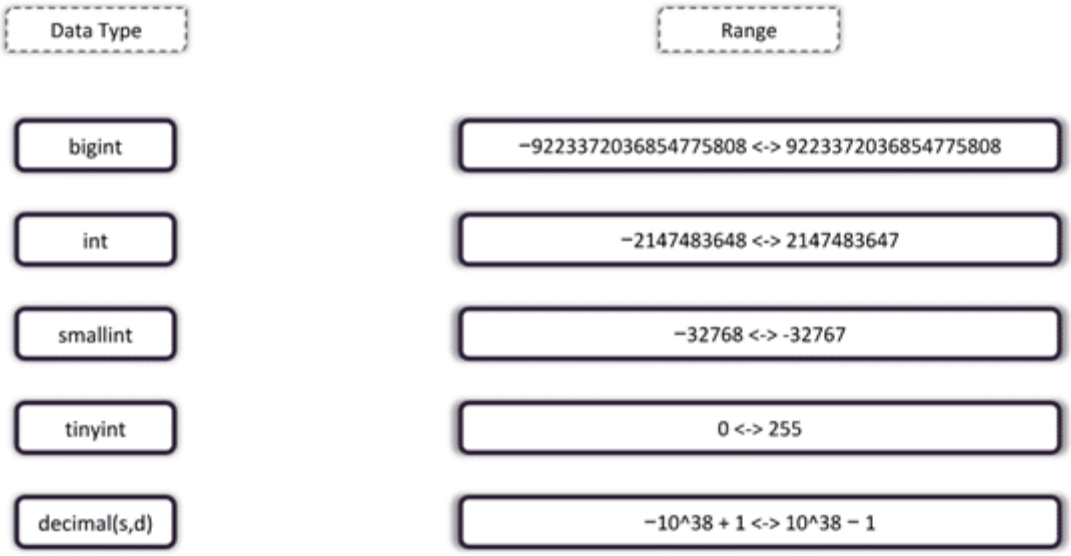
Different Data Types in SQL

SQL Data types are divided into three major categories, namely, numeric, character, and date and time

.Numeric Data Types in SQL

Numeric data types store all numerical values or integer values.



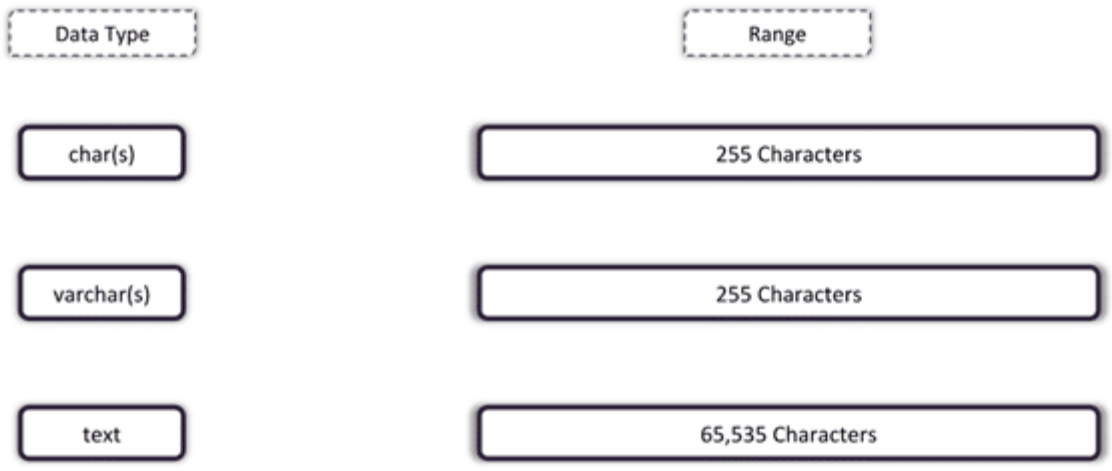
- Bigint data type helps store ‘really big’ values.
- Int data type is used to store reasonably big values.
- Smallint data type is used to store values that range from −32,768 to 32,767.

- Tinyint data type stores values from 0 to 255. It's for relatively small numbers.
- Decimal data type is used to store fractional values in two arguments. First part is the size of the value that is the total number of digits, and the second part specifies the number of digits (d) after the decimal point. Let's say, we want to store the decimal value 12.50. Here, the size would be 4 because the total number of digits is 4, and the value of 'd' would be 2 because there are 2 digits after the decimal point.

Any data type can be used based on the requirement. Int is the most commonly used data type.

Character Data Types in SQL

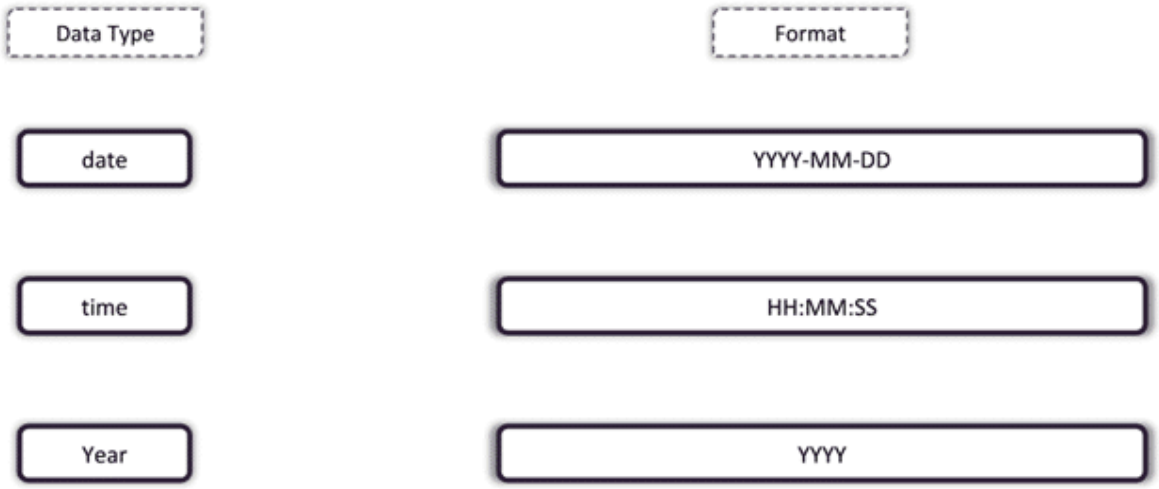
Character data types store all alphabetic values and special characters.



- Char data type takes in one argument and has fixed length. For example, consider the size of the value to be 20. This would mean that you cannot give any value having more than 20 characters. Keeping in mind the fact that char has fixed length, i.e., if the value size is to be 30 characters, but information assigned to it is of 3 characters, then the memory consumed is of 30 characters.
- Varchar data type also takes in size as the argument. But here, it is a variable length data type, unlike char. So here if the value size is to be 30 characters, and you give only 3 characters, the memory consumed would be only of 3 characters.
- The text data type can take in a string with a maximum length of 65,535 characters.

Date and Time Data Types in SQL

Date and Time data types store a date or a date/time value.



- Date data type in SQL helps us specify the date in a format. Let's say, if we want to store the date, 2 January 2019, then first we will give the year which would be 2 0 1 9, then the month which would be 0 1, and finally, the day which would be 0 2.
- Time data type helps us specify the time represented in a format. Let's say, we want to store the time 8:30:23 a.m. So, first we'll specify the hour which would be 0 8, then the minutes which would be 3 0, and finally the seconds which would be 2 3.
- Year data type holds year values such as 1995 or 2011