



MySQL - RDBMS

Trainer: Mr. Nilesh Ghule



Numeric & String functions

- ABS()
- POWER()
- ROUND(), FLOOR(), CEIL()

- ASCII(), CHAR()
- CONCAT()
- SUBSTRING()
- LOWER(), UPPER()
- TRIM(), LTRIM(), RTRIM()
- LPAD(), RPAD()
- REGEXP_LIKE()



Control and NULL and List functions

- NULL is special value in RDBMS that represents absence of value in that column.
- NULL values do not work with relational operators and need to use special operators.
- Most of functions return NULL if NULL value is passed as one of its argument.
- ISNULL()
- IFNULL()
- NULLIF()
- COALESCE()
- GREATEST(), LEAST()
- IF(condition, true-value, false-value)



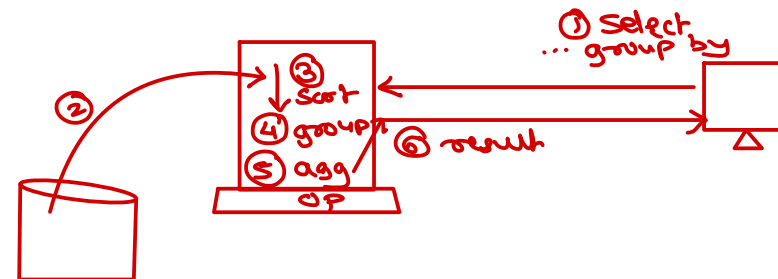
Group functions

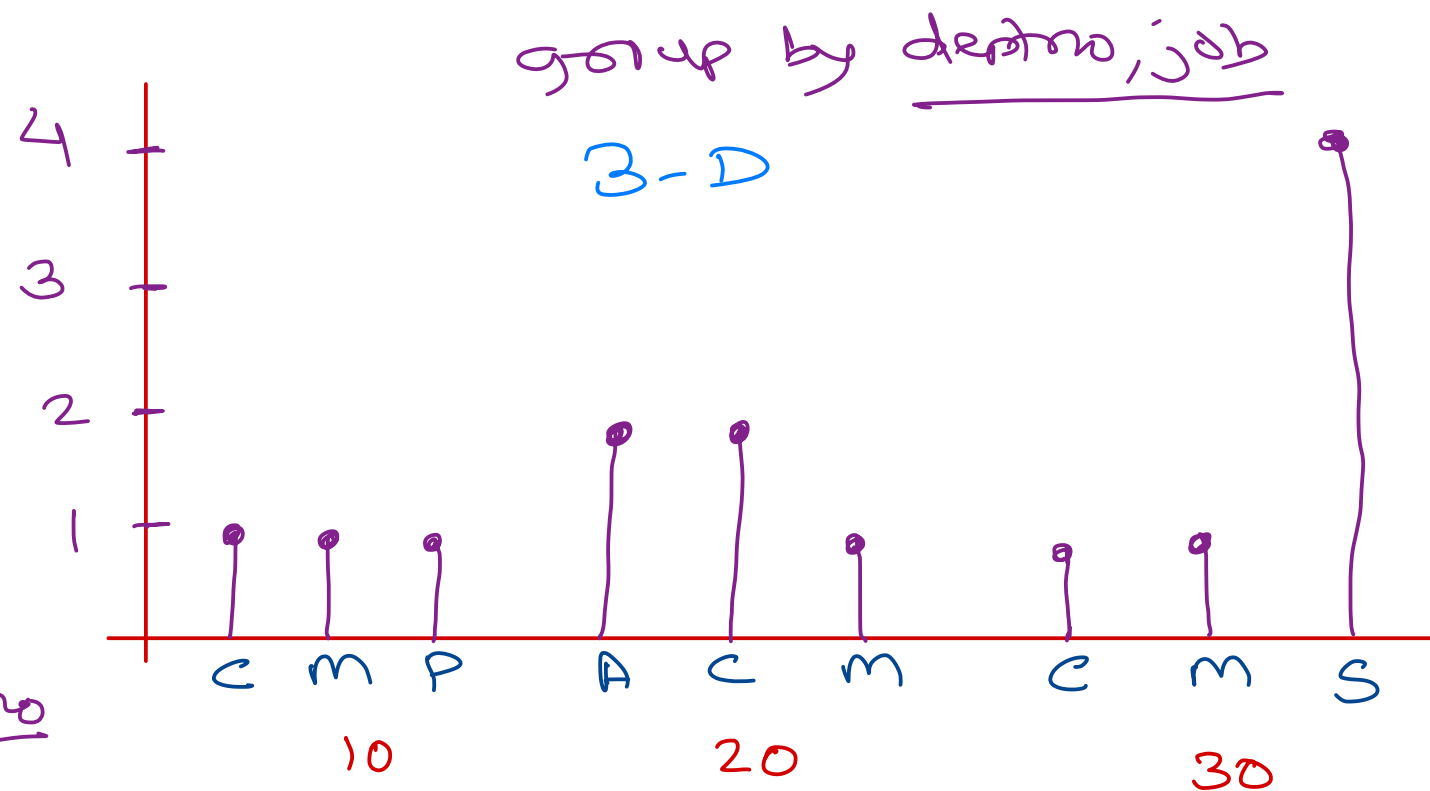
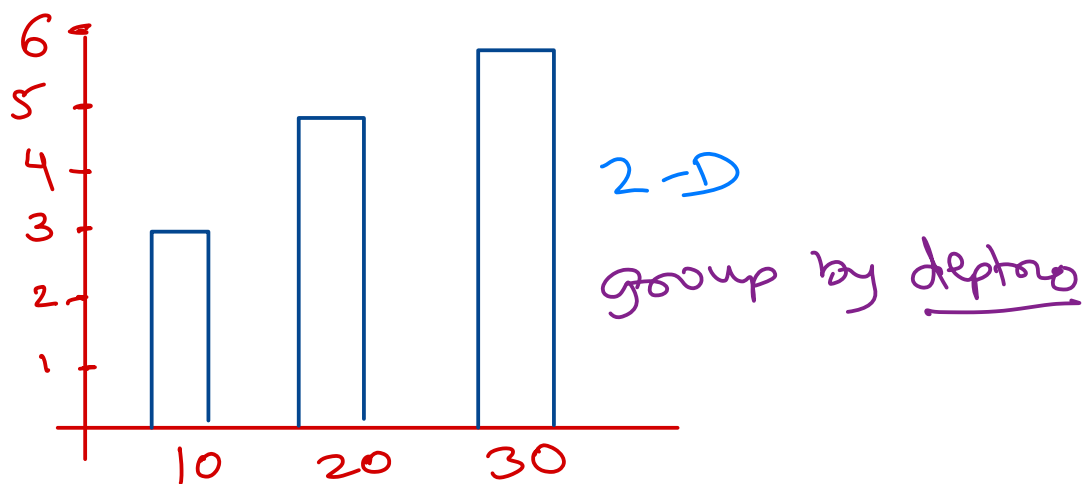
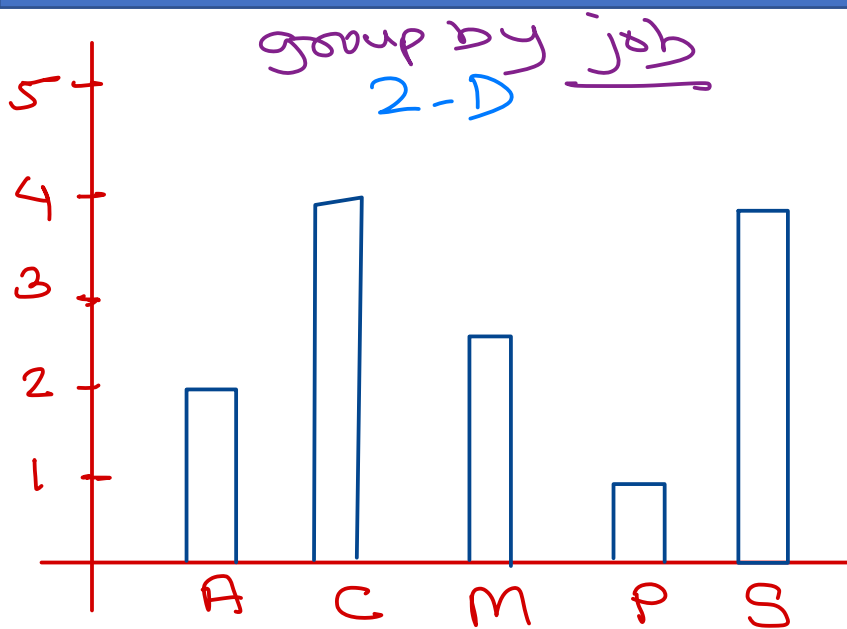
- Work on group of rows of table.
- Input to function is data from multiple rows & then output is single row. Hence these functions are called as "Multi Row Function" or "Group Functions".
- These functions are used to perform aggregate ops like sum, avg, max, min, count or std dev, etc. Hence these fns are also called as "Aggregate Functions".
- Example: SUM(), AVG(), MAX(), MIN(), COUNT().
- NULL values are ignored by group functions.
- Limitations of GROUP functions:
 - Cannot select group function along with a column.
 - Cannot select group function along with a single row fn.
 - Cannot use group function in WHERE clause/condition.
 - Cannot nest a group function in another group fn.



GROUP BY clause

- GROUP BY is used for analysis of data i.e. generating reports & charts.
- When GROUP BY single column, generated output can be used to plot 2-D chart.
When GROUP BY two column, generated output can be used to plot 3-D chart and so on.
- GROUP BY queries are also called as Multi-dimensional / Spatial queries.
- Syntactical Characteristics:
 - If a column is used for GROUP BY, then it may or may not be used in SELECT clause.
 - If a column is in SELECT, it must be in GROUP BY.
- When GROUP BY query is fired on database server, it does following:
 - Load data from server disk into server RAM.
 - Sort data on group by columns.
 - Group similar records by group columns.
 - Perform given aggregate ops on each column.
 - Send result to client.







Thank you!

Nilesh Ghule <nilesh@sunbeaminfo.com>

