**How do you select all columns from the employee table?**

select \* from employee;

**Write a query to display only the first\_name and last\_name of all employees.**

select first\_name,last\_name from employee;

**How do you select distinct departments from the employee table?**

select distinct department from employee;

**Write a query to count the total number of employees.**

select count(\*) as count from employee;

**How do you find the highest salary in the company?**

select max(salary) as max\_salary from employee;

**Write a query to find the average age of employees.**

SELECT AVG(DATEDIFF(CURDATE(), date\_of\_birth) / 365) AS average\_age FROM employee;

**How do you select all employees whose first name is 'John'?**

select \* from employee where first\_name='John';

**Write a query to find all employees who were hired in the year 2023.**

select \* from employee where year(hire\_date)=2023;

**How do you find the number of employees in each department?**

select department, count(\*) from employee group by department;

**Write a query to list all employees ordered by their salary in descending order.**

select \* from employee order by salary desc;

**How do you find the 5 highest paid employees?**

select \* from employee order by salary desc limit 5;

**Write a query to calculate the total salary paid by the company.**

select sum(salary) as total\_salary from employee;

**How do you find all employees whose last name starts with 'S'?**

select \* from employee where last\_name like 'S%';

**Write a query to find the number of male and female employees.**

select gender,count(\*) from employee group by gender;

**How do you find employees who have a salary greater than $75,000?**

select \* from employee where salary>75000;

**Write a query to find the employee(s) with the longest tenure in the company.**

SELECT employee\_id,first\_name,last\_name,hire\_date,DATEDIFF(CURDATE(), hire\_date) AS tenure\_days FROM employee ORDER BY tenure\_days DESC LIMIT 1;

**How do you find the average salary for each department?**

select department,avg(salary) as AVG\_SALARY from employee group by department;

**Write a query to list all employees who are older than 40 years.**

SELECT

employee\_id,

first\_name,

last\_name,

date\_of\_birth,

TIMESTAMPDIFF(YEAR, date\_of\_birth, CURDATE()) AS age

FROM

employee

WHERE

TIMESTAMPDIFF(YEAR, date\_of\_birth, CURDATE()) > 40;

**How do you find employees who were hired in the last 6 months?**

SELECT \* FROM employee WHERE hire\_date >= DATE\_SUB(CURDATE(), INTERVAL 6 MONTH) AND hire\_date <= CURDATE();

**Write a query to find the department with the highest average salary.**

select department,avg\_salary from (select department,avg(salary) as avg\_salary from employee group by department) as dept\_avg group by department order by avg\_salary desc limit 1;

**How do you update the salary of an employee with a specific employee\_id?**

update employee set salary=120000 where employee\_id=27;

**Write a query to delete all employees who are not active.**

delete from employee where is\_active=false and employee\_id>0;

**How do you find employees who don't have a manager (manager\_id is NULL)?**

select \* from employee where manager\_id is null;

**Write a query to find the employee with the highest salary in each department.**

select employee\_id,first\_name,last\_name,salary,department from employee where (department,salary) in (select department,max(salary) from employee group by department);

**How do you calculate the age of each employee based on their date\_of\_birth?**

select employee\_id,first\_name,last\_name,timestampdiff(year,date\_of\_birth,curdate()) as age from employee;

**Write a query to find employees who have the same last name.**

select \* from employee where last\_name in (select last\_name from employee group by last\_name) order by last\_name,first\_name asc;

**How do you find the second highest salary in the company?**

SELECT MAX(salary) AS second\_highest\_salary FROM employee WHERE salary < (SELECT MAX(salary) FROM employee);

**Write a query to list all employees along with their manager's name.**

select e.employee\_id,e.first\_name,e.last\_name,e.salary,e.department,(select first\_name from employee where employee\_id=e.manager\_id) as manager\_fname,(select last\_name from employee where employee\_id=e.manager\_id) as manager\_lname from employee e;

**How do you find departments that have more than 50 employees?**

select department,count(\*) as emp\_count from employee group by department having count(\*)>50;

**Write a query to calculate the salary range (difference between highest and lowest salary) for each department.**

select department,(max(salary)-min(salary)) as sal\_range from employee group by department;

