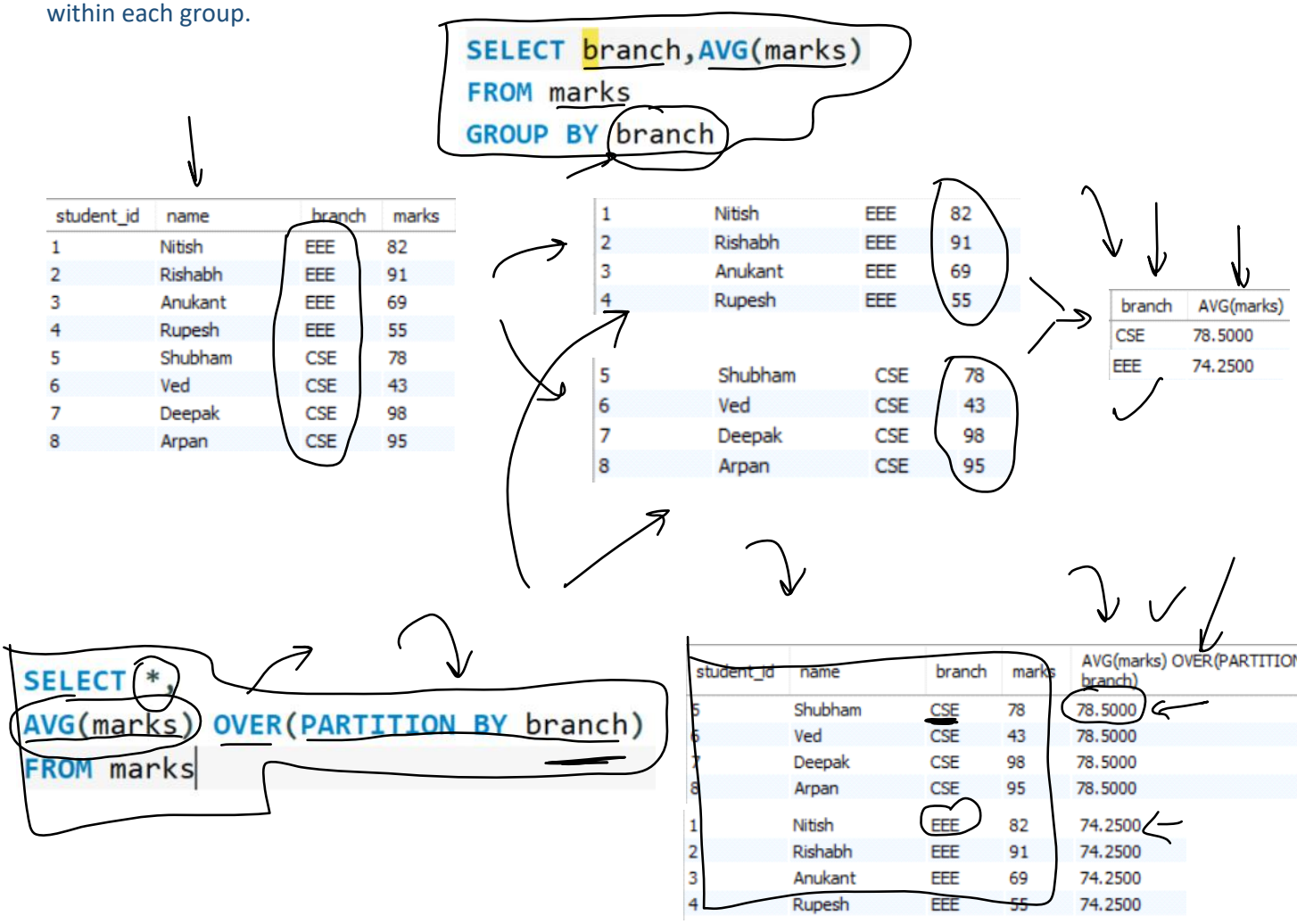
What are Window Functions?

27 February 2023 14:18

Window functions in SQL are a type of analytical function that perform calculations across a set of rows that are related to the current row, called a "window". A window function calculates a value for each row in the result set based on a subset of the rows that are defined by a window specification.

