

Problem List

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3338. Second Highest Salary II Premium

Medium | Topics

SQL Schema > Pandas Schema >

Table: employees

Column Name	Type
emp_id	int
salary	int
dept	varchar

emp_id is the unique key for this table.
Each row of this table contains information about an employee including their ID, salary, and department.

Write a solution to find the employees who earn the **second-highest salary** in each department. If **multiple employees have the second-highest salary**, include **all employees** with that salary.

Return the result table ordered by **emp_id** in **ascending** order.

The result format is in the following example.

Example:

Input:

employees table:

emp_id	salary	dept
1	70000	Sales
2	80000	Sales
3	80000	Sales
4	90000	Sales
5	55000	IT
6	65000	IT
7	65000	IT
8	50000	Marketing
9	55000	Marketing
10	55000	HR

Output:

emp_id	dept
2	Sales
3	Sales
5	IT
8	Marketing

Explanation:

- Sales Department:**
 - Highest salary is 90000 (emp_id: 4)
 - Second-highest salary is 80000 (emp_id: 2, 3)
 - Both employees with salary 80000 are included
- IT Department:**
 - Highest salary is 65000 (emp_id: 6, 7)
 - Second-highest salary is 55000 (emp_id: 5)
 - Only emp_id 5 is included as they have the second-highest salary
- Marketing Department:**
 - Highest salary is 55000 (emp_id: 9)
 - Second-highest salary is 50000 (emp_id: 8)
 - Employee 8 is included
- HR Department:**
 - Only has one employee
 - Not included in the result as it has fewer than 2 employees

Seen this question in a real interview before? 1/5

Yes No

Accepted 2,624/3K Acceptance Rate 86.5%

Topics

Discussion (3)

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Code

Pandas Auto

```
1 import pandas as pd
2
3 def find_second_highest_salary(employees: pd.DataFrame) -> pd.DataFrame:
4
5     # Rank salaries per department (dense rank + distinct salaries)
6     employees['rank'] = (
7         employees
8         .groupby('dept')['salary']
9         .rank(method='dense', ascending=False)
10    )
11
12    # Select second-highest salary per department
13    result = employees[employees['rank'] == 2][['emp_id', 'dept']]
14
15    # Order by emp_id
16    result = result.sort_values('emp_id')
17
18    return result
```

Saved Ln 1, Col 1

Testcase | Test Result

Accepted Runtime: 242 ms

Case 1

Input

employees =

emp_id	salary	dept
1	70000	Sales
2	80000	Sales
3	80000	Sales