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Assignment Writeup

Assignment 05

**Assignment 5: Writeup**

**Introduction:**

*“A SQL query goes into a bar, walks up to two tables and asks, can I join you?” (* Firdaus, Thoriq, et al. “45 Jokes Only Programmers Will Get.” *Hongkiat*, 19 July 2016, [www.hongkiat.com/blog/programming-jokes/](http://www.hongkiat.com/blog/programming-jokes/).*) (External Site).* SQL codes lead us to the world of database. In the writeup, I will address the two questions as below. This is a writeup about the use of SQL codes. During the past five weeks, we have learned many things about database, specifically SQL code utilizations. In this assignment, we are going to use our knowledge and trigger independent thoughts toward the following topics.

**Topics:**

1. Explain why constraints, views, functions and stored procedures are recommend features of a professional database design.

**Constraints:** In order to specify certain rules for different types of data in the table, we should use constraints (Figure 1) to regulate them. Once there is any violation between the data and codes, the compiling process will be halted.

A screenshot of a cell phone

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*Figure 1: Example of Constraint*

**Views:** We use views to create a virtual table for us to get data table and easily understand what are in the tables. Views (Figure 2) always show the up-to-date result of our SQL code. It is convenient for us to access the table.

A picture containing bird

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*Figure 2: Example of View*

**Functions:** Functions (Figure 3) allow us to simplify repetitions and reach efficiencies. Often times, we use functions to accomplish certain tasks without writing complex codes. On the other hand, if there are no built-in functions, we can create ones ourselves and use them if needed.

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*Figure 3: Example of Function*

**Stored Procedures:** If we have SQL queries that we reuse many times, we can store them into a stored procedure. Once we need it, we can just call it to execute. (Figure 4)

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*Figure 4: Example of Transaction*

1. Explain how transaction statements are used in a stored procedure.

Transaction will either commit or rollback within the stored procedure. All statements executed in the stored procedure will only be committed or rollbacked, depending on whether the statement execute successfully or not. Transaction is used as a single unit of work in the procedure (“SQL Transaction.” *w3resource*, [www.w3resource.com/sql/controlling-transactions.php](http://www.w3resource.com/sql/controlling-transactions.php).) (External Site) It acts like a machine doing works in a big company, which works for the stored procedure.

**Summary:**

In the topics above, I discussed the features of professional database design, including constraints, views, functions and stored procedures. Those are what we typically use in designing or setting up databases. On the other hand, the second question explains the connection between stored procedure and transaction statements in use.