

# SQL Exercises (HR Database)

## SQL SUBQUERIES

<https://www.sqltutorial.org/sql-sample-database/>

<https://www.w3resource.com/sql/tutorials.php#SQLDBASE>

<https://www.w3resource.com/sql-exercises/sql-subqueries-exercises.php>

1. Write a query to display the name ( first name and last name ) for those employees who gets more salary than the employee whose ID is 103.

```
SELECT first_name, last_name
FROM employees
WHERE salary >
( SELECT salary
FROM employees
WHERE employee_id=103
);
```

2. Write a query to display the name ( first name and last name ), salary, department id, job id for those employees who works in the same designation as the employee works whose id is 169.

```
SELECT first_name, last_name, salary, department_id, job_id
FROM employees
WHERE job_id =
( SELECT job_id
FROM employees
WHERE employee_id=169
);
```

3. Write a query to display the name ( first name and last name ), salary, department id for those employees who earn such amount of salary which is the smallest salary of any of the departments.

```
SELECT first_name, last_name, salary, department_id
FROM employees
WHERE salary IN
( SELECT MIN(salary)
FROM employees
GROUP BY department_id
);
```

4. Write a query to display the employee id, employee name (first name and last name ) for all employees who earn more than the average salary.

```
SELECT employee_id, first_name, last_name
```

```

FROM employees
WHERE salary >
( SELECT AVG(salary)
FROM employees
);

```

5. Write a query to display the employee name ( first name and last name ), employee id and salary of all employees who report to Payam.

```

SELECT first_name, last_name, employee_id, salary
FROM employees
WHERE manager_id =
(SELECT employee_id
FROM employees
WHERE first_name = 'Payam'
);

```

6. Write a query to display the department number, name ( first name and last name ), job and department name for all employees in the Finance department.

```

SELECT e.department_id, e.first_name, e.job_id , d.department_name
FROM employees e , departments d
WHERE e.department_id = d.department_id
AND d.department_name = 'Finance';

```

7. Write a query to display all the information of an employee whose salary and reporting person id is 3000 and 121 respectively.

```

SELECT *
FROM employees
WHERE (salary,manager_id)=
(SELECT 3000,121);

```

8. Display all the information of an employee whose id is any of the number 134, 159 and 183.

```

SELECT *
FROM employees
WHERE employee_id IN (134,159,183);

```

9. Write a query to display all the information of the employees whose salary is within the range 1000 and 3000.

```

SELECT * FROM employees
WHERE salary BETWEEN 1000 and 3000;

```

10. Write a query to display all the information of the employees whose salary is within the range of smallest salary and 2500.

```

SELECT *
FROM employees

```

```
WHERE salary BETWEEN  
(SELECT MIN(salary)  
FROM employees) AND 2500;
```

**11.** Write a query to display all the information of the employees who does not work in those departments where some employees works whose manager id within the range 100 and 200.

```
SELECT *  
  
FROM employees  
WHERE department_id NOT IN  
(SELECT department_id  
FROM departments  
WHERE manager_id BETWEEN 100 AND 200);
```

**12.** Write a query to display all the information for those employees whose id is any id who earn the second highest salary.

```
SELECT *  
FROM employees  
WHERE employee_id IN  
(SELECT employee_id  
FROM employees  
WHERE salary =  
(SELECT MAX(salary)  
FROM employees  
WHERE salary <  
(SELECT MAX(salary)  
FROM employees)));
```

**13.** Write a query to display the employee name( first name and last name ) and hiredate for all employees in the same department as Clara. Exclude Clara.

```
SELECT first_name, last_name, hire_date  
FROM employees  
WHERE department_id =  
( SELECT department_id  
FROM employees  
WHERE first_name = 'Clara')  
AND first_name <> 'Clara';
```

**14.** Write a query to display the employee number and name( first name and last name ) for all employees who work in a department with any employee whose name contains a T.

```
SELECT employee_id, first_name, last_name  
  
FROM employees  
WHERE department_id IN  
( SELECT department_id  
FROM employees  
WHERE first_name LIKE '%T%' );
```

