IST722 Group Project Assignment

OVERVIEW

The group project is your chance to apply what you have learned in the course towards completing a data warehouse and business intelligence (BW/BI) program for a case study.

The Case Study

Fudgemart, Inc. has hired your team to build a BW/BI solution from scratch. Fudgemart, Inc. is a fictitious conglomerate with two subsidiary companies:

1. **Fudgemart**: Fudgemart is a fictitious online retailer, similar to Amazon.com or Walmart.com. The database consists of customers, products, and vendors, and has familiar business processes you would find in any online retailer. The database for Fudgemart is called **Fudgemart_v3.**
2. **Fudgeflix**: Fudgeflix is a fictitious online DVD-by-mail and video-on-demand service, similar to Amazon Instant Video or Netflix. The database for Fudgeflix is called **Fudgeflix_v3** and contains concepts such as accounts, subscriptions, and video titles, as well as other things associated with an online video-streaming service.

NOTE: A third database, **ExternalSources,** has some useful data sets for data warehousing in general as well as some Fudgemart sets with **fm** in their object names.

Project Deliverables

1. Project document:
    a. Assemble a project charter.
    b. Devise a project plan.
    c. Outline functional requirements based on your activity of profiling data in Fudgemart, Inc.'s databases.
    d. Overview which business processes you will model from those functional requirements and explain their business value.
    e. Assign primary roles to your team members.
2. High-level dimensional modeling worksheet:
    a. Bus matrix.
    b. Attributes and metrics.
    c. Outline any issues you have.
3. Detail-level dimensional modeling worksheet:
    a. Contains fully completed dimensions and facts.
    b. Identifies sources for your source-to-target map
    c. Should be used to generate an SQL schema for your data warehouse
4. Data warehouse on SQL Server:
    a. Follows consistent conventions.
    b. Adopts techniques learned in the course, such as use of staging and enterprise bus.
5. Initial ETL done in SSIS:
    a. Source-to-target map.
    b. SSIS package to stage your data.

    c. SSIS package to load to DW from stage.
    d. ETL documentation: source-to-target map, screenshots of data flows, and explanation of ETL patterns used. Explain any data quality or survivorship rules you may have used.
6. Business intelligence:
    a. SSAS cubes on analysis services server.
    b. BI dashboard or application in Power BI and/or Excel.
    c. BI documentation. Briefly explain the goal of your analytics and what type of BI it is.
7. Presentation and demo:
    a. An executive-level presentation overviewing your DW/BI initiative, no more than five minutes.
    b. A quick demo of your BI application, no more than five minutes.
    c. Demo completed during a live session in front of the professor and your classmates.

Project Milestones

- Milestone 01—First draft of deliverable 1: project document
- Milestone 02—First draft of deliverable 2: high-level dimensional modeling worksheet
- Milestone 03—First draft of deliverable 3: detail-level dimensional modeling worksheet and deliverable 4: SQL implementation

Due dates for each milestone are outlined on the course syllabus. They must be completed by the live session, and they will be reviewed and discussed then.

Grading Rubric

Here are some guidelines for completing the project. Answering "yes" to all of these means that your project has the potential to earn the highest marks possible.

- Did you identify the functional requirements of Fudgemart, Inc.
- Did you identify four or more business processes to model in the data warehouse as part of your functional requirements?
- Can the value of those business processes be justified?
- Did you implement two of your business processes in the data warehouse?
- Did you implement meaningful, actionable business intelligence for those two processes?
- Did you implement an enterprise bus technical architecture according to the Kimball methods we learned in the course?
- Does the data warehouse your team implemented exhibit the four characteristics of a data warehouse?
- Did you satisfy all of the criteria outlined in the project deliverables section?
- Did you complete your project milestones on time?
- Does your presentation overview your DW/BI initiative at an executive level?
- Does your demo show that you satisfied the functional requirements of the business processes you implemented?