MySQL Data Types (Version 8.0)

String data types:

Data type	Description
CHAR(size)	A FIXED length string (can contain letters, numbers, and special characters). The *size* parameter specifies the column length in characters - can be from 0 to 255. Default is 1
VARCHAR(size)	A VARIABLE length string (can contain letters, numbers, and special characters). The *size* parameter specifies the maximum column length in characters - can be from 0 to 65535
BINARY(size)	Equal to CHAR(), but stores binary byte strings. The *size* parameter specifies the column length in bytes. Default is 1
VARBINARY(size)	Equal to VARCHAR(), but stores binary byte strings. The *size* parameter specifies the maximum column length in bytes.
TINYBLOB	For BLOBs (Binary Large OBjects). Max length: 255 bytes
TINYTEXT	Holds a string with a maximum length of 255 characters
TEXT(size)	Holds a string with a maximum length of 65,535 bytes
BLOB(size)	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
ENUM(val1, val2, val3, ...)	A string object that can have only one value, chosen from a list of possible values. You can list up to 65535 values in an ENUM list. If a value is inserted that is not in the list, a blank value will be inserted. The values are sorted in the order you enter them
SET(val1, val2, val3, ...)	A string object that can have 0 or more values, chosen from a list of possible values. You can list up to 64 values in a SET list

Numeric data types:

Data type	Description
BIT(*size*)	A bit-value type. The number of bits per value is specified in *size*. The *size* parameter can hold a value from 1 to 64. The default value for *size* is 1.
TINYINT(*size*)	A very small integer. Signed range is from -128 to 127. Unsigned range is from 0 to 255. The *size* parameter specifies the maximum display width (which is 255)
BOOL	Zero is considered as false, nonzero values are considered as true.
BOOLEAN	Equal to BOOL
SMALLINT(*size*)	A small integer. Signed range is from -32768 to 32767. Unsigned range is from 0 to 65535. The *size* parameter specifies the maximum display width (which is 255)
MEDIUMINT(*size*)	A medium integer. Signed range is from -8388608 to 8388607. Unsigned range is from 0 to 16777215. The *size* parameter specifies the maximum display width (which is 255)
INT(*size*)	A medium integer. Signed range is from -2147483648 to 2147483647. Unsigned range is from 0 to 4294967295. The *size* parameter specifies the maximum display width (which is 255)
INTEGER(*size*)	Equal to INT(size)
BIGINT(*size*)	A large integer. Signed range is from -9223372036854775808 to 9223372036854775807. Unsigned range is from 0 to 18446744073709551615. The *size* parameter specifies the maximum display width (which is 255)
FLOAT(*size*, *d*)	A floating point number. The total number of digits is specified in *size*. The number of digits after the decimal point is specified in the *d* parameter. This syntax is deprecated in MySQL 8.0.17, and it will be removed in future MySQL versions
FLOAT(*p*)	A floating point number. MySQL uses the *p* value to determine whether to use FLOAT or DOUBLE for the resulting data type. If *p* is from 0 to 24, the data type becomes FLOAT(). If *p* is from 25 to 53, the data type becomes DOUBLE()
DOUBLE(*size*, *d*)	A normal-size floating point number. The total number of digits is specified in *size*. The number of digits after the decimal point is specified in the *d* parameter
DOUBLE PRECISION(*size*, *d*)	
DECIMAL(*size*, *d*)	An exact fixed-point number. The total number of digits is specified in *size*. The number of digits after the decimal point is specified in the *d* parameter. The maximum number for *size* is 65. The maximum number for *d* is 30. The default value for *size* is 10. The default value for *d* is 0.
DEC(*size*, *d*)	Equal to DECIMAL(size,d)

Date and Time data types:

Data type	Description
DATE	A date. Format: YYYY-MM-DD. The supported range is from '1000-01-01' to '9999-12-31'
DATETIME(*fsp*)	A date and time combination. Format: YYYY-MM-DD hh:mm:ss. The supported range is from '1000-01-01 00:00:00' to '9999-12-31 23:59:59'. Adding DEFAULT and ON UPDATE in the column definition to get automatic initialization and updating to the current date and time
TIMESTAMP(*fsp*)	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:mm:ss. The supported range is from '1970-01-01 00:00:01' UTC to '2038-01-09 03:14:07' UTC. Automatic initialization and updating to the current date and time can be specified using DEFAULT CURRENT_TIMESTAMP and ON UPDATE CURRENT_TIMESTAMP in the column definition
TIME(*fsp*)	A time. Format: hh:mm:ss. The supported range is from '-838:59:59' to '838:59:59'
YEAR	A year in four-digit format. Values allowed in four-digit format: 1901 to 2155, and 0000. MySQL 8.0 does not support year in two-digit format.

PostgreSQL Data Type

String Datatypes

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

Data Type Syntax	Explanation
char(*size*)	Where ***size*** is the number of characters to store. Fixed-length strings. Space padded on right to equal ***size*** characters.
character(*size*)	Where ***size*** is the number of characters to store. Fixed-length strings. Space padded on right to equal ***size*** characters.
varchar(*size*)	Where ***size*** is the number of characters to store. Variable-length string.
character varying(*size*)	Where ***size*** is the number of characters to store. Variable-length string.
text	Variable-length string.

Date/Time Datatypes

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

Data Type Syntax	Explanation
date	Displayed as 'YYYY-MM-DD'.
timestamp	Displayed as 'YYYY-MM-DD HH:MM:SS'.
timestamp without time zone	Displayed as 'YYYY-MM-DD HH:MM:SS'.
timestamp with time zone	Displayed as 'YYYY-MM-DD HH:MM:SS-TZ'. Equivalent to timestamptz.
time	Displayed as 'HH:MM:SS' with no time zone.
time without time zone	Displayed as 'HH:MM:SS' with no time zone.
time with time zone	Displayed as 'HH:MM:SS-TZ' with time zone. Equivalent to timetz.

Numeric Datatypes

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

Data Type Syntax	Explanation
bit(*size*)	Fixed-length bit string Where ***size*** is the length of the bit string.
varbit(*size*) bit varying(*size*)	Variable-length bit string Where ***size*** is the length of the bit string.
smallint	Equivalent to int2. 2-byte signed integer.
int	Equivalent to int4. 4-byte signed integer.
integer	Equivalent to int4. 4-byte signed integer.
bigint	Big integer value which is equivalent to int8. 8-byte signed integer.
smallserial	Small auto-incrementing integer value which is equivalent to serial2. 2-byte signed integer that is auto-incrementing.
serial	Auto-incrementing integer value which is equivalent to serial4. 4-byte signed integer that is auto-incrementing.
bigserial	Big auto-incrementing integer value which is equivalent to serial8. 8-byte signed integer that is auto-incrementing.
numeric(*m*,*d*)	Where ***m*** is the total digits and ***d*** is the number of digits after the decimal.
double precision	8 byte, double precision, floating-point number
real	4-byte, single precision, floating-point number
money	Currency value.
bool	Logical boolean data type - true or false
boolean	Logical boolean data type - true or false