

## **Oracle Data Types**

## www.databasestar.com

Numeric

NUMBER (p, s) Numeric data, with a precision of p and scale of s. Precision p

ranges from 1 to 38, and scale ranges from -84 to 127

Range: -10^38 +1 through 10^38 - 1

BINARY\_FLOAT 32-bit, single-precision floating-point number

Range: from 1.17549E-38F to 3.40282E+38F

BINARY\_DOUBLE 64-bit, double-precision floating-point number

Range: From 2.22507485850720E-308 to

1.79769313486231E+308

INTEGER Synonym for NUMBER(38)

Range: -10^38 +1 through 10^38 - 1

FLOAT Translated to NUMBER.

Range: 1 to 126 binary digits, and up to 22 bytes

DECIMAL Translated to NUMBER.

Range: 1 to 126 binary digits, and up to 22 bytes

NUMERIC Synonym for NUMBER

INT Synonym for NUMBER(38)

SMALLINT Synonym for NUMBER(38)

DOUBLE PRECISION Synonym for FLOAT(126)

REAL Synonym for FLOAT(63)

Date

DATE Stores date and time values.

From Jan 1, 4712 BC to Dec 31 9999 AD

TIMESTAMP [(p)] A date value that stores time and fractional seconds.

From Jan 1, 4712 BC to Dec 31 9999 AD. Fractional seconds (p)

must be 0 to 9

TIMESTAMP [(p)] A timestamp that stores data in the specified timezone

WITH TIME From Jan 1, 4712 BC to Dec 31 9999 AD. Fractional seconds

ZONE (p) must be 0 to 9

TIMESTAMP [(p)] A timestamp that stores data in your local timezone.

WITH LOCAL From Jan 1, 4712 BC to Dec 31 9999 AD. Fractional seconds (p)

TIME ZONE must be 0 to 9

INTERVAL YEAR Stores a period of time in years and months. Up to 2 digits in the

[(p)] TO MONTH ye

, ...

INTERVAL DAY Stores a period of time in days, hours, minutes, and seconds.

[(p)] TO SECOND Between 0 and 9 digits in the day, between 0 and 9 digits

fractional seconds

Character

CHAR (s) Fixed-length character with a length of s.

Up to 2,000 bytes.

NCHAR (s) Fixed length national character with a length of s.

Up to 2,000 bytes.

VARCHAR Not implemented in Oracle.

VARCHAR2 (s) Variable-length character string with a maximum length of s

bytes.

Up to 32,767 bytes

NVARCHAR2 (s) Variable-length national character string with a maximum length

of s bytes. Up to 32,767 bytes

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LONG Variable-length character string. Larger than VARCHAR2.

Deprecated. Up to 2GB

RAW (s) Raw binary data of length size.

Up to 32,767 bytes

LONG RAW Raw binary data of variable length. Deprecated.

Up to 2 GB

CHARACTER Synonym for VARCHAR2

VARYING

CHARACTER Synonym for CHAR

BLOB Stores large unstructured binary objects. Recommended for

JSON fields before Oracle 21c

Up to 8 TB to 128 TB (4 GB -1 \* (database block size))

CLOB Stores large single-byte and multi-byte objects.

Up to 8 TB to 128 TB (4 GB -1 \* (database block size))

NCLOB Stores Unicode data.

Up to 8 TB to 128 TB (4 GB -1 \* (database block size))

JSON Data type to store JSON data. New in Oracle 21c

Other

BFILE A file locator that points to a file on the server.

Up to 4GB

ROWID Fixed-length binary data for a database row ID.

Up to 10 bytes

UROWID Universal RowID.

Up to 4,000 bytes