**Datatypes & Literals**

**11-03-2025**

**===================**

1) number

-------------

-> it is one of the datatype in oracle

-> to make represent whole numbers or floating-point values/fractional values/decimal values, we can use "number" type in oracle.

Whole numbers: 10, -10, 100,200,300, etc.

fractional numbers: 0.001, 1.098 etc.

-> there are two ways to define number literals:

 1) number(size)

 -------------------

 Ex: studentId number(6);

 1

 10, 121, 1023, 12345, 765432

 2) number

 -------------

 customerId number;

 3) number(precision, size)

 ------------------------------

 Ex: salary 59987.99

 here:

 number of digits before decimal point ==> precision

 number of digits after the decimal point ==> size

 employeeSalary number(6,2);

 29339.10;

 100000.9;

decimal digit vs decimal value

---------------------------------

12.234

here:

 12 ==> decimal number formed with two decimal digits 1 and2

 .234 ==> decimal value

2) Alphabet:

---------------

 -> three types:

 1) char(size)

 -------------

 -> when we want to define the text with the range of characters from 1 to 2000, we can use "char(size)".

 Ex: name char(50);

 "Ramesh" ==> 6

 -> when we want to define the text in static passion/way, we can use "char(size)".

 from the above example,

 name has the total capacity of '50'

 but we have assigned a value with '6'

 remaining are : 44 ==> wastage of memory.

 2) varchar(size)

 -----------------

 Ex: employeeName varchar(50);

 "Sharath"

 -> when we need to define the text dynamically, we can use "varchar(size)"

 -> 1 - 4000 characters

 -> no memory wastage

 -> SQL datatype

 3) varchar2(size)

 -----------------

 -> standard datatype of Oracle

 ->same as the varchar(size)

3) date:

----------

command:

--------

 select sysdate from dual; ==> default date format

-> the default date format of Oracle is:

 "dd-MON-yy"

ex: dateOfJoin date;

 "11-Mar-25"

4) Time stamp:

-----------------

-> it is the combination of date and time.

-> default format for time stamp is:

 "dd-Mon-yy HH:MM:SS";

5) Special Datatypes:

-------------------------

clob ==> Character Large Object

--------------------------------------

size : 1GB to 4GB

Ex: Google Reviews

where we can store with large amount of text, we can use "clob".

blob ==> Binary Large Object

----------------------------------

size: 1GB to 4GB

Ex: Naukri

upload resume

-> when we want to deal with files like: PDFs, .doc, .docx, audio, video etc.

bfile ==> Binary File

------------------------

size: 1 GB to 4GB