50_Second Highest Salary Medium - Solution

Source - https://leetcode.com/problems/second-highest-salary/

Running Notes

- Write a solution to find the second highest **distinct** salary from
  the `Employee` table.

now to do this I will first need to find the second highest distinct salary and for that
I will rank the table based on the salaries

```
-- Write your PostgreSQL query statement below
SELECT *,
DENSE_RANK() OVER(
    ORDER BY salary DESC
)
  FROM Employee
```

- If there is no second highest salary, return `null`

I knew it was with COALESCE but with the first error I thought maybe I was wrong
and then thought that a case statement would've been the solution and tried that
well just to realize that my mistake was that I missed a () and just that () made my
query return correct results

Mistake I made
The error is due to the incorrect syntax: you cannot directly place a
`SELECT` statement inside a `COALESCE` function. To fix this, you need to wrap the
subquery in parentheses, as `COALESCE` only accepts a scalar value, not another
`SELECT` statement without proper parentheses.

Final Code

```
-- Write your PostgreSQL query statement below
WITH main_CTE AS (SELECT salary,
DENSE_RANK() OVER(
    ORDER BY salary DESC
)
 FROM Employee)


SELECT COALESCE((SELECT DISTINCT(salary)
FROM main_CTE
WHERE dense_rank=2),null) AS SecondHighestSalary
```

Documenting mistakes is good, atleast it hits hard that you don't end up making the same (silly) mistakes again

so here it goes a very silly mistake I made

```
Runtime Error
syntax error at or near "CASE"
LINE 8: CASE
```

The error occurs because `CASE` is used incorrectly in your query. In PostgreSQL, `CASE` cannot directly replace a query structure or dictate which rows to return from a `SELECT` statement.
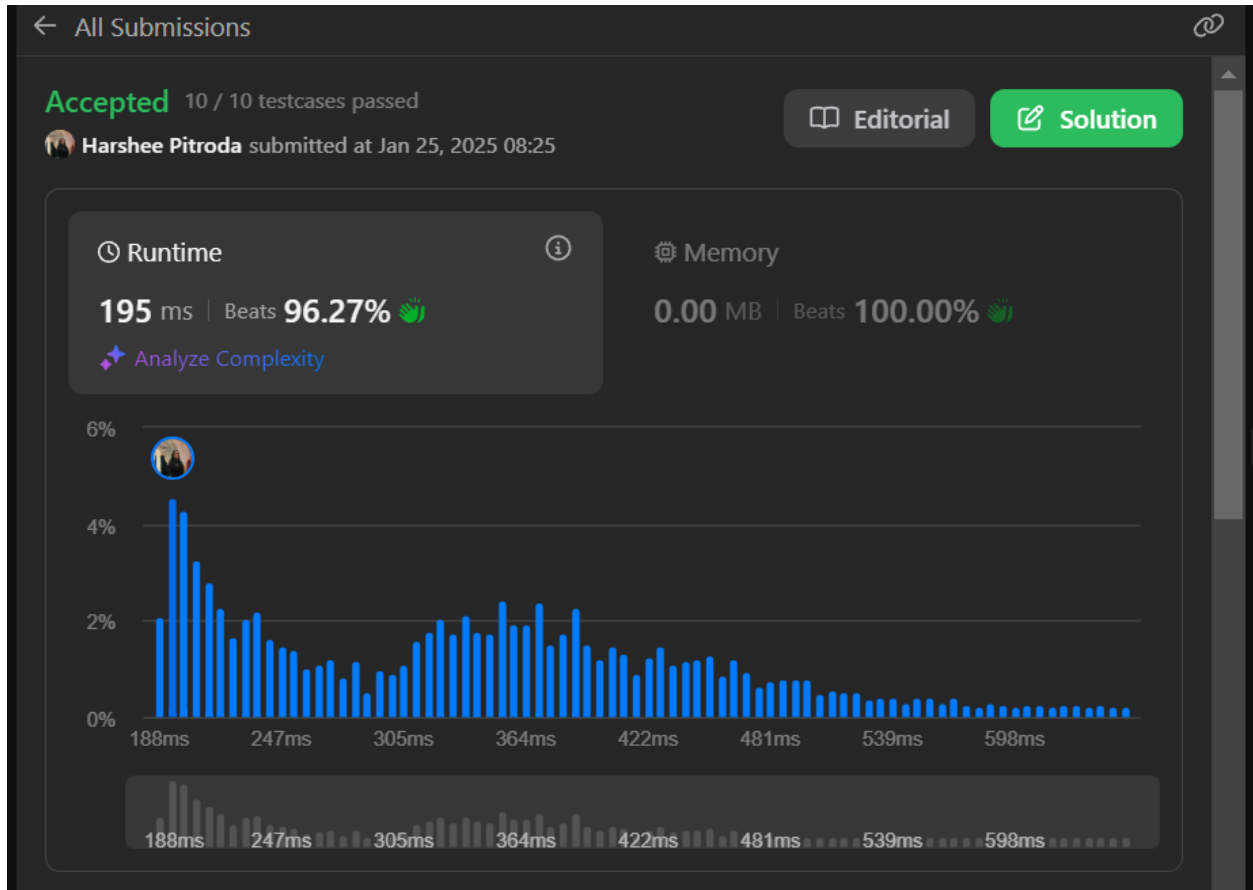
I used the CASE without a select

Wow upon solving the entire question I realised I didn't need to write 2 queries because I could've used OFFSET

```
SELECT COALESCE((SELECT DISTINCT(salary) AS SecondHighestSalary
FROM Employee
ORDER BY salary DESC
```

```
LIMIT 1
OFFSET 1),NULL) AS SecondHighestSalary
```


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