**Or**

**acle built-in functions**

<https://docs.oracle.com/cd/B19306_01/server.102/b14200/functions001.htm>

Oracle Date Functions

|  |  |
| --- | --- |
| **Function** | **Description** |
| ADD\_MONTHS | Returns a date with a specified number of months added18 |
| CURRENT\_DATE | Returns the current date in the time zone of the current SQL session as set by the ALTER SESSION command |
| CURRENT\_TIMESTAMP | Returns the current date and time in the time zone of the current SQL session as set by the ALTER SESSION command |
| DBTIMEZONE | returns the database time zone as a time zone offset or a time zone region name |
| EXTRACT | Extracts a value from a date or interval value |
| LAST\_DAY | Returns the last day of the month based on a date value |
| LOCALTIMESTAMP | Returns the current date and time in the time zone of the current SQL session as set by the ALTER SESSION command |
| MONTHS\_BETWEEN | Returns the number of months between date1 and date2 |
| NEW\_TIME | Converts a date from time zone1 to a date in time zone2 |
| NEXT\_DAY | Returns the first weekday that is greater than a date |
| ROUND | Returns a date rounded to a specific unit of measure |
| SESSIONTIMEZONE | Returns the current session's time zone as a time zone offset or a time zone region name |
| SYSDATE | Returns the current system date and time on your local database |
| SYSTIMESTAMP | Returns the current system date and time (including fractional seconds and time zone) on your local database |
| TRUNC | Returns a date truncated to a specific unit of measure |

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SQL> connect

Enter user-name: system

Enter password:

Connected.

SQL> select sysdate from dual;

SYSDATE

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24-MAR-21

SQL> select add\_months(sysdate,3) from dual;

ADD\_MONTH

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24-JUN-21

SQL> select months\_between('18-jan-2015','01-jan-2021') from dual;

MONTHS\_BETWEEN('18-JAN-2015','01-JAN-2021')

-------------------------------------------

-71.451613

SQL> select months\_between('18-jan-2015','01-jan-2019') from dual;

MONTHS\_BETWEEN('18-JAN-2015','01-JAN-2019')

-------------------------------------------

-47.451613

SQL> select months\_between('18-jan-2021','01-jan-2019') from dual;

MONTHS\_BETWEEN('18-JAN-2021','01-JAN-2019')

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24.5483871

SQL> select next\_day('18-mar-2021','monday') from dual;

NEXT\_DAY(

---------

22-MAR-21

SQL> select last\_day('18-mar-2021') from dual;

LAST\_DAY(

---------

31-MAR-21

SQL> select to\_char (sysdate,'ddth month yyyy') from dual;

TO\_CHAR(SYSDATE,'DDTHMONTHYYYY')

----------------------------------------------

24th march 2021

SQL> select to\_date ('15-feb-19', 'ddth month yyyy') from dual;

TO\_DATE('

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15-FEB-19

SQL> select new\_time('15-feb-19','est','yst') from dual;

NEW\_TIME(

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14-FEB-19

SQL> select new\_time('24-mar-2021','est','yst') from dual;

NEW\_TIME(

---------

23-MAR-21

SQL> select trunc(sysdate, 'year') from dual;

TRUNC(SYS

---------

01-JAN-21

SQL> select trunc(sysdate, 'month') from dual;

TRUNC(SYS

---------

01-MAR-21

SQL> select trunc(to\_date('24-mar-2021','dd-mm-yyyy'), 'year') from dual;

TRUNC(TO\_

---------

01-JAN-21

SQL> select round(to\_date('24-mar-2021','dd-mm-yyyy'), 'year') from dual;

ROUND(TO\_

---------

01-JAN-21

SQL> select round(to\_date('15-jul-2020','dd-mm-yyyy'), 'year') from dual;

ROUND(TO\_

---------

01-JAN-21

SQL> select round(to\_date('15-jul-2021','dd-mm-yyyy'), 'year') from dual;

ROUND(TO\_

---------

01-JAN-22

SQL> select to\_date(sysdate)-to\_date('13-dec-2030','dd-mm-yyyy') from dual;

TO\_DATE(SYSDATE)-TO\_DATE('13-DEC-2030','DD-MM-YYYY')

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-3551

SQL> select to\_date(sysdate)-to\_date('13-dec-2021','dd-mm-yyyy') from dual;

TO\_DATE(SYSDATE)-TO\_DATE('13-DEC-2021','DD-MM-YYYY')