**How do you find employees who have a birthday this month?**

select employee\_id,first\_name,last\_name,date\_of\_birth from employee where month(date\_of\_birth)=month(curdate());

**Write a query to list all employees who are managers.**

select \* from employee where employee\_id in (select manager\_id from employee);

**How do you find the employee(s) with the longest name(s)?**

select employee\_id,

first\_name,

last\_name,

LENGTH(CONCAT(first\_name, ' ', last\_name)) AS name\_length from employee where length(concat(first\_name,' ',last\_name))=(select max(length(concat(first\_name,' ',last\_name))) from employee);

**Write a query to calculate the average tenure of employees in each department.**

select department,round(avg(timestampdiff(year,hire\_date,curdate()))) as tenure from employee group by department;

**How do you find employees who were hired on a weekend?**

select employee\_id,first\_name,last\_name,hire\_date from employee where dayofweek(hire\_date) in (1,7);

**Write a query to list all employees sorted by their age, then by their salary.**

select employee\_id,first\_name,last\_name,date\_of\_birth,salary from employee order by timestampdiff(year,date\_of\_birth,curdate()),salary;

**How do you find the most common job title in the company?**

SELECT job\_title,COUNT(\*) AS count FROM employee GROUP BY job\_title ORDER BY count DESC LIMIT 5;

**Write a query to calculate the percentage of employees in each department.**

select department,((count(\*)/(select count(\*) from employee))\*100) as percentage from employee group by department;

**How do you find employees whose salary is above the company average?**

select \* from employee where salary>(select avg(salary) from employee) order by salary;

**Write a query to list all employees and their relative salary (salary / max salary in their department).**

select e.employee\_id,e.first\_name,e.last\_name,e.department,e.salary,(e.salary/(select max(salary) from employee group by e.department)) as rel\_sal from employee e;

**How do you find departments where the average salary is below the company average?**

select e.department,avg(e.salary) as avg\_salary from employee e group by e.department having avg(e.salary)<(select avg(salary) from employee) ;

**Write a query to find employees who have been with the company longer than their manager.**

Select e.employee\_id,e.first\_name,e.last\_name,e.hire\_date,timestampdiff(year,e.hire\_date,curdate()) as tenure from employee e where timestampdiff(year,e.hire\_date,curdate())>(select timestampdiff(year,hire\_date,curdate()) from employee where employee\_id=e.manager\_id);

**How do you calculate the employee turnover rate (assuming is\_active indicates current employment)?**

**Write a query to find the employee(s) with the highest salary in each job title.**

select job\_title,max(salary) from employee group by job\_title;

**How do you find employees who have changed departments (assuming you had historical data)?**

**Write a query to list all employees and their salary percentile within their department.**

SELECT

e.employee\_id,

e.first\_name,

e.last\_name,

e.department,

e.salary,

(e.salary / dept\_total.total\_salary) \* 100 AS percent\_sal

FROM

employee e

JOIN

(SELECT

department,

SUM(salary) AS total\_salary

FROM

employee

GROUP BY

department) AS dept\_total

ON

e.department = dept\_total.department;

**How do you find the department with the highest salary disparity (max salary - min salary)?**

select e.department,disparity.range\_sal from employee e join (select department ,max(salary)-min(salary) as range\_sal from employee group by department) as disparity on e.department=disparity.department group by department order by disparity.range\_sal desc limit 1;

**Write a query to calculate the company's total salary expense for each year.**

select sum(salary) as total\_expense from employee;

**How do you find employees who have the same hire date?**

select \* from employee where hire\_date in (select hire\_date from employee group by hire\_date having count(\*)>1) order by hire\_date;

**Write a query to list all employees and their years of service.**

select employee\_id,first\_name,last\_name,timestampdiff(year,hire\_date,curdate()) as years\_of\_service from employee;

**How do you find the most recently hired employee in each department?**

select e.employee\_id,e.first\_name,e.last\_name,e.department,hire\_date from employee e join (select department,max(hire\_date) as max\_hire\_date from employee group by department) as dept on e.department=dept.department and e.hire\_date=dept.max\_hire\_date;