Describe the 10 MySQL Data Types. How is each used? What makes each unique?

There are three data types: numeric, date and time, and string data types. Within the different categories are the different data types that relate to that category.

In the numeric category there is:

Bigint, int, smallint, tinyint, bit, decimal, numeric, money and smallmoney. Each one of these data types in the numeric category has a specific use. When writing a SQL database it is important to pick the correct data type for its use.

The string category has four data types. The are:

Char, varchar, varchar(max), and text. Once again the correct data type needs to be selected. You do not want to pick char to write a paragraph when a char is just on character. You should pick text for a paragraph.

The date and time category there are three different data types:

Date, time, and datetime. Depending on what you want to display for data is which data type one would pick1.

SQL defines data types even further. There are:

Numeric, character, date and time, binary, Boolean, interval, array, xml, and spatial data types. Each data type has its specific use in displaying information2.

Primary and foreign keys. What are they and how are they useful?

The primary key is a unique identifier within a table in a database. It cannot be null. The foreign key is a column or a group of columns in a table that can be linked back to another table using another foreign key or primary key3. The primary key in a table ensures data within the table. Whereas the foreign key is usually a primary key from another table that serves as a link between the two tables4.

1SQL Data Tpes, <https://www.geeksforgeeks.org/sql-data-types/>

2SQL in easy steps. Page 38.

3Difference between Primary Key and Foreign Key, <https://www.geeksforgeeks.org/difference-between-primary-key-and-foreign-key/>

4SQL FOREIGN KEY Constraint, https://www.w3schools.com/sql/sql\_foreignkey.asp