**15.** Write a query to display the employee number, name( first name and last name ), and salary for all employees who earn more than the average salary and who work in a department with any employee with a J in their name.

```
SELECT employee_id, first_name , salary
FROM employees
WHERE salary >
( SELECT AVG (salary)
FROM employees )
AND department_id IN
( SELECT department_id
FROM employees
WHERE first_name LIKE '%J%');
```

**16.** Display the employee name( first name and last name ), employee id, and job title for all employees whose department location is Toronto.

```
SELECT first_name, last_name, employee_id, job_id
FROM employees
WHERE department_id =
( SELECT department_id
FROM departments
WHERE location_id =
( SELECT location_id
FROM locations
WHERE city = 'Toronto'));
```

**17.** Write a query to display the employee number, name( first name and last name ) and job title for all employees whose salary is smaller than any salary of those employees whose job title is MK\_MAN.

```
SELECT employee_id,first_name,last_name,job_id
FROM employees
WHERE salary < ANY
( SELECT salary
FROM employees
WHERE job_id = 'MK_MAN' );
```

**18.** Write a query to display the employee number, name( first name and last name ) and job title for all employees whose salary is smaller than any salary of those employees whose job title is MK\_MAN. Exclude Job title MK\_MAN.

```
SELECT employee_id,first_name,last_name, job_id
FROM employees
WHERE salary < ANY
( SELECT salary
FROM employees
WHERE job_id = 'MK_MAN' )
AND job_id <> 'MK_MAN';
```

**19.** Write a query to display the employee number, name( first name and last name ) and job title for all employees whose salary is more than any salary of those employees whose job title is PU\_MAN. Exclude job title PU\_MAN.

```
SELECT employee_id, first_name, last_name, job_id
FROM employees
WHERE salary > ALL
( SELECT salary
FROM employees
WHERE job_id = 'PU_MAN' )
AND job_id <> 'PU_MAN';
```

**20.** Write a query to display the employee number, name( first name and last name ) and job title for all employees whose salary is more than any average salary of any department.

```
SELECT employee_id, first_name, last_name, job_id
FROM employees
WHERE salary > ALL
( SELECT AVG(salary)
FROM employees
GROUP BY department_id
);
```

**21.** Write a query to display the employee name( first name and last name ) and department for all employees for any existence of those employees whose salary is more than 3700.

```
SELECT first_name, last_name, department_id
FROM employees
WHERE EXISTS
(SELECT *
FROM employees
WHERE salary > 3700 );
```

**22.** Write a query to display the department id and the total salary for those departments which contains at least one employee.

```
SELECT departments.department_id, result1.total_amt
FROM departments,
( SELECT employees.department_id, SUM(employees.salary) total_amt
FROM employees
GROUP BY department_id) result1
WHERE result1.department_id = departments.department_id;
```

**23.** Write a query to display the employee id, name ( first name and last name ) and the job id column with a modified title SALESMAN for those employees whose job title is ST\_MAN and DEVELOPER for whose job title is IT\_PROG.

```
SELECT employee_id, first_name, last_name,
CASE job_id
WHEN 'ST_MAN' THEN 'SALESMAN'
```

```

WHEN 'IT_PROG' THEN 'DEVELOPER'
ELSE job_id
END AS designation, salary
FROM employees;

```

**24.** Write a query to display the employee id, name ( first name and last name ), salary and the SalaryStatus column with a title HIGH and LOW respectively for those employees whose salary is more than and less than the average salary of all employees.

```

SELECT employee_id, first_name, last_name, salary,
CASE WHEN salary >= (SELECT AVG(salary)
FROM employees) THEN 'HIGH'
ELSE 'LOW'
END AS SalaryStatus
FROM employees;

```

**25.** Write a query to display the employee id, name ( first name and last name ), SalaryDrawn, AvgCompare (salary - the average salary of all employees) and the SalaryStatus column with a title HIGH and LOW respectively for those employees whose salary is more than and less than the average salary of all employees.

```

SELECT employee_id, first_name, last_name, salary AS SalaryDrawn,
ROUND((salary -(SELECT AVG(salary) FROM employees)),2) AS AvgCompare,
CASE WHEN salary >=
(SELECT AVG(salary)
FROM employees) THEN 'HIGH'
ELSE 'LOW'
END AS SalaryStatus
FROM employees;

```