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## Date functions in sql

SQL provides several date and time functions that allow you to manipulate and analyze date and time data. Some common SQL date functions include:

1. `CURRENT_DATE()` - used to get the current date
2. `CURRENT_TIME()` - used to get the current time
3. `CURRENT_TIMESTAMP()` - used to get the current date and time
4. `DATE()` - used to extract the date from a datetime value
5. `YEAR()` - used to extract the year from a datetime value
6. `MONTH()` - used to extract the month from a datetime value
7. `DAY()` - used to extract the day from a datetime value
8. `DATEADD()` - used to add a specified interval to a datetime value
9. `DATEDIFF()` - used to get the difference between two datetime values
10. `DATE_FORMAT()` - used to format a datetime value as a string

Here are some examples of using these functions in SQL:

1. Getting the current date:

```
SELECT CURRENT_DATE();  
-- Result: '2023-02-16'
```

2. Getting the current time:

```
SELECT CURRENT_TIME();  
-- Result: '13:30:45'
```

3. Getting the current date and time:

```
SELECT CURRENT_TIMESTAMP();  
-- Result: '2023-02-16 13:30:45'
```

4. Extracting the date from a datetime value:

```
SELECT DATE('2023-02-16 13:30:45');  
-- Result: '2023-02-16'
```

5. Extracting the year from a datetime value:

```
SELECT YEAR('2023-02-16 13:30:45');  
-- Result: 2023
```

6. Extracting the month from a datetime value:



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```
SELECT MONTH('2023-02-16 13:30:45');  
-- Result: 2
```

7. Extracting the day from a datetime value:

```
SELECT DAY('2023-02-16 13:30:45');  
-- Result: 16
```

8. Adding a specified interval to a datetime value:

```
SELECT DATEADD(MINUTE, 30, '2023-02-16 13:30:45');  
-- Result: '2023-02-16 14:00:45'
```

9. Getting the difference between two datetime values:

```
SELECT DATEDIFF(MINUTE, '2023-02-16 13:30:45', '2023-02-16 14:00:45');  
-- Result: 30
```

10. Formatting a datetime value as a string:

```
SELECT DATE_FORMAT('2023-02-16 13:30:45', '%Y-%m-%d %H:%i:%s');  
-- Result: '2023-02-16 13:30:45'
```

## DATE()

DATE() is a SQL function that extracts the date portion of a datetime value. The syntax for DATE() varies slightly depending on the database system you are using, but the basic idea is the same.

Here is an example using DATE() in MySQL:

```
SELECT DATE('2023-02-16 13:30:45');
```

This will return the date portion of the datetime value '2023-02-16 13:30:45', which is '2023-02-16'.

The DATE() function is useful when you want to perform date-based queries, such as finding all records that were created on a particular day, without regard to the specific time of day. By using the DATE() function to extract the date portion of a datetime value, you can perform queries on the date portion only.

Note that the output format of the DATE() function may vary depending on the database system you are using. In MySQL, the output format is 'YYYY-MM-DD', but in other database systems it may be different.



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## NOW()

NOW() is a SQL function that returns the current date and time. The syntax for NOW() varies slightly depending on the database system you are using, but the basic idea is the same.

Here is an example using NOW() in MySQL:

```
SELECT NOW();
```

This will return the current date and time.

The NOW() function is useful when you want to record the current date and time when inserting data into a table, or when you want to perform time-based queries, such as finding all records that were created after a certain time.

Note that the output format of NOW() may vary depending on the database system you are using. In MySQL, the output format is 'YYYY-MM-DD HH:MM:SS', but in other database systems it may be different.

## MONTH(),MONTHNAME()

MONTH() and MONTHNAME() are SQL functions used to extract the month information from a date or datetime value.

The MONTH() function returns an integer representing the month of a given date or datetime value. The value is between 1 and 12, with 1 representing January, 2 representing February, and so on.

Here is an example using MONTH() in MySQL:

```
SELECT MONTH('2023-02-16');
```

This will return the value 2, since February is the second month of the year.

The MONTHNAME() function returns the name of the month for a given date or datetime value.

Here is an example using MONTHNAME() in MySQL:

```
SELECT MONTHNAME('2023-02-16');
```

This will return the string 'February', which is the name of the month for the given date.



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Both MONTH() and MONTHNAME() functions are useful when you want to extract or display month information from a date or datetime value.

## **YEAR(),DAY() AND DAYNAME()**

YEAR(), DAY(), and DAYNAME() are SQL functions used to extract the year, day, and day-of-week information from a date or datetime value.

The YEAR() function returns an integer representing the year of a given date or datetime value. For example:

```
SELECT YEAR('2023-02-16');
```

This will return the value 2023, which is the year of the given date.

The DAY() function returns an integer representing the day of the month for a given date or datetime value. For example:

```
SELECT DAY('2023-02-16');
```

This will return the value 16, which is the day of the month for the given date.

The DAYNAME() function returns the name of the day of the week for a given date or datetime value. For example:

```
SELECT DAYNAME('2023-02-16');
```

This will return the string 'Wednesday', which is the name of the day of the week for the given date.

All three functions are useful when you want to extract or display year, day, or day-of-week information from a date or datetime value.



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