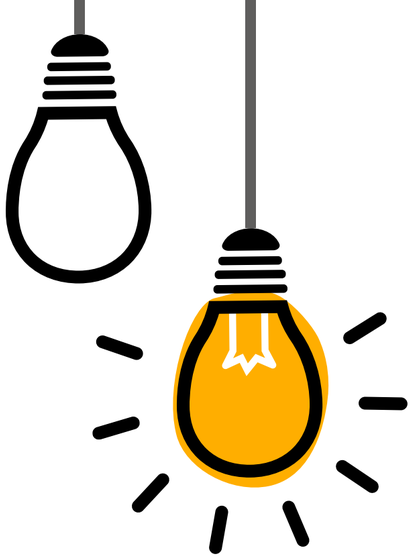

Interesting SQL Interview Question

AYUSHSINGH7796

Recently asked interview questions at one of the startups.

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Questions

Q1. Your query should return the information for the employee with the third highest salary. Write a query that will find this employee and return that row, but then replace the DivisionID column with the corresponding DivisionName from the table cb_companydivisions. You should also replace the ManagerID column with the ManagerName if the ID exists in the table and is not NULL.

Q2. Your query should identify employees who have a higher salary than their manager. Display each employee's Name, Salary, and ManagerName. If the employee does not have a manager, the ManagerName should be displayed as "No Manager". The result should be ordered by the difference between the employee's and manager's salaries in descending order. Additionally, include a column titled PromotionOpportunity that indicates "Yes" if the employee's salary is higher than their manager's and "No" otherwise.

Input Dataset

```
select * from emp;
select * from Divisions;
```

129 %

Results | Messages

	ID	Name	DivisionID	ManagerID	Salary
1	111	Larry Weis	104	35534	75000
2	112	Mary Dial	105	467	65000
3	122	Arnold Sully	101	NULL	60000
4	133	Susan Wall	105	577	110000
5	222	Mark Red	102	133	86000
6	356	Daniel Smith	100	133	40000
7	467	Lisa Roberts	100	NULL	80000
8	577	Robert Night	105	12353	76000

	ID	DivisionName
1	100	Accounting
2	101	IT
3	102	Sales
4	103	Marketing
5	104	Engineering
6	105	Customer S...

Solution : Q1

```sql
with cte as (
SELECT m1.id as ID ,m1.name as Name,
  c.DivisionName as DivisionName,
  m2.name as ManagerName,m1.Salary as Salary,
  row_number() over (order by m1.Salary) as rnk
FROM emp m1
inner join emp m2 on m1.ManagerID = m2.id
inner join divisions c on m1.DivisionID = C.ID
)
select ID,Name,DivisionName,ManagerName, Salary
from cte
where rnk= 3;
```

Solution : Q2

```sql
SELECT m1.Name as Name, m1.Salary as Salarys,
  coalesce(m2.Name, 'No Manager') as ManagerName,
  case when m1.salary > m2.salary then
    'Yes' else 'No' end
  as Promotionopportunity
FROM emp m1
left join emp m2
on m1.ManagerID = m2.ID
order by (m1.salary - m2.salary) desc;
```


Output

Output: Q1

```
with cte as (
SELECT m1.id as ID ,m1.name as Name,
c.DivisionName as DivisionName,
m2.name as ManagerName,m1.Salary as Salary,
row_number() over (order by m1.Salary) as rnk
FROM emp m1
inner join emp m2 on m1.ManagerID = m2.id
inner join divisions c
on m1.DivisionID = C.ID)
select ID,Name,DivisionName,ManagerName, Salary
from cte
where rnk= 3;
```

esults | Messages

ID	Name	DivisionName	ManagerName	Salary
222	Mark Red	Sales	Susan Wall	86000

Output: Q2

```
SELECT m1.Name as Name, m1.Salary as Salarys,
    coalesce(m2.Name, 'No Manager') as ManagerName,
    case when m1.salary > m2.salary then
        'Yes' else 'No' end
    as Promotionopportunity
FROM emp m1
left join emp m2
on m1.ManagerID = m2.ID
order by (m1.salary - m2.salary) desc;
```

129 % | Results | Messages

	Name	Salarys	ManagerName	Promotionopportunity
1	Susan Wall	110000	Robert Night	Yes
2	Mary Dial	65000	Lisa Roberts	No
3	Mark Red	86000	Susan Wall	No
4	Daniel Smith	40000	Susan Wall	No
5	Lisa Roberts	80000	No Manager	No
6	Robert Night	76000	No Manager	No
7	Dennis Front	90000	No Manager	No
8	Arnold Sully	60000	No Manager	No
9	Larry Weis	75000	No Manager	No

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Thanks for Watching

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