SINGLE ROW FUNCTIONS

1. **Character (String) Functions**
2. **Numerical (Number) Functions**
3. **Date Functions**
4. **Conversion Functions**
5. **General Functions**

1.. Character /(Sting) Functions:- To convert character data

a. **Length (S)**

- It is used to display the number of characters in a given string.

Exp:select length('datacube') from dual;

Exp: select * from emp where length(ename)=5;

DUAL:

- *It is a dummy table which is provided by Oracle engine.*
- *It has only one column and one row, which is associated with Varchar2 data type.*
- *It is used to process our own data*
- *The owner of the dual table is 'SYS' (super user)*

b. **Reverse (S)**

- It is used to reverse the given string.

Exp: select reverse ('data cube') from dual;

c. **Upper (S)**

- It is used to convert the string into upper characters.

Exp: select upper ('datacube') from dual;

d. **Lower (S)**

- It is used to convert the string into lower characters.

Exp: select lower ('DATACUBE') from dual;

Exp: select ename, lower(job) from emp;

e. **Initcap (S)**

- It is used to convert the first character into upper character in a given string.

  Exp :select initcap ('this is datacube technolgies') from dual;

  Exp: select ename,initcap(job) from emp;

  Exp: select upper('datacube'), lower('DATACUBE'), initcap('datacube') from dual;

f. **Concat (S1, S2)**

- It is used to merge the two strings. And we have to use '||' symbol while merge the two strings.

  Exp :select concat ('datacube', 'technologies')

  from dual;

  Exp :select 'datacube' || 'technologies' || 'hyderabad' from dual;

g. **Ltrim (S, C)**

- It is used to remove the character from left end of the given string, if the character is found.

Exp : select ltrim ('ebsebs' , 'e') from dual;

Exp: select ltrim(' DATACUBE ') from dual;

Exp: select ltrim('0001836','0') from dual;

Exp: select ltrim('0101836','01') from dual;

Exp: select ltrim('SAM',null) from dual;

Exp: select ltrim(null,'123') from dual;

h.**Rtrim (S, C)**

- It is used to remove the character from right end of the given string, if the character is found.

Exp :select rtrim ('ebsess' , 's') from dual;

Exp: select rtrim(' DATACUBE ') from dual;

Exp: select rtrim('1836000','0') from dual;

Exp: select rtrim('8360101','01') from dual;

Exp: select rtrim('SAM',null) from dual;

Exp: select rtrim(null,'123') from dual;

i. **Trim (C FROM S)**

- It is used to remove the characters from both sides in a given string.

Exp: select trim ('e' from 'eebse') from dual;

Exp: select trim(' datacube ') from dual;

j. **Lpad (S, length, C)**

- It is used to padding the left side of a string with a specific set of character.

Exp: select lpad ('datacube', 5 , '&') from dual;

Exp: select lpad(dname,20,'*') from dept;

k. **Rpad (S, length, C)**

- It is used to add the character from rightend.

Exp: select rpad ('datacube', 5 , '&') from dual;

Exp: select rpad(dname,20,'*') from dept;

l. **Translate (S, C, C)**

It is used to translate the character wise in a given string, if the character is found.

It is not possible to translate entire string.

Exp: select translate ('sampath' , 'sa' , 'xy') from dual;

Exp: select translate ('sampath' , 'sa' , 'x') from dual;

m. **Replace (S, S ,S)**

It is used to replace entire string.

It is not possible to replace more than one string.

Exp: select Replace ('sampath' , 'sa' , 'xy') from dual;

Exp: select Replace ('sampath' , 'sa' , 'x') from dual;

n. Decode (Column, Condition, …….. Column)

It is used replace more than one string.

It works like as a if condition but it does not allow the relational operators.

Exp:select job, decode (job, 'MANAGER', 'BOSS', 'CLERK',

'WORKER') from dual;

o. **Substr (S, M, N)**

- It is used to display the set of characters from a given string.
  S = String
  M = Position
  N = No of Characters

Exp: select substr ('DATACUBE TECHNOLOGIES', 5,4) from dual;

Exp: select substr ('DATACUBE TECHNOLOGIES', 0,4) from dual

Exp: select substr ('DATACUBE TECHNOLOGIES', 1,4) from dual;

Exp: select substr ('DATACUBE', -4,3) from dual;

Exp: select substr ('DATACUBE TECHNOLOGIES', 3) from dual;

p. **Instr (S, C, M, N)**

- It is used to display the position number of a given character.
  S = String
  C = Character
  M = Position
  N = Occurance

Exp :select instr ('welcome', 'e', 1, 1) from dual;

Exp: select instr('corporate floor','or') from dual;

Exp: select instr('corporate floor','or',6) from dual;

2. Numerical/ (Number) Functions:- To convert numerical data

a. **Power (M, N)**

Exp:select power(2,3)

from dual;

b. **Sqrt (M)**

Exp: select sqrt (625) from dual;

c. **Ascii (C)**

Exp: select ascii ('a') from dual;

d. **Ceil (M)**

- It displays the **next** integer value

Exp: select ceil (12.45) from dual.

e. **Floor (M)**

- It displays the **previous** near value

Exp:select floor (13.65) from dual;

f. **Round (M)**

- It rounds the value.

