Project 2 Milestone 3: DW Reporting and Visualization

Submit Assignment

Due Wednesday by 11:59pm   **Points** 25   **Submitting** a file upload
Available Mar 23 at 8am - May 10 at 11:59pm about 2 months

ACIS 5504 – Project 2

Data Warehouse

Milestone 3: DW Reporting and Visualization

25 Points

Due: See Canvas Assignments Page

Overview

This milestone uses the implemented database that is the output of Milestone 2 to produce reports and visualizations implemented with SQL Rollup queries. This is the final step in Project 2 and provides a hands-on application of the concepts related to using a data warehouse for addressing users' questions. It involves writing the SQL queries needed to retrieve the data and thinking from a user/management perspective to determine the best visualizations for presenting this data.

The complete SQL needed to address management's key objectives using the fact and dimension tables of the data warehouse are created along with a description of the results suitable for presentation to management.

A detailed project report should be submitted on the due date. This project is to be done individually. This may require additional reading and research.

This project will require more than 24 hours of work time to complete.

To complete assignment, you should complete the following activities:

1) Review the management questions you developed carefully.

2) For each question identify the fact and dimension tables needed.

3) Complete the activities listed below under submission requirements.

Assignment Resources

1) The populated database that implements the DW from Milestone 2.

2) The management questions for most competitive advantage from Milestone 1.

3) Review of Chapter 13;

4) Recorded lecture slides on Chapter 13;

Business Situation Description:

You work for a large corporation that has just purchased 2 hotel and resort corporations each consisting of over 100 hotels. You have created a DW for the situation and now need to demonstrate that it works by creating the queries needed for reports and visualizations.

Submission Requirements (start with #8 to pick up where M2 ended with #7)

When completed, please upload your documents under the "Assignments" tab in Canvas. Please use a document naming convention that allows us to determine your name. EXAMPLE: "LastName_FirstName_Project2Milestone3.docx".

8) Write the SQL that will be needed to answer the three most important questions using your data warehouse. This requires writing 3 SQL statements. (10 points)

For each question, show the query and sample results of executing the query using your implemented database from Milestone 2.

These sql statements should use the ROLLUP/CUBE features of SQL for processing dimension data.

This site has a summary of the ROLLUP and CUBE statements that is useful: **https://docs.oracle.com/cd/F49540_01/DOC/server.815/a68003/rollup_c.htm (https://docs.oracle.com/cd/F49540_01/DOC/server.815/a68003/rollup_c.htm)**

This script is from the textbook has sample rollup and cube SQL: **DW-OLAP-SQL.txt** 📄

9) Create a visualization for your first management question.

(Note: Figures P13.3.2G (page 615) and P13.3 (page 616) show single fact tables with multiple dimensions.

This assignment provides an opportunity to demonstrate the value of your data warehouse from Project 2 Milestones 1 and 2. It involves exporting data from your data warehouse to Excel (or Tableau or other graphing package of your choice), then using the graphing tools to create simple visualizations of your data. Simple visualizations are excellent for communicating effectively with users and managers.

Submit a picture of the visualization embedded in your submission document followed by a short description (2-3 sentences) that explains the visualization for the intended user. (5 points)

10) Create a visualization for your second management question. (Note: it must be different than the first and ideally use different fact or dimension tables).

Submit a picture of the graph embedded your submission document followed by a short description (2-3 sentences) that explains the visualization for the intended user. (5 points)

11) Create a third visualization, it must be different than the first two and should use different fact or dimension tables.

Submit a picture of the graph embedded in your submission document followed by a short description (2-3 sentences) that explains the visualization for the intended user. (5 points)

Assessment

Your submission document will be checked for correctness and completeness.

Connecting Assignments

This milestone takes the populated database for the DW from milestone 2 and uses it to produce reports and visualizations that answer the questions from Milestone 1. It is the final step that demonstrates the value of implementing a DW.