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| **Project Charter** | | | |
| **Project Name** | IST 722 Group Project Assignment – Fudgeflix & Fudgemart | | |
| **Project Description** | DW/BI for Fudgemart, Inc | | |
| **Project Manager** | **Daniel Piston** | **Date Approved** |  |
| **Project Sponsor(s)** | **Professor Khan** | **Signature** |  |
| **Business Case** | | **Expected Goals/Deliverables** | |
|  | |  | |
| **Fudgemart and Fudgeflix are two subsidiaries pf Fudgemart Inc. The business needs a Data Warehouse to manage the merging of two separate databases and create a data warehouse for business intelligence reporting. This will allow the newly formed business intelligence and business analytics teams to provide proper information on business needs and issues.** | | * Create and Build a Data Warehouse and BI solution for Fudgemart, Inc. * Requirements Gathering * Profiling Data | |
|  | | Deliverables | |
| **Team Members** | | **1 – Project Charter / Project Plan Doc** | |
| **Name** | **Role** | **2 – High – level dimensional model** | |
| **Dan Piston** | **Project Manager** | **3 – Detail-level dimensional model** | |
| **Nebe Samuel** | **Developer** | **4 – DW SQL Implementation** | |
| **Tory Lipsey** | **Business Analyst** | **5 – Initial ETL** | |
| **Shared** | **Data Architect** | **6 – Business Intelligence** | |
| **Dan Piston** | **ETL Architect** | **7 – Final Project** | |
| **Risks and Constraints** | | **Milestones** | |
| **No defined requirements** | Typically in this type of work we would have business users that we can interview and use to understand the data. Given this is a training scenario, we weed to rely on the data which gives an incomplete view. | **1 – Week 4** | **Project Charter** |
| **2 – Week 6** | **High-level dimensional modeling worksheet** |
| **3 – Week 9** | **Detail-level dimensional modeling** |
| **SQL Script** |
| **Compressed timeline** | The timeline for this project is much more compressed than in the workplace. Typically this project would be a long term project. | **Artifacts** |
| **Due: Week 11** |  |
|  |  |
| **Compressed timeline** | The timeline for this project is much more compressed than in the workplace. Typically this project would be a long term project. |  |  |
| **Lack of resources** | Small team with full schedules. Very little free time. |  |  |
| **Lack of funds** | No funds to bring on additional team members. |  |  |

**Profiling data in Fudgemart**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table** | **Type** | **Row Count** | **Business Key** | **One Row Is** |
| fm\_employees | Master Data | 33 | None (PK used) | An employee |
| fm\_employee\_timesheets | Business Process | 6275 | None (PKs used) | An employee weekly work hours. |
| fm\_departments\_lookup | Master Data | 6 | None (PK used) | A department |
| fm\_jobtitles\_lookup | Master  Data | 4 | None (PK used) | A job title |
| fm\_products | Master Data | 91 | None (PK used) | A Customer |
| fm\_vendors | Master Data | 9 | None (PK used) | A vendor |
| fm\_customer\_product\_reviews | Business  Process | 1039 | None (PKs used) | A product rating |
| fm\_customers | Master Data | 25 | None (PK used) | A customer |
| fm\_customers\_creditcards | Master Data | 54 | None (PKs used) | A customer’s credit card |
| fm\_order\_details | Master Data | 29 | None (PK used) | A Supplier |
| fm\_orders | Master Data | 77 | None (PK used) | A Product |
| fm\_shipvia\_lookup | Business Process | 10466 | None (PKs used) | A quantity of a product sold |
| fm\_creditcards | Master Data | 49 | None (PK used) | A credit card |

**Profiling data in FudgeFlix**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table** | **Type** | **Row Count** | **Business Key** | **One Row Is** |
| ff\_people | Business Process | 25347 | None (PK used) | A person |
| ff\_cast | Business Process | 70543 | None (PK used) | A rental/product |
| ff\_directors | Business Process | 7136 | None (PK used) | A director and their title |
| ff\_title\_genres | Master Data | 27841 | tg\_genre\_name and tg\_title\_id | A video/dvd and its movie genre |
| ff\_genres | Master Data | 91 | None (PK used) | A Customer |
| ff\_titles | Master Data | 7185 | title\_id (PK) | A movie |
| ff\_account\_titles | Business Process | 2368 | at\_id (PK) | A video rental |
| ff\_accounts | Master Data | 35 | Account\_ID (PK) | A customer |
| ff\_account\_billing | Business Process | 1294 | ab\_id (PK) | Each monthly bill per customer |
| ff\_plans | Master Data | 29 | None (PK used) | A Supplier |
| ff\_zipcodes | Master Data | 77 | None (PK used) | A Product |

**Requirement Gathering**

1. Interviews with users
2. Observations of users
3. Data Audits (data profiling to assess the capabilities of data sources)

**Requirements Documents**

1. Interview write-ups
2. ID business processes
3. Enterprise Bus Matrix
4. Prioritization grid
5. Issues List

**Stakeholder Interview Questions**

1. What type of routine analysis do you perform?
2. What data is used and where do you get it?
3. What do you do with the data once you get it?
4. Which reports do you use?
5. Which data on the report is important? If the report were dynamic what would it do differently?
6. Provide a product list.
7. How do you distinguish different products?
8. How are they categorized?
9. Do categories change over time?
10. Data profiling involved exploring source data to get a sense of its current : (read list)

Sometimes you might need to extract raw data from its source like a mainframe or midrange system into a relational database or spreadsheet so that you can profile the data more thoroughly.

