**Semester Project – Due Thur. May 09, 2019 11:59 PM**

DBA-285 culminates in a creative project where students demonstrate the use of the skills they have learned this semester.

The objective is to allow you work on something **you** are passionate/interested in and show how your new skills could be applied to it for analysis. You have complete freedom to work in any data subject area that you want: Poverty, Economic, Politics, Cupcakes, Climate, Business, Family… anything that you have data for.

Under each section, I’ve listed the skills covered that need to be demonstrated in the project. You will need to source and integrate your data. Model it out to meet your objectives and provide interactive reports that share the message you want. Analyzing data is the process of building a story to tell with metrics. That is your goal.

**The Project Description and Plan**

To start**,** Each student will list 3 or 4 questions they are interested in answering. Next, you will describe a data model used to investigate the answers to these questions; explain the data model you need. Furthermore, you will need to list possible data sources. (You may use any other sources you find.) These three elements should be provided in writing at the beginning of your narrative. More on the “Narrative” below.

**Skills to Cover**

Your project submission will be one PBIX file with imported data embedded. In your PBIX, submission, you will need to provide (show) examples of these skills:

**Part I: Data Model**

Build a data model in PowerBI. The data model must include at least one date table, one dimension other than date/time and one fact table. Also, in your data model show using at least two of the techniques below:

1. Add Data by using the “Get Data” tool by loading a table from a SQL Server

2. Add Data by using the “Get Data” tool by using a Custom Query from SQL Server or other RBDMS.

3. Add Data by using the “Get Data” tool by importing data from a Web Source

5. Create Relationships between your tables Tables

**Part II: Calculated columns and Measures**

1. Create calculated columns, measures, KPIs and hierarchies in the PowerBI data model.
2. Create at least one measure using a DAX expression

**Part III:** Reports and/or Dashboards built on the data model

Demonstrate the use of Visualizations:

1. Use at least one Chart of some sort on each report
2. Use a table or matrix to display data.

Demonstrate the use of Slicers:

1. Add Slicers to Report

2. Filter Data Using Slicers

**Part IV: Reports**

Use PowerBI to create at least two reports/dashboards to communicate your findings. These reports will show a data model easy for end users.

**Grading (Total 270 points possible)**

**Data Model 100 pts**

**10 pts.** The data model has at least a date table, another dimension, and a fact table

**15 pts.** Tables are named descriptively (i.e. NOT Table1, Table2, etc.)

**40 pts.** The data model includes at least one calculated column and one measure

**30 pts**. The data model has correctly defined relationships.

**5 pts.** Only relevant columns are presented to the end user; others are hidden; hierarchies are used if appropriate

**Communicating Findings 125 pts**

**10 pts.** All reports are clearly labeled for easy of navigation

**30 pts**.  Charts, Tables and slicers, based on the data model clearly relay information about the questions researched. The reports/dashboards include slicers.

**50 pts.** Presented in, at minimum, two report pages, visualizations that clearly relay information about two findings in the data that were unexpected but are in fact related to your original questions.  Label these carefully.

**Narrative 60 pts.**

**60 pts.** A narrative description of the problem (or subject area), the data sources, and the design of the model, reports and charts should be provided. Place your narrative in a separate page in the PBIX named “Narrative”.  As you know, I am not a fancy writer. However, I expect your narrative to be clear, resolute, and as engaging as possible. Tell me what you have done, why, and how. Tell me what you see in the data and how it answers the questions you discussed in you original submission. Explain how the data model and reports have been made clear and easy to use for end users. Lastly, describe the information concerning the two other findings in the data that were unexpected but are in fact related to your original questions.

