SQL Server Data Types

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Numeric

BIGINT	Integer value, uses 8 bytes. Range from -2^63 (-9,223,372,036,854,775,808) to 2^63-1 (9,223,372,036,854,775,807)
BIT	Integer data type. Can take 1, 0, or NULL. Often used as a boolean.
DECIMAL (p [,s])	Decimal number. Uses precision “p” which is the total number of decimal digits (both left and right of decimal). Default 18. The scale “s” is the number of digits to the right of the decimal. Default 0. Range -10^38 +1 through 10^38 - 1
INT	Integer value, uses 4 bytes. Range -2^31 (-2,147,483,648) to 2^31-1 (2,147,483,647)
INTEGER	Synonym for INT
MONEY	Represents monetary values, uses 8 bytes Range -922,337,203,685,477.5808 to 922,337,203,685,477.5807
NUMERIC (p [,s])	Same as DECIMAL. Range -10^38 +1 through 10^38 - 1
SMALLINT	Integer value, uses 2 bytes. Range -2^15 (-32,768) to 2^15-1 (32,767)
SMALLMONEY	Represents monetary values, uses 4 bytes. Range -214,748.3648 to 214,748.3647
TINYINT	Integer value, uses 1 byte. Range 0 to 255
FLOAT(n)	Approximate number, with “n” is the number of bits used to store the value. Default is 53. Range – 1.79E+308 to -2.23E-308, 0 and 2.23E-308 to 1.79E+308
REAL	Synonym for FLOAT(24). Range – 3.40E + 38 to -1.18E – 38, 0 and 1.18E – 38 to 3.40E + 38
DEC	Synonym for DECIMAL
DOUBLE PRECISION	Synonym for FLOAT

Date

DATE	Defines and stores a date value. Range 0001-01-01 through 9999-12-31
DATETIME	Date and time, with fractional seconds. Date: January 1, 1753, through December 31, 9999 Time: 00:00:00 through 23:59:59.997
DATETIME2 (s)	Date and time, with fractional seconds, with a larger range than DATETIME. Scale “s” is the number of digits for the fraction of seconds Date: 0001-01-01 through 9999-12-31 Time: 00:00:00 through 23:59:59.9999999
DATETIMEOFFSET (s)	Date and time, with a timezone. Scale “s” is the number of digits for the fraction of seconds. Date: 0001-01-01 through 9999-12-31 Time: 00:00:00 through 23:59:59.9999999 Timezone Offset: -14:00 to +14:00
SMALLDATETIME	Date and time. Seconds are always 0, and no fractional seconds. Date: 1900-01-01 through 2079-06-06 Time: 00:00:00 through 23:59:59
TIME (s)	Time of day, without a timezone. Scale “s” is the number of digits for the fraction of seconds Range: 00:00:00.0000000 through 23:59:59.9999999

Character

CHAR (n)	Fixed-size string. Parameter “n” is the number of bytes between 1 and 8,000. Unused characters are padded with spaces.
NCHAR (n)	Fixed-size string for Unicode data. Parameter “n” is the number of bytes between 1 and 4,000. Unused characters are padded with spaces.
VARCHAR (n)	Variable-size string. Parameter “n” is the maximum number of bytes between 1 and 8,000. If “n” is max, then the value of 2^31-1 is used (2 GB) Range 2^31-1 (2,147,483,647 or 2GB)
NVARCHAR (n)	Variable-size string for Unicode data. Parameter “n” is the maximum number of bytes between 1 and 4,000. If “n” is max, then the value of 2^30-1 is used (1 GB) Often used for JSON data.
TEXT	Variable-length non-Unicode data. Range 2^31-1 (2,147,483,647 or 2GB)
NTEXT	Variable-length Unicode data. Range 2^30 - 1 (1,073,741,823 or 1GB) bytes
BINARY (n)	Fixed-length binary data with a length of “n” bytes. “n” can be from 1 to 8,000
VARBINARY	Variable-length binary data with a length of “n” bytes.”n” can be from 1 to 8,000. If “n” is max, then the value of 2^31-1 is used (2 GB)
CHARACTER VARYING	Synonym for VARCHAR
BINARY VARYING	Synonym for VARBINARY

Other

IMAGE	Variable-length binary data. Range: 0 through 2^31-1 (2,147,483,647 or 2GB) bytes.
CURSOR	Used for variables or stored procedure out parameters to refer to a cursor
ROWVERSION	Used to store automatically-generated unique binary numbers. 8 bytes
HEIRARCHYID	Variable length system data type
UNIQUEIDENTIFIER	A 16-byte GUID (Global Unique Identifier). Uses 16 bytes.
SQL_VARIANT	Stores values of different SQL Server data types
XML	Stores XML data
GEOMETRY	A spatial data type used to represent coordinates.
GEOGRAPHY	A spatial data type used to represent GPS latitude and longitude coordinates
TABLE	Stores a temporary set of results.