SQL GROUP BY clause

GROUP BY clause

- The usage of SQL GROUP BY clause is, to divide the rows in a table into smaller groups.
- The GROUP BY clause is used with the SQL SELECT statement.
- The grouping can happen after retrieves the rows from a table.
- When some rows are retrieved from a grouped result against some condition, that is possible with HAVING clause.
- The GROUP BY clause is used with the SELECT statement to make a group of rows based on the values of a specific column or expression. The SQL AGGREGATE function can be used to get summary information for every group and these are applied to an individual group.
- The WHERE clause is used to retrieve rows based on a certain condition, but it can not be applied to grouped result.
- In an SQL statement, suppose you are using GROUP BY, if required you can use HAVING instead of WHERE, after GROUP BY.

Syntax:

SELECT <column_list>
FROM < table name >
WHERE <condition>GROUP BY <columns>
[HAVING] <condition>;

Parameters:

Name	Description
table_name	Name of the table.
column_list	Name of the columns of the table.
columns	Name of the columns which will participate in grouping..

Pictorial Presentation of Groups of Data

CUST_COUNTRY	COUNT(GRADE)
USA	4
India	10
Australia	3
Canada	3
UK	4

5 rows returned in 0.15 seconds

Using GROUP BY with Aggregate Functions
- The power of aggregate functions is greater when combined with the GROUP BY clause.
- The GROUP BY clause is rarely used without an aggregate function.

SQL GROUP BY with COUNT() function
Display number of employees work in each department.

SELECT dept_id "Department Code",
COUNT(*) "No of Employees"
FROM employee
GROUP BY dept_id;

SQL GROUP BY with SUM() function
Display total salary paid to employees work in each department.

SELECT dept_id, SUM(salary)
FROM employee
GROUP BY dept_id;

SQL GROUP BY with COUNT() and SUM() function
Display number of employees, total salary paid to employees work in each department.

SELECT dept_id "Department Code",
COUNT(*) "No of Employees",
SUM(salary) "Total Salary"
FROM employee
GROUP BY dept_id;

SQL GROUP BY on more than one columns
Display the department code, job id, total salary paid to employees group by dept_id, job_id.

SELECT dept_id "Department Code", job_id,
SUM(salary) "Total Salary"
FROM employee
GROUP BY dept_id,job_id;

SQL GROUP BY with WHERE clause
Display the department code, total salary paid to employees group by dept_id and manager_id=103.

SELECT dept_id "Department Code",
SUM(salary) "Total Salary"
FROM employee

WHERE MANAGER = 103
GROUP BY dept_id;

SQL GROUP BY with HAVING clause
Display the department id, number of employees of those groups that have more than 2 employees.

SELECT dept_id, count(*) "No. of Employee"
FROM employee
GROUP BY dept_id
HAVING count(*)>2;