

Oracle Data Types

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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

Translated to NUMBER. **FLOAT**

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

Translated to NUMBER. DECIMAL

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

Synonym for NUMBER NUMERIC

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

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

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)]

WITH LOCAL

A timestamp that stores data in your local timezone.

TIME ZONE

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

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 year

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

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

Raw binary data of variable length. Deprecated. **LONG RAW**

Up to 2 GB

CHARACTER

VARYING

Synonym for VARCHAR2

CHARACTER Synonym for CHAR

Stores large unstructured binary objects. Recommended for **BLOB**

JSON fields before Oracle 21c

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

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

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