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PostgreSQL EXTRACT Function

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The PostgreSQL `EXTRACT()` function retrieves a field such as a year, month, and day from a date/time value.

Syntax

The following illustrates the syntax of the `EXTRACT()` function:

```
EXTRACT(field FROM source)
```

Arguments

The PostgreSQL `EXTRACT()` function requires two arguments:

1) `field`

The field argument specifies which field to extract from the date/time value.

The following table illustrates the valid field values:

Field Value	TIMESTAMP	Interval
CENTURY	The century	The number of centuries
DAY	The day of the month (1-31)	The number of days
DECADE	The decade that is the year divided by 10	Sames as TIMESTAMP

DOW	The day of week Sunday (0) to Saturday (6)	N/A
DOY	The day of year that ranges from 1 to 366	N/A
EPOCH	The number of seconds since 1970-01-01 00:00:00 UTC	The total number of seconds in the interval
HOURL	The hour (0-23)	The number of hours
ISODOW	Day of week based on ISO 8601 Monday (1) to Sunday (7)	N/A
ISOYEAR	ISO 8601 week number of year	N/A
MICROSECONDS	The seconds field, including fractional parts, multiplied by 1000000	Sames as TIMESTAMP
MILLENNIUM	The millennium	The number of millennium
MILLISECONDS	The seconds field, including fractional parts, multiplied by 1000	Sames as TIMESTAMP
MINUTE	The minute (0-59)	The number of minutes
MONTH	Month, 1-12	The number of months, modulo (0-11)
QUARTER	Quarter of the year	The number of quarters
SECOND	The second	The number of seconds
TIMEZONE	The timezone offset from UTC, measured in seconds	N/A
TIMEZONE_HOUR	The hour component of the time zone offset	N/A
TIMEZONE_MINUTE	The minute component of the time zone offset	N/A
WEEK	The number of the ISO 8601 week-numbering week of the year	N/A
YEAR	The year	Sames as TIMESTAMP

2) `source`

The `source` is a value of type `TIMESTAMP` or `INTERVAL` . If you pass a `DATE` value, the function will cast it to a `TIMESTAMP` value.

Return value

The `EXTRACT()` function returns a double precision value.

Examples

A) Extracting from a `TIMESTAMP` examples

Extracting year from a timestamp:

```
SELECT EXTRACT(YEAR FROM TIMESTAMP '2016-12-31 13:30:15');
```

Here is the result:

```
2016
```

Extracting the quarter from a timestamp:

```
SELECT EXTRACT(QUARTER FROM TIMESTAMP '2016-12-31 13:30:15');
```

The result is

```
4
```

Extracting month from a timestamp:

```
SELECT EXTRACT(MONTH FROM TIMESTAMP '2016-12-31 13:30:15');
```

The following is the result:

```
12
```

Extracting day from a timestamp:

```
SELECT EXTRACT(DAY FROM TIMESTAMP '2016-12-31 13:30:15');
```

Here is the result:

```
31
```

Extracting century from a timestamp:

```
SELECT EXTRACT(CENTURY FROM TIMESTAMP '2016-12-31 13:30:15');
```

It returned 21 as expected:

```
21
```

Extracting decade from a timestamp:

```
SELECT EXTRACT(DECADE FROM TIMESTAMP '2016-12-31 13:30:15');
```

The following is the result:

201

Extracting the day of week from a timestamp:

```
SELECT EXTRACT(DOW FROM TIMESTAMP '2016-12-31 13:30:15');
```

The result is:

6

Extracting the day of year from a timestamp:

```
SELECT EXTRACT(DOY FROM TIMESTAMP '2016-12-31 13:30:15');
```

It returned 366:

366

Extracting the epoch from a timestamp:

```
SELECT EXTRACT(EPOCH FROM TIMESTAMP '2016-12-31 13:30:15');
```

The result is:

1483191015

Extracting hour from a timestamp:

```
SELECT EXTRACT(HOUR FROM TIMESTAMP '2016-12-31 13:30:15');
```

Result:

13

Extracting the minute from a timestamp:

```
SELECT EXTRACT(MINUTE FROM TIMESTAMP '2016-12-31 13:30:15');
```

Here is the result:

30

Extracting second from a timestamp:

```
SELECT EXTRACT(SECOND FROM TIMESTAMP '2016-12-31 13:30:15.45');
```

The result includes second and its fractional seconds:

```
15.45
```

Extracting the weekday according to ISO 8601:

```
SELECT EXTRACT(ISODOW FROM TIMESTAMP '2016-12-31 13:30:15');
```

Extracting the millisecond from a timestamp:

```
SELECT EXTRACT(MILLISECONDS FROM TIMESTAMP '2016-12-31 13:30:15');
```

The result is $15 * 1000 = 15000$

```
15000
```

Extracting the microseconds from a timestamp:

```
SELECT EXTRACT(MICROSECONDS FROM TIMESTAMP '2016-12-31 13:30:15');
```

The result is $15 * 1000000 = 15000000$

```
15000000
```

B) Extracting from an interval examples

Extracting year from an interval:

```
SELECT EXTRACT(YEAR FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
6
```

Extracting the quarter from an interval:

```
SELECT EXTRACT(QUARTER FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
2
```

Extracting the month from an interval:

```
SELECT EXTRACT(MONTH FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
5
```

Extracting the day from an interval:

```
SELECT EXTRACT(DAY FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
4
```

Extracting the hour from an interval:

```
SELECT EXTRACT(HOUR FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
3
```

Extracting the minute from an interval:

```
SELECT EXTRACT(MINUTE FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
2
```

Extracting the second from an interval:

```
SELECT EXTRACT(SECOND FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
1
```

Extracting the millisecond from an interval:

```
SELECT EXTRACT(MILLISECONDS FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second'
```

Result

```
1000
```

Extracting the microsecond from an interval:

```
SELECT EXTRACT(MICROSECONDS FROM INTERVAL '6 years 5 months 4 days 3 hours 2 minutes 1 second'
```

Result

```
1000000
```

Extracting the decade from an interval:

```
SELECT EXTRACT(DECADE FROM INTERVAL '60 years 5 months 4 days 3 hours 2 minutes 1 second' );
```

Result

```
60
```

Extracting the millennium from an interval:

```
SELECT EXTRACT(MILLENNIUM FROM INTERVAL '1999 years 5 months 4 days 3 hours 2 minutes 1 second'
```

Result

```
1
```

Extracting the century from an interval:

```
SELECT EXTRACT(CENTURY FROM INTERVAL '1999 years 5 months 4 days 3 hours 2 minutes 1 second' )
```

Result

```
19
```

In this tutorial, you have learned how to extract a field from a date/time or interval value.

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