Date and Time Types

DATE

- Used only for date values.
- Values are displayed in YYYY-MM-DD format regardless of the format that was entered.
- The supported range is 1000-01-01 to 9999-12-31.

DATETIME

- Used for date and time values.
- Values are displayed in YYYY-MM-DD hh:mm:ss format regardless of the format that was entered.
- The supported range is 1000-01-01 00:00:00 to 9999-12-31 23:59:59.
- Can contain fractional seconds up to six digits long that are separated from the time by a decimal.



Date and Time Types

TIMESTAMP

- Used for date and time values.
- Values are displayed in YYYY-MM-DD hh:mm:ss format regardless of the format that was entered.
- The supported range is 1970-01-01 00:00:01 UTC to 2038-01-19 03:14:07 UTC.
- Can contain fractional seconds up to six digits that are separated from the time by a decimal.
- Values are converted from the current time zone to UTC for storage and then back to the current time zone upon retrieval.

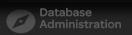
Note: The current time zone will be set to the server's time zone by default, but this can be changed on a per-connection basis. For example, to set the time zone to UTC for the current session, use

*SET time_zone='00:00';

TIME

- Used only for time values.
- Values are displayed in hh:mm:ss or hhh:mm:ss format.
- The supported range is -838:59:59 to 838:59:59.
- Can contain fractional seconds up to six digits that are separated from the time by a decimal.





Date and Time Types

YEAR

- Used only for valid year values.
- Values are displayed in YYYY format.
- The supported range is 1901 to 2155.
- Input for 4-digit YEAR values can be in number or string format 1901 to 2155 and '1901' to '2155' respectively.
- Input for 1 or 2-digit YEAR numbers can range from 1 to 99 (1 to 69 is converted into 2001 to 2069, and 70 to 99 is converted into 1970 to 1999).
- Input for 1 or 2-digit YEAR strings can range from '0' to '99' ('0' to '69' is converted into 2000 to 2069, and '70' to '99' is converted into 1970 to 1999).



Creating Tables

Date and Time Formats

- MySQL allows any punctuation character to serve as a delimiter for dates and times, except for a decimal when it is used to indicate fractional seconds. For example, 1988;02;27 would be converted to 1988-02-27.
- Invalid dates and times are stored as '0000-00-00' and '00:00:00' respectively.
- Two digit year values are interpreted as follows:
 - 00-69 is converted to 2000-2069
 - 70-99 is converted to 1970-1999
- Abbreviated TIME values with colons are interpreted as the time of the day (i.e. 10:30 is interpreted as 10:30:00 not 00:10:30).
- Abbreviated TIME values without colons are interpreted assuming the two rightmost digits are seconds (i.e. 1030 is interpreted as 00:10:30 not 10:30:00).