The window specification is defined using the OVER() clause in SQL, which specifies the partitioning and ordering of the rows that the window function will operate on. The partitioning divides the rows into groups based on a specific column or expression, while the ordering defines the order in which the rows are processed within each group.



Aggregate Function with OVER()

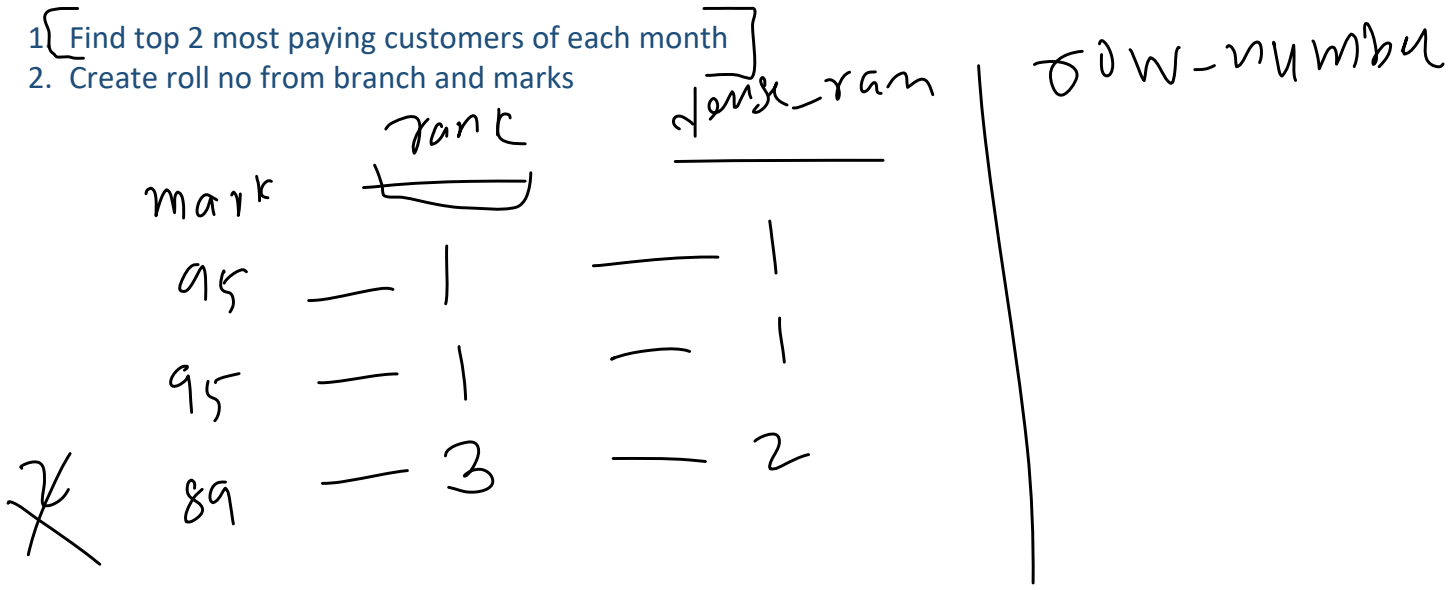
27 February 2023 16:41

Find all the students who have marks higher than the avg marks of their respective branch

RANK/DENSE_RANK/ROW_NUMBER

27 February 2023 16:56

1. Find top 2 most paying customers of each month
2. Create roll no from branch and marks



FIRST_VALUE/LAST VALUE/NTH_VALUE

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1. Find the branch toppers
2. FRAME Clause
3. Find the last guy of each branch
4. Alternate way of writing Window functions
5. Find the 2nd last guy of each branch, 5th topper of each branch

