

# String Types

## CHAR

- Max length is declared when table is created (i.e. `CHAR(50)`).
- Length can range from 0 to 255.
- Values are right-padded with spaces to the specified length when stored.
- Trailing spaces are removed upon retrieval.

## VARCHAR

- Max length is declared when table is created (i.e. `VARCHAR(50)`).
- Length can range from 0 to 65,535.
- Values are not right-padded to match the specified length.
- Trailing spaces are retained when a value is stored and retrieved.

## BINARY

- Contains byte strings rather than character strings.
- Max length is declared when table is created (i.e. `BINARY(50)`).
- Max length is a length in bytes rather than characters.
- Values are right-padded with the pad value which is `*0x00*` (the zero byte).
- Trailing bytes are not removed when value is retrieved.

## VARBINARY

- Contains byte strings rather than character strings.
- Max length is declared when table is created (i.e. `VARBINARY(50)`).
- Max length is a length in bytes rather than characters.
- Values are not right-padded to match the length.



# String Types

## BLOB

- There are four **BLOB** types that differ based on maximum length: **TINYBLOB**, **BLOB**, **MEDIUMBLOB**, **LOBLOB**.
- Values are treated as binary strings.
- Values are not padded on insert.
- Similar to the **VARBINARY** type except indexes on **BLOB** columns require a specified prefix length and columns cannot have **DEFAULT** values.

## TEXT

- There are four **TEXT** types that differ based on maximum length: **TINYTEXT**, **TEXT**, **MEDIUMTEXT**, **LONGTEXT**.
- Values are treated as character strings.
- Values are not padded on insert.
- Similar to the **VARCHAR** type except indexes on **TEXT** columns require a specified prefix length and columns cannot have **DEFAULT** values.

## ENUM

- Allows a list of permitted values to be specified upon table creation.
- A column can have a maximum of 65,535 distinct elements.
- Uses numeric values to represent string values.
- Output and queries are easily read.



# String Types

## SET

- Allows a list of permitted values to be specified upon table creation.
- Column can have up to 64 members.
- Trailing spaces are automatically deleted from member values.
- Values are displayed using the letter case that was used in the column definition.
- Values that contain multiple members from a set are separated using a comma (i.e. `val1, val2`). Because of this, commas are not permitted in the member values.

