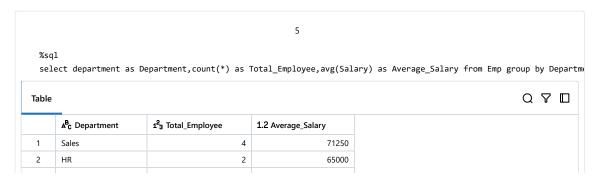
(https://databricks.com) **SQL Assignment**

```
%sql
CREATE TABLE Emp (
EmployeeID INT,
Name VARCHAR(50),
Department VARCHAR(50),
Salary INT,
JoiningDate DATE
);

OK
```

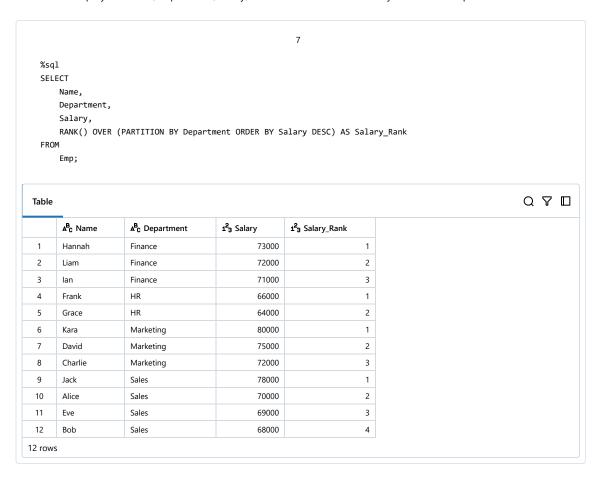


Find the total number of employees and the average salary for each department.

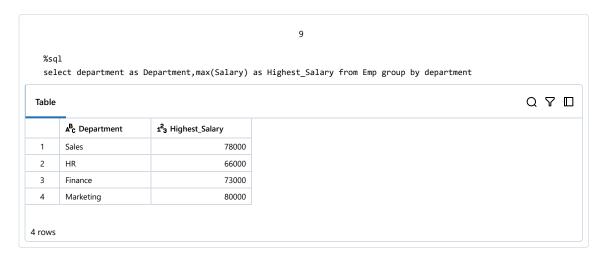


3	Finance	3	72000
4	Marketing	3	75666.66666666667
rows			

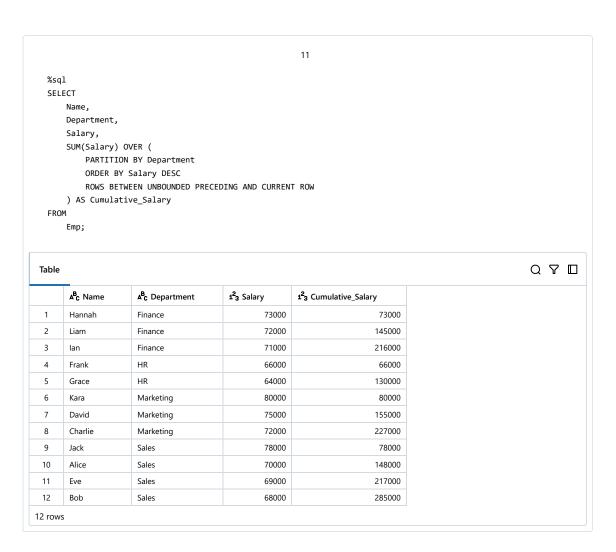
List each employee's name, department, salary, and their rank based on salary within their department.



For each department, find the employee with the highest salary.



Calculate the cumulative salary for each employee within their department, ordered by their salary in descending order.

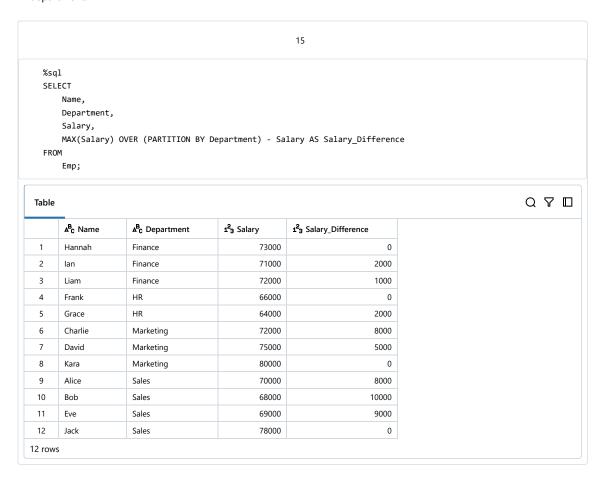


Find the average salary for each department and list the employees who earn above their department's average salary.