Frames

27 February 2023 19:08

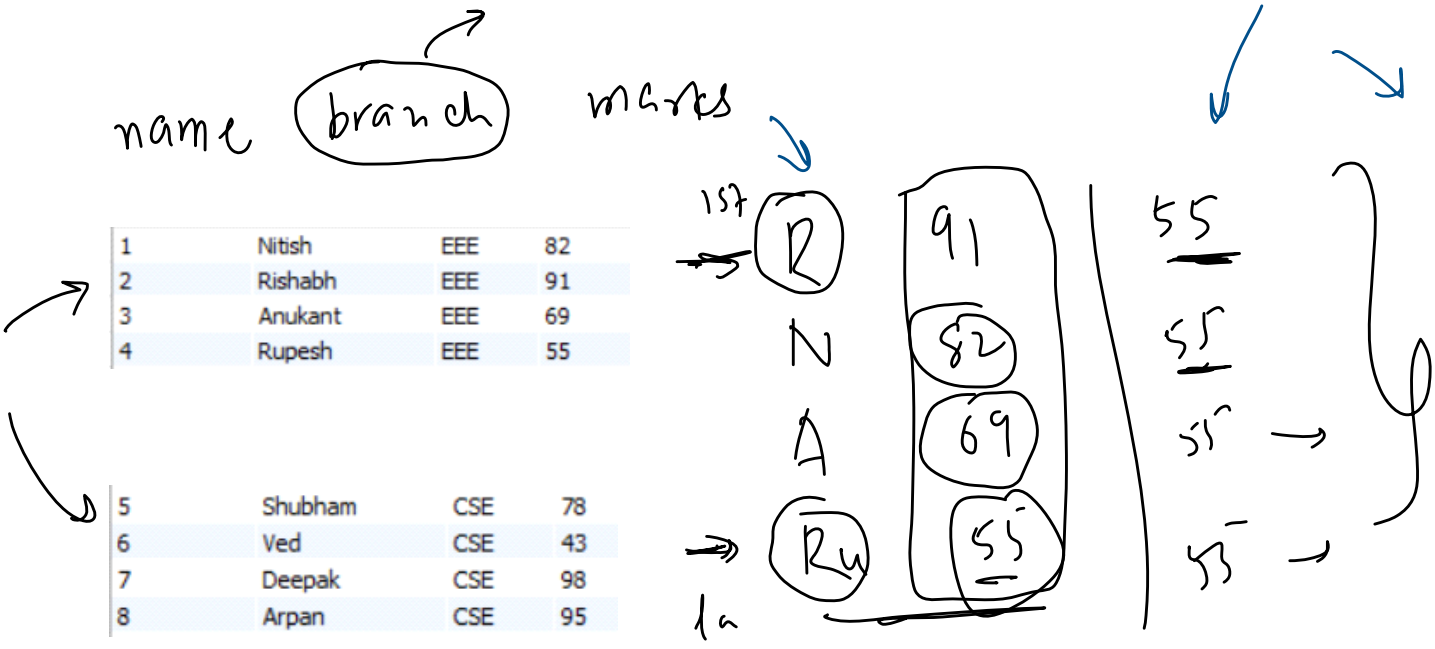
A frame in a window function is a subset of rows within the partition that determines the scope of the window function calculation. The frame is defined using a combination of two clauses in the window function: **ROWS** and **BETWEEN**.

The ROWS clause specifies how many rows should be included in the frame relative to the current row. For example, ROWS 3 PRECEDING means that the frame includes the current row and the three rows that precede it in the partition.

The BETWEEN clause specifies the boundaries of the frame.

Examples

- **ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW** means that the frame includes all rows from the beginning of the partition up to and including the current row.
- **ROWS BETWEEN 1 PRECEDING AND 1 FOLLOWING**: the frame includes the current row and the row immediately before and after it.
- **ROWS BETWEEN UNBOUNDED PRECEDING AND UNBOUNDED FOLLOWING**: the frame includes all rows in the partition.
- **ROWS BETWEEN 3 PRECEDING AND 2 FOLLOWING**: the frame includes the current row and the three rows before it and the two rows after it.



1	Nitish	EEE	82
2	Rishabh	EEE	91
3	Anukant	EEE	69
4	Rupesh	EEE	55

5	Shubham	CSE	78
6	Ved	CSE	43
7	Deepak	CSE	98
8	Arpan	CSE	95

LEAD & LAG

27 February 2023 17:12

Find the MoM revenue growth of Zomato