- SELECT E.FIRST\_NAME, E.LAST\_NAME, E.DEPARTMENT\_ID, D.DEPARTMENT\_NAME FROM employees AS E INNER JOIN departments AS D ON E.DEPARTMENT\_ID = D.DEPARTMENT\_ID;



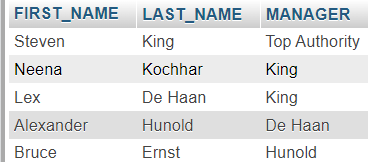
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to find the name (first\_name, last\_name), job, department ID and name of the employees who works in London.

Ans:- SELECT E.FIRST\_NAME, E.LAST\_NAME, E.JOB\_ID, L.CITY, D.DEPARTMENT\_NAME FROM locations AS L INNER JOIN departments AS D ON L.LOCATION\_ID = D.LOCATION\_ID INNER JOIN employees AS E ON D.DEPARTMENT\_ID = E.DEPARTMENT\_ID WHERE L.CITY='LONDON';



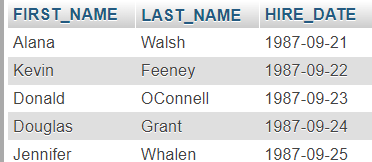
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to find the employee id, name (last\_name) along with their manager\_id and name (last\_name)

Ans:- SELECT E.FIRST\_NAME, E.LAST\_NAME, IFNULL(M.LAST\_NAME, 'Top Authority') AS MANAGER FROM employees AS E LEFT JOIN employees AS M ON E.MANAGER\_ID=M.EMPLOYEE\_ID;



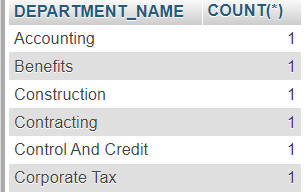
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to find the name (first\_name, last\_name) and hire date of the employees who was hired after 'Jones'.

Ans:- SELECT E1.FIRST\_NAME, E1.LAST\_NAME,E1.HIRE\_DATE FROM employees AS E1 INNER JOIN employees AS E2 ON E2.LAST\_NAME='Jones' AND E1.HIRE\_DATE>E2.HIRE\_DATE;



1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to get the department name and number of employees in the department.

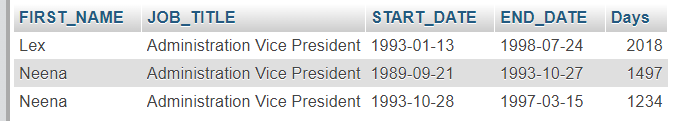
Ans:- SELECT DEPARTMENT\_NAME, COUNT(\*) FROM departments AS D INNER JOIN employees AS E ON E.EMPLOYEE\_ID=D.DEPARTMENT\_ID GROUP BY DEPARTMENT\_NAME;



1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to find the employee ID, job title, number of days between ending date and starting date for all jobs in department 90.

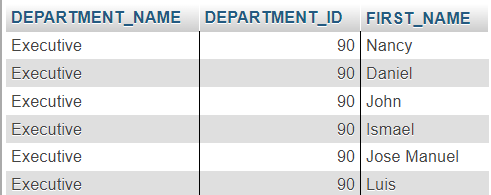
Ans:- SELECT E.FIRST\_NAME, J.JOB\_TITLE, JH.START\_DATE, JH.END\_DATE, DATEDIFF(JH.END\_DATE, JH.START\_DATE) AS Days

FROM employees AS E, jobs AS J, job\_history AS JH WHERE E.JOB\_ID=J.JOB\_ID AND E.EMPLOYEE\_ID=JH.EMPLOYEE\_ID AND E.DEPARTMENT\_ID=90;



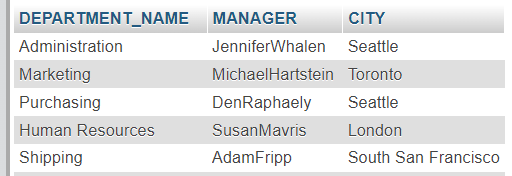
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to display the department ID and name and first name of manager.

Ans:- SELECT D.DEPARTMENT\_NAME, D.DEPARTMENT\_ID, E.FIRST\_NAME FROM departments AS D, employees AS E WHERE E.DEPARTMENT\_ID=D.MANAGER\_ID;



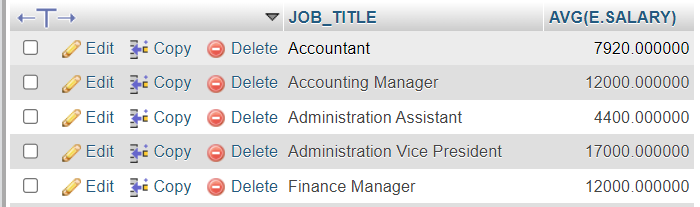
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to display the department name, manager name, and city.

Ans:- SELECT D.DEPARTMENT\_NAME,CONCAT(E.FIRST\_NAME, '', E.LAST\_NAME) AS MANAGER, L.CITY FROM departments AS D, employees AS E, locations AS L WHERE D.MANAGER\_ID=E.EMPLOYEE\_ID AND D.LOCATION\_ID=L.LOCATION\_ID;



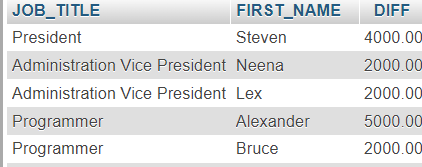
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to display the job title and average salary of employees.

Ans:- SELECT J.JOB\_TITLE, AVG(E.SALARY) FROM employees AS E, jobs As J WHERE E.JOB\_ID=J.JOB\_ID GROUP BY J.JOB\_TITLE;



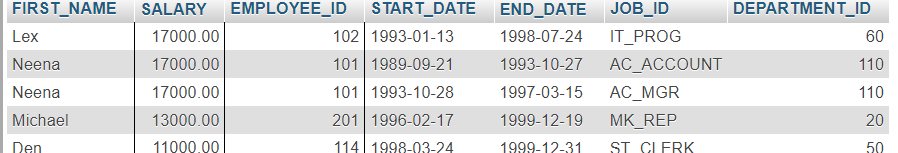
1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to display job title, employee name, and the difference between salary of the employee and minimum salary for the job.

Ans:- SELECT J.JOB\_TITLE, E.FIRST\_NAME, (E.SALARY-J.MIN\_SALARY) AS DIFF FROM employees AS E, jobs As J WHERE E.JOB\_ID=J.JOB\_ID;



1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) query to display the job history that were done by any employee who is currently drawing more than 10000 of salary.

Ans:- SELECT E.FIRST\_NAME, E.SALARY, JH.\* FROM employees AS E, job\_history AS JH WHERE E.EMPLOYEE\_ID = JH.EMPLOYEE\_ID AND E.SALARY>10000;



1. Write a [MySQL](https://www.w3resource.com/mysql-exercises/join-exercises/) 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.

Ans:- SELECT E.FIRST\_NAME, E.HIRE\_DATE, D.DEPARTMENT\_NAME, (DATEDIFF(NOW(), E.HIRE\_DATE) / 365) AS DIFF FROM employees AS E, departments AS D WHERE E.DEPARTMENT\_ID=D.MANAGER\_ID;

