CONVERSION FUNCTIONS:- Conversions are the functions where in we can convert date into required formats using those functions. There are two conversion functions that supported by SQL.

->to_char **->to_date**

To_char:- It is a character conversion function where in we can convert the date into required format

Syntax: **To_char (date,' month');**

Example:-Print the system date in the form dd th of month yyyy.

Query:- SQL>**select to_char (sysdate,'dd "th of" month yyyy') from dual;**

Output:- 05 th of august 2004

Explanation: Using to_char conversion function we have converted the system date into required format.

TO_DATE: It is a conversion function that is used to convert the given date into date data type.

Syntax: **To_date (date,'dd/month/yyyy');**

Example:-Print the specified date in the form dd th of month yyyy

Query:-SQL>**select to_char (to_date ('11-dec-08'),'dd "th of "month yyyy') from dual;**

Output:- 11 th of December 2008

Explanation:-First the date that is specified is converted to date data type using to_date and then converted to required format using to_char.

STRING FUNCTIONS:-These are the functions that are operated on the strings for different manipulation. The different string functions that are supported by SQL are:

1. **Concat:-**This string is used to concat 2 strings.

Syntax:**Concat ('str1','str2')**

Example:- 1**. SQL>select concat ('Ric','hie') from dual;**

Output:- Richie

2. SQL>**select 'the name of sailor is' || sname from sailors11;**

Output:-The name of sailor is dileep

The name of sailor is sharat

The name of sailor is lohit.

2**. Lpad**:-This string function is used to set the specified character to the left of the string up to specified index i.e., starting position.

Syntax**: Lpad ('string', number,'char')**

Example:-1. SQL>**select lpad ('Richie', 10,'*') form dual;**

Output:- ****Richie

2. SQL> **select lpad ('interlake', 12,'*') form boats;** Output:- ***interlake

3**. Rpad:-**This string function is used to set the specified character to the right of the string up to the ending position.

Syntax: **rpad ('string', number,' char')**

Example:- 1. SQL>**select rpad ('Richie', 10,'*') form dual;**

Output:-Richie****

2. SQL> **select rpad ('interlake', 12,'*') form boats;**

Output:- interlake***

4. L**trim:-** This string function suppresses the left string which is specified.

Syntax: **Ltrim ('string1','string2');**

Example:-1. SQL>**Select ltrim ('ric','hie') str from dual;**

Output:-hie

5**. Rtrim:-**This string function suppresses the right string which is specified.

Syntax**: Rtrim ('string1','string2');**

Example:-1. SQL>Select rtrim ('gmrit','it') str from dual;

Output:-Gmr

6. **Lower:-**This string function converts the entire string into lower case.

Syntax**: Lower (string);**

Example:-1**. SQL>select lower ('RICHIE') str from dual;**

Output:- richie

7. **Upper:-**This string function converts the entire string into upper case.

Syntax**: Upper (string);**

Example:- 1. SQL>**select upper ('richie') str from dual;**

Output:- RICHIE

2. SQL>**select upper ('sname') str from boat;**

Output:- INTERLAKE

INTERLAKE

8. **Initcap:-**This string function sets the first character of the string as a capital.

Syntax: **Initcap ('string');**

Example:- 1. SQL>**select initcap ('richie') str from dual;**

Output: Richie

2. SQL>**select initcap ('sname') str from sails where rating>7;**Output:- Lohit

9. **Substr:-**This string function extracts the substring from the main string which is specified.

Syntax: **Substr ('string1', number, number);**

Example:- 1. SQL>**select substr ('richie', 4, 4) str from dual;**

Output:- Chie

10**. Instr:-**This string function gives the position of the character which is to be specified.

Syntax: **Instr ('string1','string2')**

Example:-1. SQL>**select instr ('chie','h') str from dual;** Output:- 3

11**. Replace**:-This is a string function that is used to replace the new string to existed substring.

Syntax: **Replace ('string1','string2','replaced string');**

Example:-1. SQL>**select replace ('richiep','p','martin')**

Output: -richiemartin

12. **Length:-**This string function returns the length of the string.

