MariaDB: Data Types

The following is a list of datatypes available in MariaDB, which includes string, numeric, date/time, and large object datatypes.

String Datatypes

The following are the **String Datatypes** in MariaDB:

Data Type Syntax	Maximum Size	Explanation
CHAR(*size*)	Maximum size of 255 characters.	Where ***size*** is the number of characters to store. Fixed-length strings. Space padded on right to equal ***size*** characters.
VARCHAR(*size*)	Maximum size of 255 characters.	Where ***size*** is the number of characters to store. Variable-length string.
TINYTEXT(*size*)	Maximum size of 255 characters.	Where ***size*** is the number of characters to store.
TEXT(*size*)	Maximum size of 65,535 characters.	Where ***size*** is the number of characters to store.
MEDIUMTEXT(*size*)	Maximum size of 16,777,215 characters.	Where ***size*** is the number of characters to store.
LONGTEXT(*size*)	Maximum size of 4GB or 4,294,967,295 characters.	Where ***size*** is the number of characters to store.
BINARY(*size*)	Maximum size of 255 characters.	Where ***size*** is the number of binary characters to store. Fixed-length strings. Space padded on right to equal ***size*** characters.
VARBINARY(*size*)	Maximum size of 255 characters.	Where ***size*** is the number of characters to store. Variable-length string.

Numeric Datatypes

The following are the **Numeric Datatypes** in MariaDB:

Data Type Syntax	Maximum Size	Explanation
BIT	Very small integer value that is equivalent to TINYINT(1). Signed values range from -128 to 127. Unsigned values range from 0 to 255.	
TINYINT(*m*)	Very small integer value. Signed values range from -128 to 127. Unsigned values range from 0 to 255.	
SMALLINT(*m*)	Small integer value. Signed values range from -32768 to 32767. Unsigned values range from 0 to 65535.	
MEDIUMINT(*m*)	Medium integer value. Signed values range from -8388608 to 8388607. Unsigned values range from 0 to 16777215.	
INT(*m*)	Standard integer value. Signed values range from -2147483648 to 2147483647. Unsigned values range from 0 to 4294967295.	
INTEGER(*m*)	Standard integer value. Signed values range from -2147483648 to 2147483647. Unsigned values range from 0 to 4294967295.	This is a synonym for the INT datatype.
BIGINT(*m*)	Big integer value. Signed values range from -9223372036854775808 to 9223372036854775807. Unsigned values range from 0 to 18446744073709551615.	
DECIMAL(*m*,*d*)	Unpacked fixed point number. ***m*** defaults to 10, if not specified. ***d*** defaults to 0, if not specified.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal.

Data Type Syntax	Maximum Size	Explanation
DEC(*m*,*d*)	Unpacked fixed point number. ***m*** defaults to 10, if not specified. ***d*** defaults to 0, if not specified.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal. This is a synonym for the DECIMAL datatype.
NUMERIC(*m*,*d*)	Unpacked fixed-point number. ***m*** defaults to 10, if not specified. ***d*** defaults to 0, if not specified.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal. This is a synonym for the DECIMAL datatype.
FIXED(*m*,*d*)	Unpacked fixed-point number. ***m*** defaults to 10, if not specified. ***d*** defaults to 0, if not specified.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal. This is a synonym for the DECIMAL datatype.
FLOAT(*m*,*d*)	Single precision floating point number.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal.
DOUBLE(*m*,*d*)	Double precision floating point number.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal.
DOUBLE PRECISION(*m*,*d*)	Double precision floating point number.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal. This is a synonym for the DOUBLE datatype.
REAL(*m*,*d*)	Double precision floating point number.	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal. This is a synonym for the DOUBLE datatype.
FLOAT(p)	Floating point number.	Where ***p*** is the precision.

Data Type Syntax	Maximum Size	Explanation
BOOL	Synonym for TINYINT(1)	Treated as a boolean data type where a value of 0 is considered to be FALSE and any other value is considered to be TRUE.
BOOLEAN	Synonym for TINYINT(1)	Treated as a boolean data type where a value of 0 is considered to be FALSE and any other value is considered to be TRUE.

Date/Time Datatypes

The following are the **Date/Time Datatypes** in MariaDB:

Data Type Syntax	Maximum Size	Explanation
DATE	Values range from '1000-01-01' to '9999-12-31'.	Displayed as 'YYYY-MM-DD'.
DATETIME	Values range from '1000-01-01 00:00:00' to '9999-12-31 23:59:59'.	Displayed as 'YYYY-MM-DD HH:MM:SS'.
TIMESTAMP(*m*)	Values range from '1970-01-01 00:00:01' UTC to '2038-01-19 03:14:07' UTC.	Displayed as 'YYYY-MM-DD HH:MM:SS'.
TIME	Values range from '-838:59:59' to '838:59:59'.	Displayed as 'HH:MM:SS'.
YEAR[(2|4)]	Year value as 2 digits or 4 digits.	Default is 4 digits.

Large Object (LOB) Datatypes

The following are the **LOB Datatypes** in MariaDB:

Data Type Syntax	Maximum Size	Explanation
TINYBLOB	Maximum size of 255 bytes.	
BLOB(*size*)	Maximum size of 65,535 bytes.	Where ***size*** is the number of characters to store
MEDIUMBLOB	Maximum size of 16,777,215 bytes.	
LONGTEXT	Maximum size of 4GB or 4,294,967,295 characters.	