**CST8215 --- Assignment Two**

**Objective**

The objective of this second assignment is for you to add the ‘normalization’ process to the beginning of the database design process.

Assignment 2 is broken into two parts.

**Part 1** – Perform a normalization exercise and create the data model using PG Modeler

You will need to choose one of the three available CASE studies (all three CASE files are attached to the Assignment 2 Materials page). Once you have decided which of the three CASE files you want to use, download it and this WORD document will become your ‘template’ that you will be asked to submit for Part 1.

Use the SAMPLE also attached to the Assignment 2 Materials page to fill in your ‘Normalization’ template.

Deliverable (Assignment 2 Part 1 submission) will be two (2) documents.

1. must include the Normalization report (a filled in WORD document which you downloaded) --- ensure that this template follows the same format as the SAMPLE provided
2. a screenshot of your data model in PG Modeler (created by using your final 3NF set of entities and their columns (a BMP or PNG file format)

***Due date for Assignment 2 - Part 1 is November 13th, 11:30pm***

**Part 2**– Complete the database creation, population and generate the same output as found in your chosen CASE document.

Using the PG Modeler data model you created in Part 1, you will generate the DDL script and run it into a new, empty Postgres database.

Create a DML script to populate your new tables using the exact data that exists in your chosen CASE document.

Create a SQL query to produce output to match what you used as ‘raw data’ in your chosen CASE document. Note, in the case of a formatted report such as in ‘invoice’, simply ensure all the data columns shown on the CASE document appear in your resulting dataset.

Deliverable (Assignment 2 Part 2 submission) will be two (3) documents.

1. DDL script generated from your data model in PG Modeler
2. DML script showing your CASE data being inserted into your new tables
3. Screenshot of your SQL query which will reproduce the report (or something similar) to the CASE report used in Part 1

***Due date for Assignment 2 - Part 2 is November 22nd, 11:30pm***

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**CST8215 – Assignment 2 Rubric**

Refer to the following **rubric** to verify that you have met all the requirements.

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| **Requirement** | **Max Points** | **Points Earned** |
| Part 1 – Two submission files were uploaded to Brightspace. WORD document – Normalization Report and a BMP or PNG file showing the screenshot of the new PG Modeler data model | 3 |  |
| Part 1 – Normalization report was completed as per the SAMPLE, using the same layout and notations (underline for PK, etc.) | 5 |  |
| Part 1 – Data Model showed all the data columns as documented in the accompanying Normalization report, primary keys were properly defined, datatypes were correctly chosen based on the CASE source data, and relationships were created where appropriate. | 5 |  |
| *Bonus points for submitting Part 1 on November 11th (two days early)* | 3 |  |
| **Possible total with Bonus marks** | **13 + 3 (16)** |  |
|  |  |  |
| Part 2 – DDL script was submitted and it ran **ERROR FREE** | 3 |  |
| Part 2 – DML script was submitted and it ran **ERROR FREE** | 3 |  |
| Part 2 – a WORD document was submitted which contained the screenshot of the SQL statement (query) used to reproduce the data shown in the CASE source report | 5 |  |
| *Bonus points for submitting Part 2 on November 20th (two days early)* | *3* |  |
| **Possible total with Bonus marks** | **11 + 3 (14)** |  |

Assignment 2 has a possible total mark of 30 (which includes the two ‘bonus’ marks)