Eric Zorn

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ICT 4300: Professor/Dr. Lakhani

**Unit 4 & Module 4 Homework Assignment: Data Base Questions 1 and 2**

**Question 1: FULL EXCEL SPREADSHEET IS ON SEPARATE DOCUMENT IN FOLDER (Double Click Table)******

**Question 2 (What are the drawbacks of using a database designed in question 1?):**

* There are many drawbacks to using this type of database. The problem with the data upfront is that the data is not sorted or considered to be normalized. It is important that the data can be shown in a proper format and that the data from a database is not repeated multiple times. By not normalizing the data, you can access the information with many keys, while querying the database and getting multiple results of the same value. If we separated the database into multiple sections like grades and exams together, while the names, student IDs, course numbers and course titles remain separate. It will ensure that the repeating data is put into one table and only has one edition of that data. The other one-time data that was not repeated originally, will be placed into the original table.

**Question 3 (How will you deal with the requirements if the number of HWs, quizzes, and tests can vary from course to course)?**

* In order to ensure that the requirements would not change, you would have to place the data into an even further normalized database. This would be known as a 3N formed database. You would be separating the data properly into three separate tables of data or specific tables of data to the key original key, that would have different IDs and individualized data per category. If you separate the data into these different tables, it would be ensured that there are not repeating datasets and as long as they share a link, any effects made to one table, will indirectly affect the other tables. This way, any data that is added to the database or removed from the database in any one of the tables, will not have a negative impact on the entire dataset/database as a whole. This is why normalizing your database is such a powerful practice to engage in.

**Question 4 (Convert the Database into 3NF Form)**

**NEXT PAGE!**

**FULL EXCEL SPREADSHEET IS ON SEPARATE DOCUMENT IN PROJECT FOLDER (Double Click Table)** 