

LET'S TRY ...

SQL QUESTION

Problem :

You are given a table BMS with 2 columns **SEAT_NO** and **IS_EMPTY**

you have to book 3 seats consecutive for you and your 2 other friends together

Find out all those seat numbers which can be part of those consecutive seats.

INPUT

SEAT_NO	IS_EMPTY
1	N
2	Y
3	N
4	Y
5	Y
6	Y
7	N
8	Y
9	Y
10	Y
11	Y
12	N
13	Y
14	Y

OUTPUT

SEAT_NO
1
2
3
4
5
6
7
8
9
10
11

Solution : 1

We will use the **Lead & Lag** functions to find the status of 2 previous and 2 next seats for each current seat and we can check with all combinations.

```
SELECT SEAT_NO
FROM
(
    SELECT * ,
        lag(IS_EMPTY,1) OVER(ORDER BY SEAT_NO) AS PREV_1,
        lag(IS_EMPTY,2) OVER(ORDER BY SEAT_NO) AS PREV_2,
        lead(IS_EMPTY,1) OVER(ORDER BY SEAT_NO) AS NEXT_1,
        lead(IS_EMPTY,2) OVER(ORDER BY SEAT_NO) AS NEXT_2,
    FROM BMS
)
WHERE
    IS_EMPTY = 'Y' AND PREV_1 = 'Y' AND PREV_2 = 'Y' OR
    IS_EMPTY = 'Y' AND PREV_1 = 'Y' AND NEXT_1 = 'Y' OR
    IS_EMPTY = 'Y' AND NEXT_1 = 'Y' AND NEXT_2 = 'Y'
```

Solution : 2

We will use **Current Row**, **Preceding** & **Following** to perform advanced aggregation to check Empty Seats Sum for each current seat for all combinations.

```
SELECT SEAT_NO
FROM
(
    SELECT *,  

        SUM(CASE WHEN IS_EMPTY = 'Y' THEN 1 ELSE 0 END) OVER (ORDER BY SEAT_NO ROWS BETWEEN 2 PRECEDING AND CURRENT ROW) AS PREV_2,  

        SUM(CASE WHEN IS_EMPTY = 'Y' THEN 1 ELSE 0 END) OVER (ORDER BY SEAT_NO ROWS BETWEEN 1 PRECEDING AND 1 FOLLOWING) AS PREV_NEXT_1,  

        SUM(CASE WHEN IS_EMPTY = 'Y' THEN 1 ELSE 0 END) OVER (ORDER BY SEAT_NO ROWS BETWEEN CURRENT ROW AND 2 FOLLOWING) AS NEXT_2  

    FROM BMS
)
WHERE  

    PREV_2 = 3 OR PREV_NEXT_1 = 3 OR NEXT_2 = 3
```