Relational Databases with MySQL Week 3 Research Assignment

**Points possible:** 30

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| --- | --- | --- |
| Category | Criteria | % of Grade |
| Accuracy | Is the information accurate? | 25 |
| Organization | Is the essay clean and organized? Ideas are presented in a logical order. | 25 |
| Citations | Students reference and cite at least 5 sources. | 25 |
| Completeness | All requirements of the assignment are complete. | 25 |

**Instructions:** In however many words necessary, write a thorough essay response to each of the below prompts. Be sure to include at least 5 references for this assignment. Do not copy and paste text from the internet or any other source; use the information you find in your research, summarize, in your own words, the concepts. Plagiarism will result in a zero for the assignment as well as disciplinary actions. Push this document to your GitHub repository for this week. Add the URL for this week’s repository to this document where instructed and submit this document to your instructor when complete.

**What are ten different data types MySQL provides?**

Fixed-point types (exact value) – decimal, numeric

Bite-value type-BIT

The time type

The YEAR type

The CHAR and VARCHAR Types

The SET Type

The ENUM Type

GEOMETRY

GEOMETRYCOLLECTION

UNSIGNED

**How is each data type you described used, and what makes it unique?**

**Fixed-point types (exact value) – decimal, numeric**: this data type stores exact numeric data vales. This is valuable when you want to store and preserve exact precision, like with a salary.

**Bite-value type-BIT:** this data type is used to store bit values.

**The TIME type:** This data type displays time values in ‘HH:MM:SS’ and it may range from negative to positive, this data type can be useful because not only can it tell you the time in the day ( within 24 hours) or the time between two points ( can be more then 24 hours or in the negatives).

**The YEAR type:** This data type is a 1-byte type used to represents year values. This can be declared as YEARS (4) or YEARS (2). For the year 4 you pick the values of YYYY format with range of 1901 to 2155 or 0000. Whereas the year 2 only displays the last two for example you pick 70 and you can get 1970 or 2070.

**The CHAR and VARCHAR Types:** These data types are similar, but differ in the way they are stored and retrieved. They also can be different in the length and in whether trailing spaces are retained. For both of these types they are declared with a length that indicates the maximum number of characters you want to store. For the CHAR datatype its maximum number of characters is 30, for VARCHAR its maximum number of characters is 65,535. These two data types can be useful when you want to hold a certain amount of information for example a phone number.

**The SET Type:** This data type is a string object that can have zero or more values, each of which must be chosen from a list of permitted values specified when the table is created. A SET column can have a maximum of 64 distinct members. A table can have no more than 255 unique element list definitions among its ENUM and SET columns considered as a group.

**The ENUM Type:** This data type id a string object with a value chosen from a list of permitted values that are enumerated explicitly in the column specification at table creation time.

**GEOMETRY:** This data type can hold single values, it can store geometry values of any type.

**GEOMETRYCOLLECTION:** This data type can store collection of objects of any type.

**UNSIGNED:** This data type cannot be used for negative numbers but can be used when you want to insert a big number into a column.

**What is your favorite thing you learned this week?**

I liked learning about the tables you can create before actually making them, or the fact you can type them out in a note pad and upload it into the terminal and it will actually create the tables!

**References:**

[**https://dev.mysql.com/doc/refman/5.6/en/data-types.html**](https://dev.mysql.com/doc/refman/5.6/en/data-types.html)

**URL to GitHub Repository:**

[**https://github.com/samsquanch27/DBWeek3**](https://github.com/samsquanch27/DBWeek3)