**Discussion Question: SQL**

For this module's discussion board assignment respond to **one**the following topics:

1. What is a primary key? Provide characteristics and an example for what type of field could be used, and what type of field should NOT be used as a primary key. Does each table need a primary key? Why or why not?

When utilizing MySQL, it is normal to encounter the primary key. Primary keys are assigned to tables, making them specific to that table. Primary keys must be unique and cannot be null (Comeau, 2016, p. 183). This means there cannot be any primary keys or fields that do not contain a value. Primary keys can be identified by the abbreviation PK (Comeau, 2016). Primary keys can even be automatically generated through a program by auto increments (Comeau, 2016, p. 184-188). However, we can use “one or more fields” for a table primary key but limited to one index (Comeau, 2016, p. 193). So, if there are more fields, they cannot be null. When dealing with primary keys, they should not be altered since they can cause database confusion. If a primary key is constantly changing, it is no longer one.

Any personal information should be avoided at all costs when it comes to assigning a primary key. This means no part of a name, social security number, address, driver’s license, or even phone number should be associated with this key. Using a primary key to assign to myself, including my last name, Hinz, should be avoided. It also might not be unique enough. An example of a field that should be used for a primary key is a generated number that increments after a new entry to avoid duplicates. Technically, I do not think a tech table needs a primary key, but it is best to use one anyway.

**Reference**

Comeau, A. (2016). *MySQL explained: your step-by-step guide to database design*. Ostraining.

1. What is a foreign key? Provide an example for how a foreign key might be used. What are some of the issues associated with using foreign keys?
2. What are the three ways in which you can declare a comment in SQL? Provide an example of each and when it might be used.
3. What are two possible responses from the database if a user attempts to delete a record in a parent table for which there are associated records in a child table? How should each response be met?

***Before you submit your thread, put your name in the subject line.***

**Assignment Requirements and Grading:**

1. An initial post is due by **Thursday, 11:59 p.m., CST**.
2. For the initial post to be considered substantive, it should fully cover the topic(s) being presented. Single-sentence definitions or responses will not be awarded points.
3. Submit your post by clicking on the **Assignment Link** above, then **Create Thread**. You must create a thread in order to view your peers' posts. Tip: Create your post in a Word document and then copy and paste your work into the thread.
4. A minimum of three (3) responses, **to the original threads of other students**,, of 100-200 words each are due by **Sunday, 11:59 p.m., CST**.
5. To view the rubric grading criteria, click on the following link: [Discussion Board Grading Rubric](https://content.bellevue.edu/cst/csd/rubricdbv3.pdf)

**(50 points)**

Jessica, you did an excellent job on your discussion post! You accurately identified the three ways one can declare comments within MySQL. I always like seeing the additional resources people include in their references since they are very helpful! Do you have a preference when entering comments? For me, I am most drawn to the inline comments because I like how they save line space in the editor. However, if I have a longer comment to leave, then I do prefer to utilize the block comments so you do not have to scroll forever. Do you have any issues remembering how to leave comments when dealing with different programming software?

Adrian, you did a great job explaining the ways you can declare a comment in SQL. You are completely right when you say that comments are important. As much as it is nice to think that we can remember everything, that is simply not the case. So, using comments to document code can save a lot of time for the user and other developers. Sometimes, it can feel a little tedious, but it is always best practice. The examples you included using the comments are perfect since they are accurate! It is interesting to see how they differ from other programming like Python.

Brett, you did a fantastic job on your post and elaborating on how foreign keys work! The example you utilized perfectly encapsulates how a foreign key works. It is smart to have a specific key that links back so there are no duplicates. We use this in many of our diagrams and read about it extensively. I really like the resource you included to explain foreign keys further outside of our textbook and other resources. I like how you were able to relate to concepts from previous weeks, like relational databases. In addition, I like how you also associated with different relationships like one-to-many.