----------------------------------------------------

-264

TO\_DATE(SYSDATE)-TO\_DATE('13-DEC-2020','DD-MM-YYYY')

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101

SQL> select (to\_date(sysdate)-to\_date('13-dec-2020','dd-mm-yyyy'))/365 from dual;

(TO\_DATE(SYSDATE)-TO\_DATE('13-DEC-2020','DD-MM-YYYY'))/365

----------------------------------------------------------

.276712329

SQL> select sysdate + interval '5' day from dual;

SYSDATE+I

---------

29-MAR-21

SQL> select to\_date('27 december 2021','dd month yyyy') from dual;

TO\_DATE('

---------

27-DEC-21

SQL> select to\_char(sysdate,'ddth mm yyyy')from dual;

TO\_CHAR(SYSD

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24th 03 2021

SQL> select table\_name from all\_tables ;

STUDENT

STU

TABLE\_NAME

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STUD3

SUPPLIER

STUD

EMPV

CUSTOMER

WITHDRAW

CUSTOMER1

CUSTOMER2

SUPPLIER1

PART

SHIPMENT

TABLE\_NAME

------------------------------

CUSTOMER3

CUSTOMER4

STUD1

CUSTDET

ACCOUNT

DEPOSITOR

CUSTDET1

ACC

DEPOSITOR1

SQL> select \* from stud3;

REG\_NO SNAME DOB

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CGPA

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20MIS2002 ramu 22-JAN-09

5.8

20MIS2003 santhosh 23-MAR-08

4.7

20MIS2011 ram 03-MAR-09

9.2L

REG\_NO SNAME DOB

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CGPA

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20MIS2010 deepu 07-JUL-07

9.7

20MIS2013 asha 07-JUL-08

9.7

SQL> select dob,reg\_no from stud3;

DOB REG\_NO

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22-JAN-09 20MIS2002

23-MAR-08 20MIS2003

03-MAR-09 20MIS2011

07-JUL-07 20MIS2010

07-JUL-08 20MIS2013

SQL> select extract(year from to\_date(dob)) from stud3;

EXTRACT(YEARFROMTO\_DATE(DOB))

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2009

2008

2009

2007

2008

SQL> select extract(month from to\_date(dob)) from stud3;

EXTRACT(MONTHFROMTO\_DATE(DOB))

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1

3

3

7

7

SQL> select extract(day from to\_date(dob)) from stud3;

EXTRACT(DAYFROMTO\_DATE(DOB))

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22

23

3

7

7

List the students who are not born during December or November

Oracle String Functions

|  |  |
| --- | --- |
| **Function** | **Description** |
| ASCII | Returns the number code that represents the specified character |
| ASCIISTR | Converts a string in any character set to an ASCII string using the database character set |
| CHR | Returns the character based on the number code |
| COMPOSE | Returns a Unicode string |
| CONCAT | Allows you to concatenate two strings together |
| Concat with || | Allows you to concatenate two or more strings together |
| CONVERT | Converts a string from one character set to another |
| DECOMPOSE | Accepts a string and returns a Unicode string |
| DUMP | Returns a varchar2 value that includes the datatype code, the length in bytes, and the internal representation of the expression |
| INITCAP | Sets the first character in each word to uppercase and the rest to lowercase |
| INSTR | Returns the location of a substring in a string |
| INSTR2 | Returns the location of a substring in a string, using UCS2 code points |
| INSTR4 | Returns the location of a substring in a string, using UCS4 code points |
| INSTRB | Returns the location of a substring in a string, using bytes instead of characters |
| INSTRC | Returns the location of a substring in a string, using Unicode complete characters |
| LENGTH | Returns the length of the specified string |
| LENGTH2 | Returns the length of the specified string, using UCS2 code points |
| LENGTH4 | Returns the length of the specified string, using UCS4 code points |
| LENGTHB | Returns the length of the specified string, using bytes instead of characters |
| LENGTHC | Returns the length of the specified string, using Unicode complete of characters |
| LOWER | Converts all letters in the specified string to lowercase |
| LPAD | Pads the left-side of a string with a specific set of characters |
| LTRIM | Removes all specified characters from the left-hand side of a string |
| NCHR | Returns the character based on the number code in the national character set |
| REGEXP\_INSTR | Returns the location of a regular expression pattern in a string |
| REGEXP\_REPLACE | Allows you to replace a sequence of characters in a string with another set of characters using regular expression pattern matching |
| REGEXP\_SUBSTR | Allows you to extract a substring from a string using regular expression pattern matching |
| REPLACE | Replaces a sequence of characters in a string with another set of characters |
| RPAD | Pads the right-side of a string with a specific set of characters |
| RTRIM | Removes all specified characters from the right-hand side of a string |
| SOUNDEX | Returns a phonetic representation (the way it sounds) of a string |
| SUBSTR | Allows you to extract a substring from a string |
| TRANSLATE | Replaces a sequence of characters in a string with another set of characters |
| TRIM | Removes all specified characters either from the beginning or the end of a string |
| UPPER | Converts all letters in the specified string to uppercase |
| VSIZE | Returns the number of bytes in the internal representation of an expression |