Data profiling might raise additional questions about the use and meaning of the data in your profiling. As such you might need to conduct brief follow-up interviews with users or research an organization’s technical documentation, such as data dictionaries (should they exist).

# **Business Requirements**

High-level needs of the overall organization to address a problem or opportunity. These requirements provide the rationale for business processes.

|  |  |  |
| --- | --- | --- |
| Req. ID | Requirement | Priority (P1,P2,P3) |
| BDR1.FMART.URX | List the customer contact names and titles sorted by the company in each category |  |
| BDR2.FMART.URX | Select a specific customer and display that customer’s orders with a total amount of product sold for each order |  |
| BDR3.FMART.URX | Select a specific employee and each order, how it was shipped ship via the company who shipped it, and the total number of days elapsed from order date to shipped date, and date of return |  |
| BDR4.FMART.URX | Total amount sold for each product and the top selling products in each category. |  |

# **Functional Requirements**

# **Fudgemart, Inc.**

Requirements denote particular behaviors and operations that the solution will perform. Based on the Fudgemart Database.

|  |  |  |
| --- | --- | --- |
| DW.FMART.URX.0001 | Business users must be able to analyze sales of a product over time and by geographic region, customer segment, or sales territory. |  |
| DW.FMART.URX.0002 | Business users must be able to view their finance data within their own department such as revenues and expenses by fiscal period broken down into account codes. |  |
| DW.FMART.URX.0003 | the business users must be able to retrieve customer transactions for any given period |  |
| DW.FMART.URX.0004 | The system shall use a ribbon to group user functionality. |  |
| DW.FMART.URX.0005 | The system shall be developed in compliance with relevant sections of Section 508 of the Rehabilitation Act of 1973. |  |
| DW.FMART.URX.0006 | Analyze if the Customer belongs to Fudgemart or FudgeFlix for offers selection |  |
| DW.FMART.URX.0007 | The system will allow exporting of system reports. |  |
| DW.FMART.URX.0008 | The system shall provide for a read-only log of changes to files records. |  |
| DW.FMART.URX.0009 | Analyze Fudgemart Orders |  |
| DW.FMART.URX.0010 | The system should allow analyzing Fudgemart Sales |  |
| DW.FMART.URX.0011 | The system should allow a view of payment type |  |
| DW.FMART.URX.0012 | The DW should allow for calculation of products sold |  |
| DW.FMART.URX.0013 | The system should distinguish loyal customers |  |
| DW.FMART.URX.0014 | The system must show a list of titles that have been rented/purchased |  |
| DW.FMART.URX.0015 | Must allow reporting of most popular titles. |  |
| DW.FMART.URX.0016 | The system should provide the average product price |  |
| DW.FMART.URX.0017 | The DW should show when an item was shipped and returned |  |
| DW.FMART.URX.0018 | Business users will be able to review customer reviews at any time. |  |
| DW.FMART.URX.0019 | The DW must show order date |  |
| DW.FMART.URX.0020 | Business users can analyze customer orders by order dates, shipped dates, ship via, product quantities, order totals, and average product price |  |

# **Analytic Themes and Business Processes**

Business processes (related to the above questions) you will model from those functional requirements and explain their business value - Nebe (Event /Transaction = BP, Status = id workflow, level = quantitative measurement/periodic snapshot, roles = who, what, and when the aforementioned is required.

1. View Customer account information and purchases
2. Ship Orders
3. Sell Products
4. Accounts & Billing
5. Forecast which Titles are the most popular, products that sell the best
6. View the top selling products over time and per product category

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

**Justifications**

* The project is focused on creating a centralized data warehouse repository that consists of aggregated data coming from different subsidiaries.
* The data will be stored in a series of snapshots/views, in which each record represents data at a specific time. By analyzing the snapshots, one can compare among the time periods. These comparisons can help the user make important business decisions.
* The data warehouse databases provide a decision support system in which a user can calculate and evaluate the performance of the organization over time.

# **Business Process Selected for integration implementation**

**Facts Tables**

Note: Fact tables contain the metrics resulting from a business process or measurement events, such as the sales ordering process or service call event.

* FactSubscriptionPlansRevenue
* FactProductReviews
* **FactOrders (FudgeMart Orders / FudgeFlix Account Titles)**
* FactFudgeFlixMetrics (StarttoWatchTime & TotalWatchTime)

**Dimensions Tables**

* DimSubscriptionPlans
* DimAccounts
* DimAccountBilling (remove)
* DimTitles
* **DimCustomers**
* DimCustomerProductReviews (remove) cust metrics
* DimOrders
* **DimProducts**
* DimDate

**Next Steps**

* Program/Project Management
  + Project Definition
  + Develop the Project Plan [ [Fudgemart, Inc Project Plan](https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:72bd798f-cf02-4536-80ed-9c4f41823d9a) ]
  + Naming the project
  + Team Members
  + Project Plan Doc
  + Schedule
  + Communication Plan
  + Track Issues /Change Log
  + Kickoff Meeting
* Artifacts
* Business Intelligence Visuals