

## Datatypes

It is used to specify or determine the type of data that will be stored in a particular memory location.

DATATYPES:

1.CHAR

2.VARCHAR / VARCHAR2

3.DATE

4.NUMBER

5.LARGE OBJECTS

- Character Large Object
- Binary Large Object

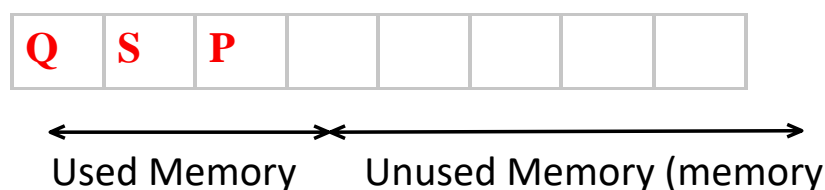
**NOTE : SQL is not a Case Sensitive Language.**

1. **CHAR:** In character datatype we can store 'A-Z' , 'a-z' , '0-9' and Special Characters (!, \$, &, @, etc)

- Characters must always be enclosed within single quotes ''.
- Whenever we use char datatype, we must mention size
- Size: it is used to specify number of characters it can store.
- The maximum number of characters it can store is 2000 characters.
- Char follows fixed length memory allocation.

Syntax: CHAR ( SIZE )

Example: CHAR (8)



2. **VARCHAR:** In varchar datatype we can store 'A-Z' , 'a-z' , '0-9' And Special Characters( \$ , & , @ , ! ... ) .

- Characters must always be enclosed within single quotes ''.
- Whenever we use char datatype, we must mention size

- **Size**: it is used to specify number of characters it can store.
- The maximum number of characters it can store is 2000 characters.
- VarChar follows variable length memory allocation.

Syntax: VARCHAR ( SIZE )

Example :

**STUDENT**

<b><u>USN</u></b>	<b><u>SNAME</u></b>	<b><u>ADDRESS</u></b>	<b><u>PAN_NO</u></b>
CHAR(4)	VARCHAR(10)	VARCHAR(10)	CHAR(10)
QSP1	DINGA	BANGALORE	ABC123XYZ1
QSP2	DINGI	MYSORE	ABC123XYZ2

**ASSIGNMENT :**

DIFFERENTIATE BETWEEN (i) CHAR & VARCHAR (ii) VARCHAR & VARCHAR2

**3. NUMBER :** It is used to store numeric values .

SYNTAX: **NUMBER** ( Precision , [ **Scale** ] )

[ ] - Not Mandatory .

**Precision**: it is used to determine the number of digits used to store integer value.

**Scale**: it is used to determine the number of digits used to store Decimal (floating) value within the precision .

- Scale is not mandatory, and the default value of scale is zero (0).

Example:	Number (3)	+/- 999
Example:	Number (5,0)	+/- 99999
Example:	Number (5, 2)	+/- 999. <b>99</b>
Example:	Number (7, 3)	+/- 9999. <b>999</b>
Example:	Number (4,4)	+/- <b>.9999</b>
Example:	Number (5,4)	+/- 9. <b>9999</b>
Example:	Number (3,3)	+/- <b>.999</b>
Example:	Number (5,5)	+/- <b>.99999</b>
Example:	Number (2,7)	+/- <b>.000099</b>

EXAMPLE:

<u>EID</u>	<u>PHONE NO</u>	<u>SALARY</u>
Number( 3 )	Number ( 10 )	Number ( 7 , 2 )
101	9876543210	9000.85

#### 4. DATE:

it is used to store dates in a particular format .

It used *Oracle specified Format* .

'DD-MON-YY'	OR	'DD-MON-YYYY'
'22-JUN-20'		'22-JUN-2020'

SYNTAX: **DATE**

Example :

<u>DOB</u>	<u>Hiredate</u>	<u>Anniversary</u>
Date	Date	Date
'01-JAN-1945'	'20-JUN-20'	'15-APR-2008'

#### 5. LARGE OBJECTS

##### 1. Character large object ( CLOB ):

It is used to store characters up to 4 GB of size.

SYNTAX: CLOB

##### 2. Binary large object ( BLOB ):

It is used to store binary values of images, mp3, mp4Documents etc .... Up to 4GB of size.

SYNTAX: BLOB