Syntax: **Length ('string');** Example:- 1. SQL>**select length ('rich') len from dual;**

Output:- 4

2. SQL>**select sname, length (sname) from sails;**

Output:-Dileep 6

Sharat 6

DATE FUNCTIONS:- The date functions that are operated on date data type for different manipulations. The different date functions that are supported by SQL are:

1. **Sysdate**:- This function returns the current date.

Example:-1. SQL>**Select sysdate from dual; Output:-01-feb-09**

2. **Next_day:-**This function returns the date which is the next week day of the specified date.

Syntax: **next_day (date, weekday)**

Example:-1. SQL>**Select next_day ('4-oct-89','mon date') from dual;**

Output:-09-oct-89

3**. add_months**:-This function adds the specified number of months to the date which is required.

Syntax: **add_months (date, number);**

Example:- 1. SQL>**Select add_months ('4-oct-98', 2) from dual;**

Output:-O4-dec-98

4. **Last_day:-**This function returns the last date of the specified date.

Syntax: **Last_day (date);**

Example:- 1. SQL>**Select last_day ('4-oct-98') from dual;**

Output:-31-oct-98

5. **Months_between**: This function returns the number of months between the specified dates.

Syntax: **Months_between (date1, date2);**

Example:-1. SQL>**select months_between ('11-nov-89','11-mar-09') dat from dual;**

Output:- -231

2. SQL>**select months_between ('11-nov-09','11-nov-08') dat from dual;**

Output:- 12

6. **Least:-**This function returns the least number of dates from the given dates irrespective to the year.

Syntax:**Least (date1, date2,…);**

Example:-SQL>**select least ('1-dec-07','5-jan-01') from dual;**

Output:-1-dec-07

7**. Greatest:-**This function returns the given dates irrespect to the year.

Syntax: **greatest (date1, date2,…);**

Example:- 1. SQL>**select greatest ('1-dec-07','5-jan-01') from dual;**

Output:-5-jan-01

8. **Trunc**:-This function returns the starting date of the specified month.

Syntax: **Trunk (doj,'mon');**

Example:- 1. SQL>**select trunk ((to_date (27-sep-08')),'month) from dual;**

Output:-01-sep-08

9. **Round:-** It is a date function that rounds date to nearest date.

Syntax: **Round (n);**

Example:- 1. SQL>**select round ((to_date ('27-sep-08')),'month') from dual;**

Output:- 01-oct-08

NUMERIC FUNCTIONS:-

These are the functions that are operated on the numeric values of a database. The different numeric functions that are supported by SQL are:

1**. Abs**:-This function is used to find the absolute positive value of a given number.

Example:- 1. **SQL>select abs (-3) from dual; Output:- 3**

2. **Sin:-**This function is used to give the sine value of numerical data.

Example:-1. SQL>**select sin (abs (-27.44)) from dual;**

Output:- 0.74084

3. **Sqrt:-**This function is used to compute the square root of any value.

Example:- 1. SQL>**select sqrt (9999) from dual;**

Output:- 99.95

4. **Power:** This function contains two values one is the base and the other is exponent of base. Power calculates the value of exponent raised to base.

Example:- 1. SQL>**select power (2, 5) from dual; o/p:32.**

5. **Exp:-**This function is used to give the value of power of value.

Example:- 1. SQL>**select exp (2) from dual;** Output:- 7.38905

6. **Ln:-**This function gives the logarithmic value of the value specified.

Example:- 1. SQL>**select ln (2) from dual; Output:- 0.6931**

7. **Mod**:-This function gives the modulus i.e., the remainder of a number divided by other number.

Example:- 1. SQL>**select mod (6, 4) from dual**; Output:- 2

8**. Ceil**: This function is used to give the next value of a decimal number.

Example:- 1. SQL>**select ceil (9.4) from dual;** Output:- 10

9. **Floor:-** This function is used to give the integer part of decimal by removing decimal digits.

Example:- 1. SQL>**select floor (7.2) from dual;**

Output:- 7