

DATA TYPES

Data types are available in various forms like numeric, text etc. each data type have its own length, size and scope. These multiple datatypes help computer and language programmers to create programs including database tables as per their ease and the requirement of the database.

Here are the main datatypes which are used in database as per given below:

1. NUMERIC (EXACT)
2. APPROXIMATE NUMERIC DATATYPES
3. STRING
4. DATE AND TIME DATATYPES
5. LONG
6. RAW
7. LONG RAW
8. ROWID

Precision: Total number of digits allowed.

Scale: Number of digits allowed to the right of the decimal point.

1. NUMERIC (EXACT)

Numeric data types are numbers. Exact means values where the precision and scale need to be preserved, means always remember the total number count used vs total number count available. In this No decimal values are allowed.

1.1.BIT = 0,1

1.2.Tiny int = 0 to 255

1.3.Small int = -32768 to +32767

1.4.Int = -2147483648 to +2147483647

1.5.Big int = -9223372036854775808 to +9223372036854775807

1.6.Decimal = $(-10^{32}) + 1$ to $(+10^{32}) - 1$

2. APPROXIMATE NUMERIC DATATYPES

These are also numbers. Approximate means values where the precision needs to be preserved and the scale can be floating. It supports decimal values.

2.1.Float = (1.7×10^{-308}) to $(1.7 \times 10^{+308})$

2.2.Real = (3.4×10^{-38}) to $(3.4 \times 10^{+38})$

3. STRING (TEXT)

3.1.Char = Used to store character strings values of fixed length upto 8000.

3.2.Varchar = Used to store variable length alphanumeric data upto 8000.

4. DATE AND TIME DATATYPES

This data type is used to represent date and time. It stores date in the 24-hour format. The default time in a date field is 12:00:00 AM used, if no time portion is specified at the time of description.

4.1. Date = DD/MM/YYYY

4.2.Time = hh:mm:ss

4.3.Datetime = DD/MM/YYYY hh:mm:ss

5. LONG

The LONG data type is used to store character strings containing upto 2 GB with Variable length.

6. RAW

The RAW data types is used to store binary data, such as digitized picture or image upto 255 Bytes capacity.

7. LONG RAW

The LONG RAW data types is used to store binary data, such as digitized picture or image upto 2 GB.

8. ROWID

As name implies it is used to store address of any specific database file in given below format

BBBBBBB.RRRR.FFFF

HERE

BBBBBBB = Block in database

RRRR = Row in block

FFFF = database File