## 18\_Y-on-Y Growth Rate Hard - Solution

Source - W nicksinghtech Wayfair SQL Interview Question | DataLemur

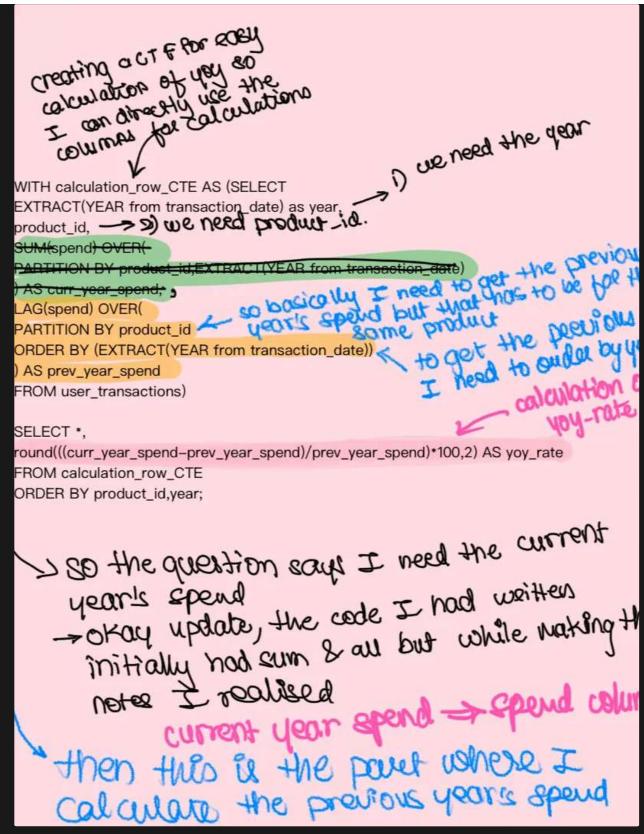
## **Running Notes**

- we have user transactions
- query year-on-year growth rate for the total spend of each product, grouping the results by product ID.
- output should include the year in ascending order, product ID, current year's spend, previous year's spend and year-on-year growth percentage, rounded to 2 decimal places.
- confusing at first but lets go step by step

```
SELECT *, EXTRACT(YEAR from transaction_date) as year FROM user_transactions;
```

okay so i got the year what now

```
WITH calculation_row_CTE AS (SELECT EXTRACT(YEAR from transaction_date) as year, product_id, spend AS curr_year_spend, LAG(spend) OVER(a PARTITION BY product_id ORDER BY (EXTRACT(YEAR from transaction_date)) ) AS prev_year_spend FROM user_transactions) SELECT *, round(((curr_year_spend-prev_year_spend)/prev_year_spend)*100,2) AS yoy_rate FROM calculation_row_CTE ORDER BY product_id,year;
```



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