

| emp_id | emp_name | department | salary | join_date | city | ⋮ |
|--------|----------|------------|--------|------------|----------|---|
| 101 | Alice | HR | 50000 | 2021-01-15 | New York | ⋮ |
| 102 | Bob | IT | 70000 | 2020-03-10 | London | ⋮ |
| 103 | Charlie | IT | 65000 | 2019-07-23 | London | ⋮ |
| 104 | Diana | HR | 52000 | 2021-06-01 | New York | ⋮ |
| 105 | Edward | Finance | 80000 | 2018-11-12 | Sydney | ⋮ |
| 106 | Fiona | Finance | 75000 | 2020-02-20 | Sydney | ⋮ |
| 107 | George | IT | 72000 | 2022-04-18 | New York | ⋮ |

Table : Employees

1. Find the total salary paid per department.
2. Find the number of employees in each department.
3. first 3 characters of each employee name in capital letters
4. Find the employee who have more than 6 character in their name
5. Find employees who joined after November 2020.
6. Display the number of years since joining (assuming current year = 2025).
7. Display salary rounded to nearest thousand.
8. Find cities having more than 2 employees.
9. Find cities where the average salary is between 60,000 and 75,000.
10. Find the department and city combination where the average salary is highest.
11. Display departments where more than one city is present.
12. Write a brief on SQL and type of sql languages

Here are the SQL queries one by one:

1 Total salary per department

```
SELECT department, SUM(salary) AS total_salary
FROM employees
GROUP BY department;
```

2 Number of employees in each department

```
SELECT department, COUNT(*) AS employee_count
FROM employees
GROUP BY department;
```

3 First 3 characters of each name in uppercase

```
SELECT emp_name, UPPER(SUBSTRING(emp_name,1,3)) AS
short_name
FROM employees;
```

4 Employees having more than 6 characters in name

```
SELECT emp_name
FROM employees
WHERE LENGTH(emp_name) > 6;
```

5 Employees who joined after Nov 2020

```
SELECT emp_name, join_date
FROM employees
WHERE join_date > '2020-11-30';
```

6 Number of years since joining (assuming 2025)

```
SELECT emp_name, 2025 - YEAR(join_date) AS years_worked
FROM employees;
```

7 Salary rounded to nearest thousand

```
SELECT emp_name, ROUND(salary,-3) AS rounded_salary
FROM employees;
```

8 Cities having more than 2 employees

```
SELECT city, COUNT(*) AS employee_count
FROM employees
GROUP BY city
HAVING COUNT(*) > 2;
```

9 Cities where avg salary between 60000 and 75000

```
SELECT city, AVG(salary) AS avg_salary
FROM employees
GROUP BY city
HAVING AVG(salary) BETWEEN 60000 AND 75000;
```

10 Department + city combination with highest avg salary

```
SELECT department, city
FROM employees
GROUP BY department, city
ORDER BY AVG(salary) DESC;
```

11 Departments working in more than one city

```
SELECT department
FROM employees
GROUP BY department
HAVING COUNT(DISTINCT city) > 1;
```

12 Short SQL theory

SQL stands for Structured Query Language and is used to manage data in databases. SQL is divided into:
DQL (SELECT),
DDL (CREATE, ALTER, DROP),
DML (INSERT, UPDATE, DELETE),
DCL (GRANT, REVOKE),
TCL (COMMIT, ROLLBACK).