**LPAD Function:**

• This function returns an expression padded with special character to the left side of that expression returned.

• The default padding character is space.

Syntax:

LPAD (Column | Expression, n, ‘C')

• Fill extra spaces with char 'C' up to 'n' position on left side.

Sql>select lpad('page 1',20,'\*') from dual;

Sql>select lpad('page 1',20) from dual;

Sql>select lpad(ename,20,'@') from emp where deptno=10;

**RPAD Function:**

• This function returns an expression padded with special character to the right side of that expression returned.

• The default padding character is space.

Syntax: RPAD (Column | Expression, n, 'C')

Sql> Select Rpad('Page 1',20,'\*') From Dual;

Sql> Select Rpad('Page 1',20) From Dual;

Sql> Select Rpad(Ename,20, '@') From Emp Where Deptno=10;

Sql>select ename,lpad(ename,10,'-'),rpad(ename,10,'-') from emp where deptno=10;

Sql>select ename,lpad(rpad(ename,10,'-'),15,'-') from emp;

**LTRIM Function:**

• It enables to trim heading character from a character string.

• All the left most characters that appear in the set are removed.

Syntax: LTRIM(Char,Set)

Sql> Select Ltrim('xyxyORACLE','xy') From Dual;

Sql> Select Ltrim('MM KRISHNA', 'M') From Dual;/

**RTRIM Function:**

• It enables to trim heading character from a character string.

• All the right most characters that appear in the set are removed.

Syntax: RTRIM(Char,Set)

Sql> Select Rtrim('Oracle 11gxyxy', 'xy') From Dual;

Sql> Select Rtrim('techno AAA','A') From Dual;

Sql> Select Rtrim(job, 'ER'),job From Emp Where

Ltrim(job, 'MAN') like 'GER';

**TRIM Function:**

• Trims Leading or Trailing characters (or both) from a character string.

• If trim\_character or trim\_source is a character literal, you must enclose it in single quotes.

• If Leading is specified concentrates on leading characters.

• If Trailing is specified concentrates on trailing characters.

• If Both or none is specified concentrates both on leading and trailing.

• Returns the varchar2 type.

* WE CAN ONLY PASS ONE TRIM\_CHARACTER AT TIME.

Sql> Select Trim( 'S' From 'MITHSS') From Dual;

Sql> Select Trim( 'S' From 'SSMITH') From Dual;

Sql> Select Trim( 'S' From 'SSMITHSS') From Dual;

Sql> Select Trim(Leading 'S' From 'SSMITHSS') From Dual;

Sql> Select Trim(Trailing 'S' From 'SSMITHSS') From Dual;

Sql> Select Trim(Both 'S' From 'SSMITHSS') From Dual;

**Replace Function:**

* It returns every Occurrence of search string replace by the replacement string.
* If the replacement string is omitted or null, all occurrences of search string are removed.
* It substitutes one string for another as well as to remove character strings.

Syntax: REPLACE(text, search\_string, [Replacement\_string])

Sql> Select Replace('Led', 'L', 'R') From Dual;

Sql> Select Replace('Led', 'L', 'Ra') From Dual;

Sql> Select Replace('Led', 'Le', 'R') From Dual;

Sql> Select Ename,Replace(Job,'MAN', 'DAM') From Emp Where Job='MANAGER';

Sql> Select Job,Replace(Job,'P') From Emp Where Job='PRESIDENT';

Sql> Select Job,Replace(Job,'MAN','EXECUTIVE') From Emp Where Job = 'SALESMAN';

**TRANSLATE Function:**

* Used to Translate Character by character in a String.

Syntax: TRANSLATE(char,From ,To)

* It returns a char with all occurrences of each character in 'From' replaced by corresponding character in 'To'.
* Characters in char that are not in the Form are not replaced.
* The argument Form can contain more characters than To.
* If the extra characters appear in Char, they are removed from the return value.

Sql> Select Translate(Job,'P',' ') From Emp Where Job = 'PRESIDENT';

Sql>Select Translate(job, 'MN', 'DM') from where job='MANAGER';

Sql>Select job,Translate(job, 'A', 'O') from emp where job='SALESMAN';

Sql>select Translate('Led', 'Le', 'R') from dual;

**CHR Function:**

* It returns a character having the binary equivalent to ‘n’.
* It returns the equivalent for ‘n’ in database character set or national character set.

