SQL Day 12: SQL Predefined Functions

4) Single Row Functions -Conversion Functions

=> Conversion functions are used to convert one data type value to another data type.

=> There are two types of conversion
1) Implicit Conversion
2) Explicit Conversion

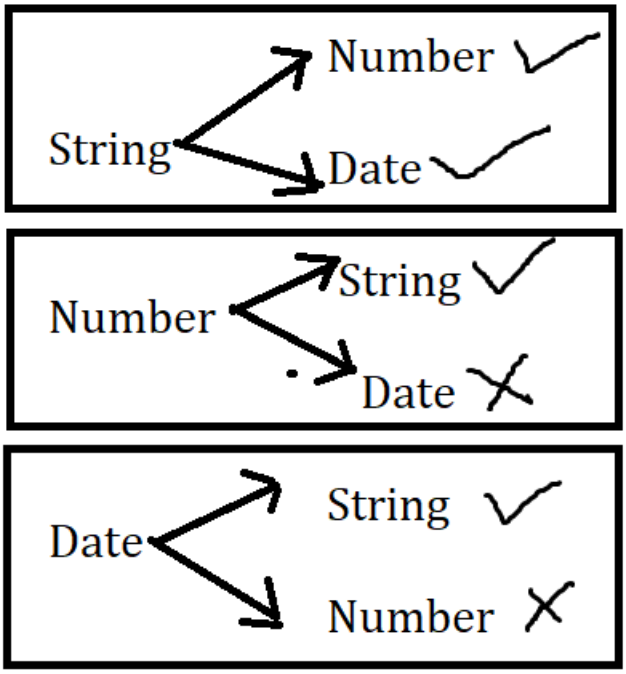
=>Implicit conversion means Oracle engine or Oracle server is responsible for conversion.

4) Implicit convesrion happens automatically, being a programmer we don't need to do extract work.

5) Explicit Conversion means programmer is responsible for conversion.

=> As we know that there are three data types
1) String
2) Number
3) Date

=> In implicit, following conversion happens



Explicit Data type conversion

To convert one data type value to another type explicitly then following functions are used

1) TO_NUMBER

2) TO_CHAR

3) TO_DATE

1) TO_Char()
=>This function is used to convert Number type value or Date type value to character type.

=> Number to character conversion

Example: select to_char(111) from dual;

o/p=>

=> Date to character conversion

Examples

select to_char(sysdate) from dual;

o/p: => 11-SEP-21

select to_char(sysdate,'dd-mm-yy') from dual;

o/p:=> 11-08-21

Date format

=> d- Day of week (0-7)

=> dd- Day of month (1-31)

=> ddd- Day of year (1-365)

=> w- Week of month

=> ww- week of year

=> mm- Month value in digit(1-12)

=> mon : Month in 3 letter

=> month : Month name in full form.

=> yy- year last 2 digit
=> yyy- year last 3 digit
=> yyyy- year last 4 digit

2) To_number()

1) This function is used to convert String type of value to number.

Example: select to_number('111') from dual;

O/P: 111

2) While converting character value to number, character should be well formatted. if String value is not in well format then we will get error

Example: select to_number('TEN') from dual;

This query will give an error

Note: Date to Number conversion is not possible.

3) To_date()

=> This function is used to convert String type date value to date data type.

=> Number of date conversion is not possible

Examples: String to date conversion

select to_date('10-Sep-21') from dual;

Out put is 10-Sep-21

Select to_date('10-sep-21' , 'dd-month-yyyy') from dual;

Out put is : 10-SEP-21

Here it is considering the default date format. i.e dd-mon-yy

5) General functions

Under General functions we are going to discuss below two functions

1) NVL()
2) NVL2()

1) NVL()

Syntax: NVL(expre1,expre2)

If expression 1 value is null then it will consider expression 2 value.

If expression 1 value is not null then it will consider expression 1 value

Examples:

NVL(111,555) o/p=> 111

NVL('null',555) o/p=> null

NVL(111,null) o/p=> 111

NVL(null,555) o/p=> 555

NVL(null,null) o/p=> null

How to use in real table.

Sample query

select emp_no, NVL(dept_id,999) from Employee;

2) NVL2(expr1,expre2,expre3)

If expre1 value is not null then consider expre 2 value.
If expre 1 is null then consider expr3 value.

Examples

NVL(111,'ABC', 999) => ABC

NVL(null,'ABC', 999) => 999

NVL(111,null, 999) =>null

NVL(null,null, 999) => 999

NVL(null,'ABC', 999) => 999

NVL(null,'ABC', null) => null

Q. What is difference between NVL and NVL2?

Ans:

1) NVL takes two input arguments while NVL2 takes three input arguments

2) In NVL if first expression value is null then it will consider second Expression value but In NVL2 if first expression value is null then it will consider third Expression value.

3) In NVL if first expression value is not null then it will consider that value but In NVL2 if first expression value is not null then it will consider second expression value.

Q. Write a query to display even number of rows?

```
select * from Employee where mod(emp_no,2)=0
```

Q. Write a query to display odd number of rows?

```
select * from Employee where mod(emp_no,2)!=0
```

Even number: The number which is divisible by 2

Odd Number : The number which not divisible by 2