

Group Summary Statistics with SQL: Takeaways



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Syntax

- Counting rows by group

```
SELECT group_column, COUNT(*) AS num_row
FROM table
GROUP BY group_column;
```

- Summing a computed column by group

```
SELECT group_column, SUM(column_1 * column_2) AS total
FROM table
GROUP BY group_column;
```

- Computing statistics with grouped data under conditions

```
SELECT group_column, COUNT(*) AS num_row, AVG(column) AS avg_column
FROM table
WHERE conditions
GROUP BY group_column;
```

- Grouping rows and ordering the result

```
SELECT group_column,
       COUNT(*) AS num_row,
       SUM(column) AS sum_column
FROM table
GROUP BY group_column
ORDER BY sum_column DESC,
         num_row DESC
LIMIT n;
```

- Writing a comprehensive query

```
SELECT billing_city,
       COUNT(*) AS num_row,
       SUM(total) AS overall_sale,
       MIN(total) AS min_sale,
       AVG(total) AS avg_sale,
       MAX(total) AS max_sale
FROM invoice
WHERE billing_country = 'Canada'
      OR billing_country = 'France'
GROUP BY billing_city
ORDER BY overall_sale DESC, num_row DESC
LIMIT 3;
```

Concepts

- Aggregate functions allow us to make operations combining several rows over groups.
- With the new clause, the new SQL order of clauses is as follows:

```
SELECT > FROM > WHERE > GROUP BY > ORDER BY > LIMIT
```

- With the new clause, the new SQL execution order is as follows:

```
FROM > WHERE > GROUP BY > SELECT > ORDER BY > LIMIT
```

Resources

- [SQL aggregate functions](#)

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