Syntax: CHR(n)

SQL>SELECT chr(65)||chr(78)||chr(75)||chr(85)||chr(82) from dual;

Sq|>Select Chr(75)| |Chr(82)| |Chr(73)| |Chr(83)| |Chr(72)| |Chr(78)| |Chr(65) Name From Dual;

**ASCII Function:**

* It returns the decimal representation in the character database set of the first characters of the Char.

Syntax: ASCII(Char)

Sql> Select Ascii('A') From Dual;

Sql> Select Ename,Ascii(Ename) From Emp;

Sql> Select Ascii('&name') From Dual;

**NUMBER Function:**

* These function accept number input and return numeric values.
* Many functions return values that are accurate to 38 decimal digit.

**ROUND Function:**

Systax: ROUND(m,[n])

* It returns 'm' round to 'n' places right of the decimal point.
* If 'n' omitted , n is rounded to 0, places
* 'n' can be negative, and rounds off the digits to the left of the decimal point.
* 'n' must be an integer.

Sql>Select 19.637 Num1, ROUND(19.637,1) Rounded From Dual;

Sql> Select 19.637 Num1,ROUND(19.637,-1) Rounded From Dual;

Sql> Select 7843.637 Num1, ROUND(7843.637,2) Rounded, ROUND(7843.637,-1) Rounded, ROUND(7843.637,-2) Rounded, ROUND(7843.637,-3) Rounded, ROUND(7843.637,-4) Rounded From Dual;

O/p:

NUM1 ROUNDED ROUNDED ROUNDED ROUNDED ROUNDED

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7843.637 7843.64 7840 7800 8000 10000

**TRUNCATE Function:**

Syntax: TRUNC (m,[n])

* It returns 'm' Truncated to 'n' decimal places.
* If 'n' omitted, n is truncated to 0 decimal places.
* 'n' can be negative to truncate 'm' digits left of the decimal point.

Sql>Select 19.637 Num1,TRUNC(19.637,1) Truncated From Dual;

Sql> Select 19.637 Num1,TRUNC(19.637,-1) Truncated From Dual;

Sql> Select 7843.637 Num1, TRUNC(7843.637,2) Truncated, TRUNC(7843.637,-1) Truncated,

TRUNC(7843.637,-2) Truncated, TRUNC(7843.637,-3) Truncated, TRUNC(7843.637,-4) Truncated From Dual;

o/p:

NUM1 TRUNCATED TRUNCATED TRUNCATED TRUNCATED TRUNCATED

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7843.637 7843.63 7840 7800 7000 0

**CEIL Function:**

syntax: CEIL(n)

* Returns the Largest integer greater than or equal to 'n'.
* The adjustment is done to the highest nearest decimal value.

Sql>Select 19.001 Num1,CEIL(19.001) Ceiled From Dual;

Sql> Select 19.34 Numl, CEIL(19.32) Ceiled , CEIL(19.2) Ceiled, CEIL(19) Ceiled From Dual;

**FLOOR Function:**

Syntax: FLOOR (n)

* Returns the smallest integer less than or equal than 'n'.
* The adjustment is done to the lowest nearest decimal value.

Sql>Select 19.001 Num1, FLOOR (19.999) Floor From Dual;

Sql> Select 18.34 Num1, FLOOR (18.34) Floor, FLOOR(18.9) Floor, FLOOR(18) Floor From Dual;

**MODULUS Function:**

Syntax: MOD (m,n)

* It Returns remainder of 'm' divided by 'n'.
* It returns 'm' if 'n' is 0.

Sql> Select MOD (100,10) Modulus, MOD(17,4) Modulus From Dual;

**POWER Function:**

Syntax: POWER (m,n)

* It Returns 'm' Raised to the 'n'th power.
* The base 'm' and the exponent 'n' can be any number.

Sql> Select POWER(5,2) Power, POWER(-5,2) Power From Dual;

Sql> Select POWER(5,-2) Power, POWER(-5,-2)Power From Dual;

**SQUARE Function:**

Syntax: SQRT (n)

* It Returns Square Root of 'n' as Real Value.
* The Value of 'n' cannot be negative.

Sql> Select SQRT (25) From Dual;

**ABSOLUTE Function:**

Syntax: ABS (n)

It Returns the Absolute value of 'n'

Sql> Select ABS(-100) From Dual;

Sql>Select Sal, Comm, Sal-Comm, ABS(Sal-Comm) FROM Emp;

**SIGN Function:**

Syntax : SIGN(n)

It Returns the SIGN, Specification of a number.

