| **Project Charter** | | | |
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| **Project Name** | IST 722 Group Project Assignment – Fudgeflix & Fudgemart | | |
| **Project Description** | Building an Integrated Data Warehouse and BI Solution for Fudgemart Focusing on Sales as Business process. | | |
| **Project Manager** | **Himanshu, Anvitha** | **Date Approved** | **08/02/2023** |
| **Project Sponsor(s)** | **Syracuse University** | **Signature** | **Bill Bucker** |
| **Business Case** | | **Expected Goals/Deliverables** | |
| **Fudgemart, Inc., operating through its subsidiaries Fudgemart and Fudgeflix, accumulates a vast amount of data from its online retail and streaming operations, as well as from external sources. However, this data is currently siloed and underutilized, representing a significant missed opportunity. By investing in a comprehensive Business Warehouse/Business Intelligence (BW/BI) solution, Fudgemart, Inc. can transform this raw data into actionable insights, driving improved decision-making, greater efficiency, and increased profitability.** | | Requirements  Integrated Data Warehouse: A unified data warehouse which will integrate data from FudgeFlix and Fudgemart databases.  Strong ETL Processes: Efficient and reliable ETL process which will ensure data is accurately extracted, transformed, and loaded.  Effective BI solution: A robust BI solution that will provide relevant, accurate, and timely insights which will help with decision making of this project. | |
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|  | | Deliverables | |
| **Team Members** | | 1. **Detailed report on Sales Analysis based on region** 2. **Detailed report on Sales Anaysis by Supplier** 3. **Detailed report on Sales based on Product** | |
| **Name** | **Role** |  | |
| **Anvitha** | **BI Developer** |  | |
| **Himanshu** | **ETL Developer** |  | |
| **Jaya** | **Data Architect** |  | |
| **Rasim** | **QA Analyst** |  | |
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| **Risks and Constraints** | | **Milestones** | |
| **Data Quality Issues** | **The data may be inconsistent, faulty, incomplete and inaccurate. These issues should be identified before the beginning of the project development, preferably at the data profiling since it would take a lot of time to go back and fix the problem at it’s root.** | **Project Beginning** | **Day 1** |
| **Integration Challenges** | **Integration of data from a few data sources can be time consuming and complex, which could lead to further delays.** | **Completed Data Profiling and gathering Requirements** | **x** |
| **Technical Difficulties** | **Issues with software/hardware compatibility.** | **Completed Data Modeling** | **x** |
| **Change Resistance** | **The end users may find it challenging or may even resist the transition to a completely new BI system.** | **Completed Data Warehouse Construction** | **x** |
| **Time** | **Project Timeline can be challenging with the little time that we have.** | **Completed ETL Process Development** | **x** |
| **Staffing** | **Having a team of four allows for good teamwork and coordination, but may not be enough for such a large scale project to be completed with all the details being perfect** | **Completed BI Development** | **x** |
| **Budget** | **The budget of this project may limit the resources that can be allocated to complete this project.** | **Completed Project Presentation** | **x** |
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# **Business Requirements**

1. Ability to track sales performance, identify popular products amongst customers and sales trends.

# **Functional Requirements**

1. The dashboard should display real-time and historical sales data for Fudgemart and Fudgeflix.
2. Users should be able to view sales performance metrics, such as total revenue, sales quantity, and profit margin.
3. The dashboard should have interactive data visualization elements, like charts and graphs, to represent sales trends over time and identify popular products.

# **Business processes (related to above questions)**

1. Sales Analysis: Analyzing data related to retail operations. Helps track sales performance, identify popular products and analyze customer preferences.

# \*we selected business process (?) for integration across both fudgemart and fudgeflix.

# **Business Process (selected from above) for integration implementation**

**Sales Analysis**

**Facts:**Sales Amount,Quantity Sold,Time,Customer ID,Product ID,Region/Location  
**Dimensions:** Customer, Product, Time, Region/Location  
  
**Comments**

August 9, 2023.

Project deliverables

1. Project Document:

a. Assemble a Project Charter

b. Devise a project plan / schedule

c. Outline functional requirements based on your activity of profiling data in Fudgemart,

Inc.’s databases.

d. Overview 5 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 for 5 business processes

b. Attributes and metrics

c. Outline any issues you have

3. Detail-level dimensional modeling worksheet

a. Choose 1 of the 5 processes for integration across both Fudgemart and Fudgeflix.

b. Provide fully completed dimensions and facts

c. Identify sources for your source to target map

d. Generate an integrated SQL schema for your data warehouse

4. Data Warehouse on SQL Server

a. Use generated SQL schema to construct data warehouse with the integrated Fact table

b. Include all dimension tables needed for the integrated Fact table

c. Adopt techniques learned in the course, such as use of staging and enterprise bus.

d. Follow consistent conventions

Group Project Instructions Page 2 Revised Aug 01, 2021

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. Construct SSAS cube on Analysis Services Server for the integrated Business Process

b. BI Dashboard or Application in Power BI and/or Excel.

c. BI may connect with ROLAP and/or MOLAP (cube).

d. BI Documentation: Create a powerpoint that includes the goal of your analytics, the star

schema (generated from SSAS), and several graphs/charts/dashboards from above steps.

Focus on the data story. Include recommendations.

(Last Part)

7. Individual Peer Review and Writeup

a. Score you team contributions.

b. What did you learn?

c. What was your contribution to the project?