SQL> select initcap('oracle') from dual;

INITCA

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Oracle

SQL> select lower('ORAcle) from dual;

ERROR:

ORA-01756: quoted string not properly terminated

SQL> select lower('ORAcle') from dual;

LOWER(

------

oracle

SQL> select upper('ORAcle') from dual;

UPPER(

------

ORACLE

SQL> select ltrim('ORAcle','cle') from dual;

LTRIM(

------

ORAcle

SQL> select ltrim('ORAcle','ORA') from dual;

LTR

---

cle

SQL> select rtrim('ORAcle','cle') from dual;

RTR

---

ORA

SQL> select trim('ORAcle','cle') from dual;

SQL> select replace('ORAcle', 'O','A') from dual;

REPLAC

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ARAcle

SQL> select SUBSTR('ORAcle', 0,3) from dual;

SUB

---

ORA

SQL> select SUBSTR('ORAcle', -1) from dual;

S

-

e

SQL> select SUBSTR('ORAcle', -3) from dual;

SUB

---

cle

SQL> select VSIZE('ORAcle') from dual;

VSIZE('ORACLE')

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6

SQL> SELECT CONCAT('SQL','SERVER') AS NAME FROM DUAL;

NAME

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SQLSERVER

SQL>select 'ORACLE ' || 'SERVER' as "NAME" from dual;

Oracle Numeric Functions

|  |  |
| --- | --- |
| **Function** | **Description** |
| ABS | Returns the absolute value of a number |
| ACOS | Returns the arc cosine of a number |
| ASIN | Returns the arc sine of a number |
| ATAN | Returns the arc tangent of a number |
| ATAN2 | Returns the arc tangent of n and m |
| AVG | Returns the average value of an expression |
| BITAND | Returns an integer representing an AND operation on the bits of expr1 and expr2 |
| CEIL | Returns the smallest integer value that is greater than or equal to a number |
| COS | Returns the cosine of a number |
| COSH | Returns the hyperbolic cosine of a number |
| COUNT | Returns the count of an expression |
| EXP | Returns e raised to the power of number |
| FLOOR | Returns the largest integer value that is equal to or less than a number |
| GREATEST | Returns the greatest value in a list of expressions |
| LEAST | Returns the smallest value in a list of expressions |
| LN | Returns the natural logarithm of a number |
| LOG | Returns the natural logarithm of a number to a specified base |
| MAX | Returns the maximum value of an expression |
| MEDIAN | Returns the median of an expression |
| MIN | Returns the minimum value of an expression |
| MOD | Returns the remainder of n divided by m |
| POWER | Returns m raised to the nth power |
| REGEXP\_COUNT | Counts the number of times that a pattern occurs in a string |
| REMAINDER | Returns the remainder of m divided by n |
| ROUND | Returns a number rounded to a certain number of decimal places |
| ROWNUM | Returns a number that represents the order that a row is |
| SIGN | Returns a value indicating the sign of a number |
| SIN | Returns the sine of a number |
| SQRT | Returns the square root of a number |
| SUM | Returns the summed value of an expression |
| TAN | Returns the tangent of a number |
| TANH | Returns the hyperbolic tangent of n |
| TRUNC | Returns a number truncated to a certain number of decimal places |

Examples

* SELECT ABS(-15) "Absolute" FROM DUAL;
* Select product\_name, product\_price, **ROUND(**product\_price,0**) f**rom product;
* Select product\_name, product\_price, **TRUNC(**product\_price,0**) f**rom product;
* Select **mod(**salary,3**) f**rom employee where ssn=123456789;