If n<0,retums -1

If n=0,returns 0

If n>0,returns 1

Sql> Select SIGN(-10), SIGN(10), SIGN(0) From Dual;

Sql> Select Sal, Comm, SIGN(Sal-Comm), ABS(Sal-Comm) FROM

Emp Where SIGN(Sal-Comm)=-1;

**Working With Dates:**

■Oracle stores dates in an internal numeric format.

■The dates in Oracle range from January 1,4712 BC to December 31,9999 AD.

■The default display and input format for any date is DD-MON-YY.

■The numeric format represents

\*\*Century \*\*Year \*\*Month \*\*Day \*\*Hours

\*\*Minutes \*\*Seconds

**SYSDATE:**

■It is a date function that returns current date and time.

■SYSDATE is generally selected upon a DUAL Table.

Sql>Select SYSDATE From Dual;

**Date Arithmetic:**

■As database stores dates as numbers, it allows to perform calculations using arithmetic operators such as addition and subtraction.

■We can perform the following operations......

O Date + Number Date Adds a number of days to a date.

O Date - Number Date Subtracts a number of days from a date .

O Date - Date Number of days Subtracts one date from another.

O Date + Number/24 Date Adds a number of hours to a date.

Sql>Select Sysdate From Dual;

Sql>Select Sysdate,Sysdate+10 From Dual;

Sql>SelectSysdate,Sysdate+48/24 From Dual; .

Sql>Select Ename,Hiredate,Hiredate+10 From Emp;

Sql>Select Ename,Hiredate,Hiredate-5 From Emp;

Sql>Select Ename,Hiredate,Sysdate-Hiredate "ExpofEmps" From Emp;

Sql> Select Ename,Round((Sysdate-Hiredate)/7) Weeks From Emp;

Sql>Select Empno,Hiredate,Round((Sysdate-Hiredate)/365) From Emp;

**DATE Function:**

**Add\_months Function:**

Syntax: ADD\_MONTHS(D, +(or)-N)

■Adds 'N' number of calendar months to date.

■The value of 'N' must be an integer and can be negative.

Sql> Select Sysdate, Add\_months(Sysdate,1) From Dual;

Sql> Select Ename, Sal,Hiredate, Add\_months(Hiredate,1) From Emp Where Deptno=30;

**Months\_Between Function:**

Syntax: Months\_between(D1,D2)

■It gives the difference between dates D1 and D2 In months.

■If D1 is later than D2, the result is Positive, else Negative.

■If D1 and D2 are either the same days of the months or both last days of the months, the result is always an integer.

Sql>Select Ename,Hiredate,Round(Months\_Between(Sysdate,

Hiredate)/12) " Experience in Years" From Emp;

Sql>SelectEname,Hiredate,Months\_Between(Sysdate,Hiredate) From Emp Where Months\_Between(Sysdate,Hiredate)<320;

**Next\_day Function:**

Syntax: Next\_day (D, Char)

■It returns the date of the first week day named by char, that is later than the data D.

■The CHAR must be a day of the week in the sessions data language.

■The day of the week can be full name or the abbreviation.

Sql>Select Sysdate, Next\_day(Sysdate,'WED') From Dual;

Sqi>Select Sal,Hiredate,Next\_day(Hiredate,'MONDAY') From Emp;

**Last\_Day Function:**

Syntax: Last\_day(D)

■It returns the date of the last day of the month that contains D.

■Mostly used to determine how many days are left in the current month.

Sql> Select Sysdate, Last\_day(Sysdate) Last, Last\_day(Sysdate)-Sysdate Daysleft From Dual ;

**real time senario:**

Sql> Select Add\_months(Last\_day(Sysdate),-1) + 1 From Dual;

Syntax:Round(Date,'Format')

■Returns Date rounded to the Unit specified by the format.

■If format is omitted, Date is rounded to the nearest day.

Sql> Select Round(Sysdate,'DAY') From Dual;

Sql> Select Round(Sysdate,'MONTH') From Dual;

Sql> Select Round(Sysdate,'YEAR') From Dual;

**Truncating Dates:**

Synatx:Trunc(Date,'Format')

■ Return Date with the time portion of the day truncated to the specified unit.

■ If format is omitted, date is truncated to the nearest day.

Sql> Select Round(Sysdate,'DAY'), Trunc(Sysdate,'DAY') From Dual;

Sql> Select Round(Sysdate,'MONTH'), Trunc(Sysdate,'MONTH') From Dual;

Sql> Select Round(Sysdate,'YEAR'), Trunc(Sysdate,'YEAR' ) From Dual;