

SQL Group By Examples

Group By:

- The GROUP BY clause is a SQL command that is used to group rows that have the same values.
- It is used in conjunction with aggregate functions to produce summary reports from the database.

Having:

- The HAVING clause is used with the GROUP BY clause to filter groups based on a specified list of conditions.
- The GROUP BY clause summarizes the rows into groups and the HAVING clause applies one or more conditions to these groups. Only groups that make the conditions evaluate to TRUE are included in the result. In other words, the groups for which the condition evaluates to FALSE or UNKNOWN are filtered out.

Example:

Given the table below, find the following items:

Table: student			
	name	class	mark
	Filter	Filter	Filter
1	A	Math	78
2	A	English	67
3	A	Chemistry	83
4	B	Math	89
5	B	Chemistry	93
6	C	English	75
7	C	Biology	66
8	D	French	78

1. Find the names of the students taking exactly 3 classes.

Solution: **select name from student group by name having count(class) = 3;**

	name
1	A

2. Find the names of the students taking more than 1 class.

Solution: **select name from student group by name having count(class) > 1;**

	name
1	A
2	B
3	C

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3. Find the average of each student.

Solution: **select name, avg(mark) from student group by name;**

	name	avg(mark)
1	A	76.0
2	B	91.0
3	C	70.5
4	D	78.0

4. Find the name of the student with the highest mark in each class.

Solution: **select name, class, max(mark) from student group by class;**

	name	class	max(mark)
1	C	Biology	66
2	B	Chemistry	93
3	C	English	75
4	D	French	78
5	B	Math	89

5. Find the lowest mark for each student.

Solution: **select name, min(mark) from student group by name;**

	name	min(mark)
1	A	67
2	B	89
3	C	66
4	D	78

6. Find the names of students who have an average of 75 or higher.

Solution: **select name from student group by name having avg(mark) >= 75;**

	name
1	A
2	B
3	D