

an "extract" function as follows -

② select extract(day from sysdate) as only-date from dual;

ONLY-DATE

26

③ select extract(month from sysdate) as only-month from dual;

ONLY-MONTH

9

④ select extract(year from sysdate) as only-year from dual;

ONLY-YEAR

17

2. Add-months(date, n) :-

add-months(date, n) is also one of the date functions which is used to add specific number of months(n) to the given date. The 'n' can be both negative and positive.

Examples :-

① select add-months(sysdate, -1) as prev-month, sysdate, add-months(sysdate, 1) as next-month from dual;

PREV-MON

SYSDATE

NEXT-MON

26-08-17

26-09-17

26-10-17

② select add-months('12 jun 2016', 12) from dual;

ADD-MONTH

24-06-17

③ select add-months ('24 Jun 16', -12) from dual;

ADD-MONT

24-06-15

④ sample table: Reserves

| <u>SID</u> | <u>BID</u> | <u>DAY</u> |
|------------|------------|------------|
| 501        | 101        | 22-06-17   |
| 502        | 102        | 23-06-17   |
| 503        | 103        | 24-06-17   |
| 504        | 104        | 25-06-17   |
| 505        | 105        | 26-06-17   |

select add-months (day, 12), <sup>sid</sup> from reserves;

| <u>ADD-MONT</u> | <u>sid</u> |
|-----------------|------------|
| 22-06-18        | 501        |
| 23-06-18        | 502        |
| 24-06-18        | 503        |
| 25-06-18        | 504        |
| 26-06-18        | 505        |

5 rows selected.

last-day(date) :-

last-day(date) is also one of the date functions which is used to return the last day date in the month of the specified date.

Examples :-

① select sysdate, last-day(sysdate) from dual;

| <u>SYSDATE</u> | <u>LAST-DAY</u> |
|----------------|-----------------|
| 26-09-17       | 30-09-17        |

LAST\_DAY

30-06-17

③ Sample table: Reserves

| <u>SID</u> | <u>BID</u> | <u>DAY</u> |
|------------|------------|------------|
| 501        | 101        | 22-06-17   |
| 502        | 102        | 23-06-17   |
| 503        | 103        | 24-06-17   |
| 504        | 104        | 25-06-17   |
| 505        | 105        | 26-06-17   |

select day, last-day(day) as last-day of day from reserves;

| <u>DAY</u> | <u>LAST-DAY OF DAY</u> |
|------------|------------------------|
| 22-06-17   | 30-06-17               |
| 23-06-17   | 30-06-17               |
| 24-06-17   | 30-06-17               |
| 25-06-17   | 30-06-17               |
| 26-06-17   | 30-06-17               |

5 rows selected.

4. Months-between(date, date) :-

Months-between(date, date) is also one of the date functions which calculates and returns the number of months between two dates.

Example :-

① select months-between('10 jun 2018', '10 jun 2017') from dual;

MONTHS-BETWEEN('10 JUN 2018', '10 JUN 2017')

MONTHS-BETWEEN('14-07-17', '24-12-12')

54.6774194

③ Sample table: Reserves

| SID | BID | DAY      |
|-----|-----|----------|
| 501 | 101 | 22-06-17 |
| 502 | 102 | 23-06-17 |
| 503 | 103 | 24-06-17 |
| 504 | 104 | 25-06-17 |
| 505 | 105 | 26-06-17 |

select sysdate, Months-between(sysdate, day),<sup>day</sup> \* from reserves.

| SYSDATE  | MONTHS-BETWEEN(sysdate, DAY) | DAY      |
|----------|------------------------------|----------|
| 26-09-17 | 3.4                          | 22-06-17 |
| 26-09-17 | 3.3                          | 23-06-17 |
| 26-09-17 | 3.2                          | 24-06-17 |
| 26-09-17 | 3.1                          | 25-06-17 |
| 26-09-17 | 3                            | 26-06-17 |

5 rows selected.

5. Next-day (date, day-of-week) :-

next-day(date, day-of-week) is also one of the date function which returns the date of the first weekday specified that is later than the date.

Examples :-

① select next-day(sysdate, 'monday') as next-monday, sysdate from dual;

| NEXT-MONDAY | SYSDATE  |
|-------------|----------|
| 09-10-17    | 02-10-17 |

② select \* next-day(sysdate, 'friday') from dual;

| <u>SYSDATE</u> | <u>NEXT-DAY</u> |
|----------------|-----------------|
| 02-10-17       | 06-10-17        |

③ select day, next-day(day, 'friday') from series;

| <u>DAY</u> | <u>NEXT-DAY</u> |
|------------|-----------------|
| 22-06-17   | 23-06-17        |
| 23-06-17   | 30-06-17        |
| 24-06-17   | 30-06-17        |
| 25-06-17   | 30-06-17        |
| 26-06-17   | 30-06-17        |

5 rows selected.