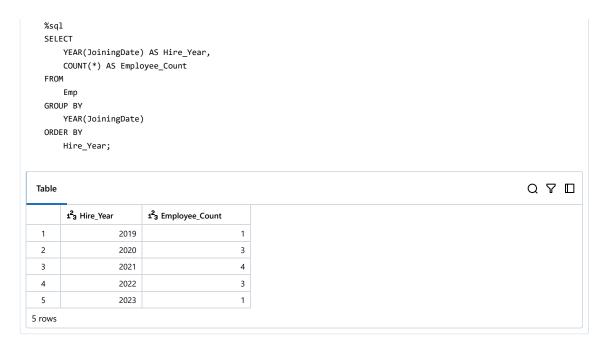
```
13
%sql
SELECT
    e.Name,
    e.Department,
    e.Salary
FROM
    Emp e
JOIN
    (SELECT
         Department,
         AVG(salary)\ AS\ Average\_Salary
     FROM
         Emp
     GROUP BY
         Department) d
    e.Department = d.Department
    e.Salary > d.Average_Salary;
```



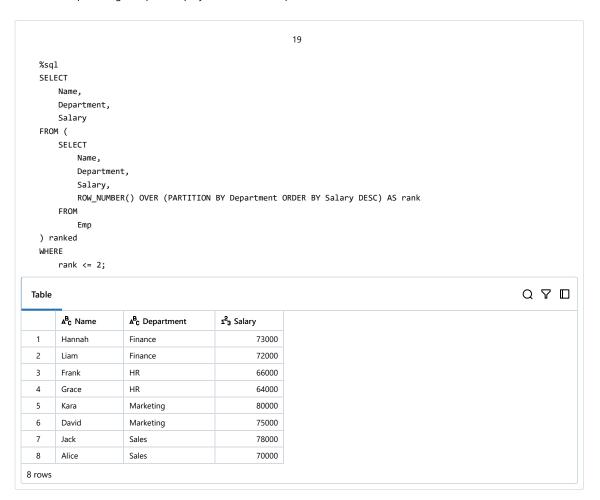
For each department, determine the difference between each employee's salary and the highest salary in that department.



List the number of employees hired each year, ordered by year.



Find the top two highest-paid employees from each department.



Calculate the running average salary for each department, ordered by salary in descending order.

```
21
   %sql
   SELECT
       Name,
       Department,
       Salary,
       AVG(Salary) OVER (
            PARTITION BY Department
            ORDER BY Salary DESC
            ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW
       ) AS Running_Average_Salary
   FROM
       Emp;
                                                                                                                            Q70
 Table
        ₄<sup>B</sup><sub>c</sub> Name
                         A<sup>B</sup><sub>C</sub> Department
                                                 123 Salary
                                                                  1.2 Running_Average_Salary
                                                          73000
                                                                                            73000
  1
        Hannah
                         Finance
                                                          72000
                                                                                            72500
  2
        Liam
                         Finance
  3
                         Finance
                                                         71000
                                                                                            72000
        lan
  4
        Frank
                         HR
                                                          66000
                                                                                            66000
                                                          64000
                                                                                            65000
  5
        Grace
                         \mathsf{HR}
                                                         80000
                                                                                            80000
  6
        Kara
                         Marketing
                                                          75000
                                                                                            77500
  7
        David
                         Marketing
  8
        Charlie
                         Marketing
                                                          72000
                                                                                75666.6666666667
  9
                                                                                            78000
        Jack
                         Sales
                                                          78000
                                                         70000
                                                                                            74000
 10
        Alice
                         Sales
 11
        Eve
                         Sales
                                                          69000
                                                                                72333.33333333333
 12
        Bob
                         Sales
                                                          68000
                                                                                            71250
12 rows
```

Find each employee's tenure in years (as of today) and rank employees by tenure within each department.

