**GROUPING**

**EXPT NO: 5 DATE: 18/10/22**

**AIM**

To study grouping in SQL

**THEORY**

An aggregate function in [SQL](https://www.simplilearn.com/tutorials/sql-tutorial/what-is-sql) performs a calculation on multiple values and returns a single value. SQL provides many aggregate functions that include avg, count, sum, min, max, etc. An aggregate function ignores NULL values when it performs the calculation, except for the count function.

The SQL Grouping is one of the aggregate functions which is used to indicate whether the specified column in a GROUP BY Clause aggregated or not. This grouping function will return one for aggregated and zero for not aggregated.

The GROUP BY statement basically groups rows that have same values into summary rows like “find the number of customers in each country”, The GROUP BY statement is often used with aggregate functions (COUNT(), MAX(), MIN(), SUM(), AVG()) to group the result-set by one or more columns.

It is used in collaboration with the SELECT statement to arrange identical data into groups. This GROUP BY clause follows the WHERE clause in a SELECT statement and precedes the ORDER BY clause. Having Clause is used to place conditions to decide which group will be part of final result-set.

Syntax:

SELECT column1, function\_name(column2) FROM table\_name WHERE condition GROUP BY column1,column2

Where,

* function\_name: name of function used for example, SUM(), COUNT()
* table\_name: Name of the table
* condition: Condition used

Example:

|  |  |  |
| --- | --- | --- |
| **SUBJECT** | **YEAR** | **NAME** |
| English | 1 | Harsh |
| English | 1 | Pratik |
| English | 1 | Ramesh |
| English | 2 | Ashish |
| English | 2 | Suresh |
| Mathematics | 1 | Deepak |
| Mathematics | 1 | Sayan |

Query:

SELECT SUBJECT, YEAR, Count(\*) FROM STUDENT GROUP BY SUBJECT, YEAR;

Output:

|  |  |  |
| --- | --- | --- |
| **SUBJECT** | **YEAR** | **NAME** |
| English | 1 | 3 |
| English | 2 | 2 |
| Mathematics | 1 | 2 |

**CONCLUSION**

The various MySQL Grouping Operations were studied with its appropriate use cases.