### Arithmetic Operations with dates and date functions :-

1. Date + number

sysdate,  
select \* sysdate+1 as tomorrow from dual;

| <u>SYSDATE</u> | <u>TOMORROW</u> |
|----------------|-----------------|
| 02-10-17       | 03-10-17        |

2. Date - number

select sysdate, sysdate-1 as yesterday from dual;

| <u>SYSDATE</u> | <u>YESTERDAY</u> |
|----------------|------------------|
| 02-10-17       | 01-10-17         |

3. Date - Date

sysdate, lastday  
select \* last-day(sysdate) - sysdate as days-left, \* from dual;

| <u>DAYS-LEFT</u> | <u>SYSDATE</u> | <u>LASTDAY</u> |
|------------------|----------------|----------------|
| 30               | 02-10-17       | 31-10-17       |

This command displays, how many days are left in the current month except current day.

## Numeric-functions :-

These are functions that accept of numeric input and return numeric values. Numeric functions are used to perform operations on numbers.

### 1. ABS(x) :-

ABS(x) means absolute value of the number 'x'. means it returns the absolute value of the given number x. It accepts both +ve & -ve values.

#### Examples :-

① select abs(1) from dual;

$$\begin{array}{r} \text{ABS}(1) \\ \hline 1 \end{array}$$

② select abs(-1) from dual;

$$\begin{array}{r} \text{ABS}(-1) \\ \hline 1 \end{array}$$

### 2. CEIL(x) :-

CEIL(x) means integer value that is greater than or equals to the number x. It accepts both +ve and -ve values.

#### Examples :-

① select ceil(8.235) from dual;

$$\begin{array}{r} \text{CEIL}(8.235) \\ \hline 9 \end{array}$$

② select ceil(-29.33) from dual;

$$\begin{array}{r} \text{CEIL}(-29.33) \\ \hline -29 \end{array}$$

FLOOR(x) is a numeric function that returns integer value that is less than or equal to the number 'x'. It accepts both +ve and -ve values.

Examples:-

① select floor(8.235) from dual;

FLOOR(8.235)

8

② select floor(-29.33) from dual;

FLOOR(-29.33)

-30

③ select floor(30) from dual;

FLOOR(30)

30

4. TRUNC(x, y) :-

TRUNC(x, y) is a numeric function that truncates value of number 'x' upto 'y' decimal places. TRUNC() function can have one argument or two arguments.

Examples:-

① select trunc(8.639) from dual;

TRUNC(8.639)

8

② select trunc(8.6391345, 2) from dual;

TRUNC(8.6391345, 2)

8.63

③ select trunc(bid) from

TRUNC(BID)

101

102

103

104

105

5 rows selected.

5. ROUND(X, Y) :-

Round(x, y) is a numeric function that rounded off value of the number 'x' to the number 'y' decimal places.

Examples :-

① select round(86.546321) from dual;

ROUND(86.546321)

87

② select round(86.546321, 2) from dual;

ROUND(86.546321, 2)

86.55

③ select round(bid) from reserves;

ROUND(bid)

101

102

103

104

105

5 rows selected.



String Functions are also known as Character or Text Functions. Character or Text Functions are used to manipulate text strings. They accept characters or strings as input and can return both character/strings and numerical values as output.

### 1. lower(string-value) :-

lower(string-value) is one of the string functions which converts and returns all the letters in string-value in lower case.

Example :-

① select lower('HARIKA') from dual;

LOWER('HARIKA')

harika

② Sample table: sailors

| <u>SNAME</u> | <u>SID</u> |
|--------------|------------|
| RAVI         | 501        |
| RAJU         | 502        |
| RAM          | 503        |
| RAJESH       | 504        |

select lower(sname) from sailors;

LOWER(SNAME)

ravi

raju

ram

rajesh

4 rows selected.

### UPPER(string-value) :-

Upper(string-value) is also one of the string functions that converts all the letters in string-value to capital letters.

#### Examples

① select upper('harika') from dual;

UPPER('harika')

HARIKA

② select upper(sname) from sailors;

UPPER(SNAME)

RAVI

RAJU

RAM

RAJESH.

③ 4 rows selected.

### 3. initcap(string-value) :-

initcap(string-value) is also one of the string functions that converts all the letters in string-value to mixed case (i.e. initial letter capital & remaining are smalls).

#### Examples

① select initcap('harika') from dual;

INITCAP('harika')

Harika

② select initcap(sname) from sailors;

INITCAP(SNAME)

Ravi

Raju

Ram

Rajesh.

4 rows selected.