Exp:select round (12345.678) from dual;

g. **Trunc (M)**

- It removes the decimal
- **Exp:** select trunc (12345.678) from dual;

h. Mod(v1,v2): It is used to find remainder.

Exp: select mod(9,3) from dual;

3. Date Functions: - To convert date data

a. **Sysdate :**

It is used to display the system date.

Exp :select sysdate from dual;

b. **Current_Date :**

It is used to display the current date of system.

Exp:select current_date from dual;

c. **Add_Months :**

It is used to add or substract number of months for a given date.

Exp:select add_months(sysdate, 1) from dual;

Exp: select add_months(sysdate, 6) from dual;

Exp: select add_months(sysdate, -6) from dual;

d. **Months_Between (Date1, Date2):**

It is used to display the number of months between two given dates

Exp:select months_between (sysdate, hiredate) from emp;

Exp:select ename,months_between (sysdate, hiredate) /12 as EXP from emp;

Exp:select ename,round(months_between (sysdate, hiredate) /12) as EXP from emp;

e. **Next_Day (Date, 'format')**

It is used to display the next day date based on the format.

Exp: select next_day (sysdate, 'sun') from dual;

f. **Last_Day (Date)**

It is used to display the last day of the given month

Exp: select last_day (sysdate) from dual;

4. Conversion Functions: - To convert one data type to another datatype

g. **To_Char (Date, 'format MODEL')**

It is used to convert date into string format using format models.

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FORMAT Models:

1. D ⇒Number of days in the week

2. DD ⇒Number of days in the month
3. DDD ⇒Number of days in the year
4. DY ⇒First 3 Characters of the day - SUN
5. Dy ⇒First 3 Characters of the day - Sun
6. dy ⇒First 3 Characters of the day - sun
7. FMDAY ⇒Complete Characters of the day
8. FMDay ⇒Complete Characters of the day 9. FMday ⇒Complete Characters of the day
10. MM ⇒Number of the month in the year.
11. MON ⇒First 3 Characters of the month
12. Mon ⇒First 3 Characters of the month
13. mon ⇒First 3 Characters of the month
14. MONTH ⇒Complete Characters of the month
15. Month ⇒Complete Characters of the month
    i. month ⇒Complete Characters of the month
    ii. Y ⇒Last digit of the year
16. YY ⇒Last two digits of the year
        a. YYY ⇒Last three digits of the year
        b. YYYY ⇒Four digits of the year
        c. YEAR ⇒Year in the character format.
    2. HH ⇒An hour of the day HH24 ⇒24 Hours format.
    3. MI ⇒Minutes of the Hour 5. SS ⇒Seconds of the minute.
    b. SSSS ⇒Seconds since starting of the day
    c. FS ⇒Fraction of Seconds xxiv.
    d. W ⇒Week of the month xxv.
    e. WW ⇒Week of the year

Q ⇒Quarter of the year

Exp: select to_char (sysdate, 'dy') from dual;

Exp: select to_char (sysdate, 'dd') from dual;

Exp: select to_char (sysdate, 'ddd') from dual;

Exp: select to_char (sysdate, 'mm') from dual;

Exp: select to_char (sysdate, 'mon') from dual;

Exp: select to_char (sysdate, 'month') from dual;

Exp: select to_char (sysdate, 'MONTH') from dual;

Exp: select to_char (sysdate, 'w') from dual;

Exp: select to_char (sysdate, 'ww') from dual;

g. To_Date ('C', 'format')

It is used to convert user format into system format

Exp :select to_date ('21', 'DD') from dual;

Exp: Select to_date ('december', 'MM') from dual;

h. To_Number()

It is used to translate a value of char or varchar data type to number format.

Exp: select to_number ('20') from dual;

4. **General Functions**

a. User & Uid Select user,uid from dual;

b. Greatest & Least **Exp**: Select greatest (1,2,3), least (1, 2, 3) from dual;

c. **NVL (Col1, Val)**

It is used to handle the null values

it work like as an if condition

Exp: select Sal, comm, sal+nvl(comm, 0) from emp;

d. **NVL2 (Col1, Val1, Val2)**

It is an advanced of nvl

It works like as an if then else condition

Exp: select Sal, comm, nvl2 (comm, 0, 100) from emp;