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## DBMS/SQL

### Power(),round() and mode() in sql

In SQL, the functions `POWER()`, `ROUND()`, and `MODE()` are used to perform mathematical operations and statistical analysis on data.

1. `POWER()`: The `POWER()` function is used to raise a number to a specified power. It takes two arguments: the base and the exponent. For example, the query `SELECT POWER(2, 3);` will return 8, as 2 raised to the power of 3 is 8.
2. `ROUND()`: The `ROUND()` function is used to round a number to a specified number of decimal places. It takes two arguments: the number to be rounded and the number of decimal places to which it should be rounded. For example, the query `SELECT ROUND(3.14159, 2);` will return 3.14, as the number 3.14159 is rounded to two decimal places.
3. `MODE()`: The `MODE()` function is used to calculate the mode of a set of values. The mode is the value that appears most frequently in the set. For example, the query `SELECT MODE(1, 2, 2, 3, 3, 3, 4, 4, 4, 4);` will return 4, as 4 appears four times in the set and is the most frequently occurring value.

It's important to note that the functions may behave differently depending on the specific SQL implementation being used. For example, some SQL implementations may use the `MOD()` function instead of `MODE()` to calculate the remainder of a division operation.

### Query of POWER()

The `POWER()` function in SQL is used to raise a number to a specified power. It takes two arguments: the base and the exponent. Here is an example query using the `POWER()` function in SQL:

```
SELECT POWER(2, 3);
```

In this query, the `POWER()` function is used to raise the base 2 to the power of 3. The result of this query will be 8, as 2 raised to the power of 3 is 8.

You can also use column names or expressions in the `POWER()` function. For example, if you have a table called `my_table` with columns `base` and `exponent`, you can use the following query:

```
SELECT POWER(base, exponent) FROM my_table;
```

This will raise the values in the `base` column to the power of the values in the `exponent` column and return the result for each row.



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## Query of ROUND()

The `ROUND()` function in SQL is used to round a number to a specified number of decimal places. It takes two arguments: the number to be rounded and the number of decimal places to which it should be rounded. Here is an example query using the `ROUND()` function in SQL:

```
SELECT ROUND(3.14159, 2);
```

In this query, the `ROUND()` function is used to round the number 3.14159 to two decimal places. The result of this query will be 3.14, as the number 3.14159 is rounded to two decimal places.

You can also use column names or expressions in the `ROUND()` function. For example, if you have a table called `my_table` with a column called `value`, you can use the following query:

```
SELECT ROUND(value, 2) FROM my_table;
```

This will round the values in the `value` column to two decimal places and return the result for each row.

## Query of MOD()

`MOD()` is a mathematical function that returns the remainder when one number is divided by another. In other words, it computes the modulo operation.

The syntax for `MOD()` varies depending on the programming language or system you are using. In general, the function takes two arguments: the first is the dividend, and the second is the divisor.

For example, in SQL, the syntax for `MOD()` is as follows:

```
scss
MOD(dividend, divisor)
```

If dividend is not evenly divisible by divisor, the function returns the remainder. For example, `MOD(10, 3)` would return 1, because 10 divided by 3 is 3 with a remainder of 1.

Note that some programming languages use a different symbol for the modulo operation. For example, in Python, the modulo operator is represented by the percent sign (%). So, the expression `10 % 3` would evaluate to 1.



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