56_Customers Who Never Order Easy - Solution

Source - https://leetcode.com/problems/customers-who-never-order/description/

Running Notes

- find all customers who never order anything
- we have 2 tables customers and orders and the common this between them is id

```
-- Write your PostgreSQL query statement below
SELECT
Customers.name AS Customers
FROM
Customers
LEFT JOIN
Orders
ON Customers.id = Orders.customerId
WHERE customerid IS NULL
```

```
-- Write your PostgreSQL query statement below
SELECT
name as Customers
FROM CUSTOMERS
WHERE id NOT IN (SELECT customerId FROM Orders)
```

- **NOT IN Query:**
  - In the `NOT IN` query, PostgreSQL first executes the subquery to retrieve all `customerId` values from the `Orders` table. If an index exists on the `customerId` column, this step is very efficient.

    - After the subquery runs, PostgreSQL filters the `Customers` table by checking each `id` against the precomputed subquery results. This filtering step avoids creating large intermediate results, making the query faster.

- **LEFT JOIN Query:**
    - In the `LEFT JOIN` query, PostgreSQL joins the `Customers` table with the `Orders` table first. This creates an intermediate result that includes all rows from `Customers`, paired with matching rows from `Orders` (or `NULL` if no match exists).
    - After performing the join, PostgreSQL applies the `WHERE customerId IS NULL` condition to filter out the rows that have matches in `Orders`. This join step adds significant overhead because it processes and stores unnecessary rows before filtering.

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