17_Odd and Even Measurements - Medium Solution

Source - 🐵 nicksinghtech Google Interview Question | DataLemur

Running Notes

- measurement data

- in one day multiple data

- query - sum of odd-numbered and even-numbered measurements separately for a particular day

- order the data by **measurement_time so I can get the odd measurement and even measurements ... how well you will see it in the code below**

```
SELECT *, ROW_NUMBER() OVER ( PARTITION BY measurement_time::DATE ORDER BY
measurement_time ) AS row_n FROM measurements;
```

- so this allots a row number so 07/10/2022 date if I have 3 measurements ... so each is given a row number in the order of the time from first to last

So the final code is here!!!

```
WITH measurements_CTE AS ( SELECT *, ROW_NUMBER() OVER ( PARTITION BY
measurement_time::DATE ORDER BY measurement_time ) AS row_n FROM measurements
) SELECT measurement_time::DATE, SUM(CASE WHEN row_n%2=0 THEN
measurement_value END) AS "even_sum", SUM(CASE WHEN row_n%2=1 THEN
measurement_value END) AS "odd_sum" FROM measurements_CTE GROUP BY
measurement_time::DATE ORDER BY measurement_time::DATE
```

```sql
WITH measurements_CTE AS (
SELECT *,
ROW_NUMBER() OVER (
PARTITION BY measurement_time::DATE
ORDER BY measurement_time
) AS row_n
FROM measurements
)

SELECT measurement_time::DATE,
SUM(CASE
WHEN row_n%2=0 THEN measurement_value
END) AS "even_sum",
SUM(CASE
WHEN row_n%2=1 THEN measurement_value
END) AS "odd_sum"
FROM measurements_CTE
GROUP BY measurement_time::DATE
ORDER BY measurement_time::DATE
```

(Handwritten annotations:)

creating a CTE that has row numbers alloted to the data

the Order is given based on the time

row number has to be alloted to every date, but we have diff time stamps so I need to partition (make window by the date so ::Date

finding the rows that are even
1) → take the even rows value
2) → apply sum over those values
→ same for odd.

want the above even & odd sum for every date so group by the date

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