# MySQL Datatypes

## Links

* Data types, MySQL Documentation: <https://dev.mysql.com/doc/refman/5.7/en/data-type-overview.html>
* https://www.w3schools.com/sql/sql\_datatypes.asp

## Soorten velden in MySQL – beknopt overzicht

#### TeKSTVELDEN

|  |  |
| --- | --- |
| **Data type** | **Description** |
| CHAR(size) | Holds a fixed length string (can contain letters, numbers, and special characters). The fixed size is specified in parenthesis. Can store up to 255 characters |
| VARCHAR(size) | Holds a variable length string (can contain letters, numbers, and special characters). The maximum size is specified in parenthesis. Can store up to 255 characters. Note: If you put a greater value than 255 it will be converted to a TEXT type |
| TINYTEXT | Holds a string with a maximum length of 255 characters |
| TEXT | Holds a string with a maximum length of 65,535 characters |
| BLOB | For BLOBs (Binary Large OBjects). Holds up to 65,535 bytes of data |
| MEDIUMTEXT | Holds a string with a maximum length of 16,777,215 characters |
| MEDIUMBLOB | For BLOBs (Binary Large OBjects). Holds up to 16,777,215 bytes of data |
| LONGTEXT | Holds a string with a maximum length of 4,294,967,295 characters |
| LONGBLOB | For BLOBs (Binary Large OBjects). Holds up to 4,294,967,295 bytes of data |

#### NUMERIEKE VELDEN

|  |  |
| --- | --- |
| **Data type** | **Description** |
| TINYINT(size) | -128 to 127 normal. 0 to 255 UNSIGNED\*. The maximum number of digits may be specified in parenthesis |
| SMALLINT(size) | -32768 to 32767 normal. 0 to 65535 UNSIGNED\*. The maximum number of digits may be specified in parenthesis |
| MEDIUMINT(size) | -8388608 to 8388607 normal. 0 to 16777215 UNSIGNED\*. The maximum number of digits may be specified in parenthesis |
| INT(size) | -2147483648 to 2147483647 normal. 0 to 4294967295 UNSIGNED\*. The maximum number of digits may be specified in parenthesis |
| BIGINT(size) | -9223372036854775808 to 9223372036854775807 normal. 0 to 18446744073709551615 UNSIGNED\*. The maximum number of digits may be specified in parenthesis |
| FLOAT(size,d) | A small number with a floating decimal point. The maximum number of digits may be specified in the size parameter. The maximum number of digits to the right of the decimal point is specified in the d parameter |
| DOUBLE(size,d) | A large number with a floating decimal point. The maximum number of digits may be specified in the size parameter. The maximum number of digits to the right of the decimal point is specified in the d parameter |
| DECIMAL(size,d) | A DOUBLE stored as a string , allowing for a fixed decimal point. The maximum number of digits may be specified in the size parameter. The maximum number of digits to the right of the decimal point is specified in the d parameter |

\*The integer types have an extra option called UNSIGNED. Normally, the integer goes from an negative to positive value. Adding the UNSIGNED attribute will move that range up so it starts at zero instead of a negative number.

#### DATUMVELDEN

|  |  |
| --- | --- |
| **Data type** | **Description** |
| DATE() | A date. Format: YYYY-MM-DD  Note: The supported range is from '1000-01-01' to '9999-12-31' |
| DATETIME() | \*A date and time combination. Format: YYYY-MM-DD HH:MI:SS  Note: The supported range is from '1000-01-01 00:00:00' to '9999-12-31 23:59:59' |
| TIMESTAMP() | \*A timestamp. TIMESTAMP values are stored as the number of seconds since the Unix epoch ('1970-01-01 00:00:00' UTC). Format: YYYY-MM-DD HH:MI:SS  Note: The supported range is from '1970-01-01 00:00:01' UTC to '2038-01-09 03:14:07' UTC |
| TIME() | A time. Format: HH:MI:SS  Note: The supported range is from '-838:59:59' to '838:59:59' |
| YEAR() | A year in two-digit or four-digit format.  Note: Values allowed in four-digit format: 1901 to 2155. Values allowed in two-digit format: 70 to 69, representing years from 1970 to 2069 |

\*Even if DATETIME and TIMESTAMP return the same format, they work very differently. In an INSERT or UPDATE query, the TIMESTAMP automatically set itself to the current date and time. TIMESTAMP also accepts various formats, like YYYYMMDDHHMISS, YYMMDDHHMISS, YYYYMMDD, or YYMMDD.

## Voorbeelden en suggesties

|  |  |
| --- | --- |
| Soort veld | Data type |
| id | mediumint(9) + autoincrement |
| postcode, huisnr, telefoon, … | varchar(30) |
| naam, omschr, e-mail, … | varchar(256) varchar(512) |
| lange omschrijvingen | varchar(512) text() |
| webpagina redactieartikel … | mediumtext() longtext() |
| aantal producten (geheel getal) | mediumint(9) |
| aantal kg (met decimalen) | double(16,2) |
| bedrag, prijs (valuta) | double(16,2) |
| boolean velden zoals ‘betaald’ (vaak een aankruisvakje) | tinyint(4) -1 0 |
| keuzemogelijkheden, minder dan 100 mogelijkheden (radio buttons)  bv. Thuis / Op kantoor / Op verplaatsing | tinyint(4) |
| geboortedatum | date() |
| datum en tijd laatste wijziging | datetime()  timestamp() |
| begintijd (uur + minuten) | time() |