System Requirements Specification For

SALES MONITORING SYSTEM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
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# Requirement providers

|  |  |  |
| --- | --- | --- |
| Name | Designation | Role |
| Faculty Team | Sr. Faculty, Sr. Managers | Reviewer |

# Scope

## Environment Specification

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Environment** | **Technology** | **Platform** | **Tools** | **Data warehouse** |
| Development | BI | Windows | Teradata | Teradata |
|  |  | Windows | Ab-Initio GDE | Oracle |
|  |  | Windows | Qlik View | Oracle |
| Testing | NA | NA | NA | NA |

## Customer ctqs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CTQ** | **Importance**  (1 – Lowest; 10 – Highest) | **Measurement** | **Target** | **Tolerance** |
| Performance requirements | 8 | No. of seconds taken to upload 1000 records from CSV file to DB | 10 seconds | 12 seconds |
| Performance requirements | 8 | No. of seconds taken to retrieve 1000 records from the DB (during search) | 5 seconds | 7 seconds |
| Look and feel | 10 | Reports must be well represented | NA | NA |

## Functional Requirements

### User Interface specification

* Any user can access the system

### Database specification

### Back End Tool**:** Teradata

1. Dimension Table
2. Retailer

This dimension contains Retailer details and the CSV file comprises of the following Fields:

* Retailer\_ID\_key – number(2)
* Retailer\_Name – VARCHAR2(50)
* Retailer\_Mgr – VARCHAR2(50)
* Address- VARCHAR2(50)
* City\_Id- VARCHAR2(50)
* Zip\_Code- VARCHAR2(50)
* Phone\_No- VARCHAR2(50)
* Email\_Id- VARCHAR2(50)

1. City

This dimension contains City details and the CSV file comprises of the following Fields:

* City\_ID – VARCHAR2(3)
* City\_Name– VARCHAR2(11)
* State- VARCHAR2(13)
* Zone- VARCHAR2(6)
* Country- VARCHAR2(5)

1. Salesperson

This dimension contains Salesperson details and the CSV file comprises of the following Fields:

* Salesp\_Id\_Key- VARCHAR2(3)
* Salesp\_Id\_Key- VARCHAR2(3)
* Salesp\_Id\_Key- VARCHAR2(3)
* Hiredate- VARCHAR2(15)
* Salary- NUMBER(5)
* City\_Id- VARCHAR2(2)
* Salesp\_Mgr\_Id- VARCHAR2(6)
* Mgr\_name- VARCHAR2(17)

1. Salesperson Compensation

This dimension contains Salesperson Compensation details and the CSV file comprises of the following Fields:

* Salesp\_Id\_Key- VARCHAR2(3)
* Target\_Sales\_Revenue-NUMBER(15,2)
* Prcnt\_increment\_sal- VARCHAR2(10)

1. Product Prmotion

This dimension contains Product Promotion details and the CSV file comprises of the following Fields:

* Promotion\_Id\_Key-NUMBER(1)
* Newspaper-VARCHAR2(1)
* Television-VARCHAR2(1)
* Radio-VARCHAR2(1)
* Print-VARCHAR2(1)
* E-media-VARCHAR2(1)

1. Product

This dimension contains Product details and the CSV file comprises of the following Fields:

* Product\_id\_key- VARCHAR2(1)
* Product\_name- VARCHAR2(1)
* Product\_category- VARCHAR2(1)
* Package\_type- VARCHAR2(1)
* Sales\_price\_unit- NUMBER(15,2)
* Product\_discount- NUMBER(15,2)
* Margin- NUMBER(15,2)
* Promotion\_id\_key NUMBER(1)
* Product\_launch\_date- VARCHAR2(1)

1. Payment\_mode

This dimension contains Payment\_mode details and the CSV file comprises of the following Fields:

* Pay\_mode\_key- VARCHAR2(1)
* Pay\_mode- VARCHAR2(1)
* Description- VARCHAR2(1)

1. Order

This dimension contains Order details and the CSV file comprises of the following Fields:

* Order\_id\_key- VARCHAR2(1)
* Order­\_date\_key-NUMBER(1)
* Pay\_mode\_key- VARCHAR2(1)

1. Time

This dimension contains Time details and the CSV file comprises of the following Fields:

* Order­\_date\_key-VARCHAR2(10)
* Year- VARCHAR2(10)
* Quarter- VARCHAR2(10)
* Month- VARCHAR2(10)
* Week\_of\_month- VARCHAR2(10)
* Week\_of\_year- VARCHAR2(10)
* Day- VARCHAR2(10)
* DD- VARCHAR2(10)
* Monsoon\_flag- VARCHAR2(10)

1. Fact Table
2. Sales\_Fact

This is a Fact table that would contain the

* Retailer\_id\_key
* Product\_id\_key
* Order\_id\_key
* Salesp\_id\_key
* Quantity\_sold
* Sales\_amount
* Discount\_amount
* Margin\_amount
* Sales\_profit
* Quantity\_volume\_flag
* Age\_of\_product

### Business Logic specification

* Retailer\_Id, Product\_Id, SalesP\_Id and Order\_Id are the Foreign Keys for this fact table and these three fields all-together form Primary key for this table.
* The fact table should store the data pertaining to all the sales categories separately for each product.
* The measures that do not have data in the CSV file should be given default value zero ‘NULL’ in the fact table while loading the data

### Input specification

1. User specifying the CSV file:

Data type : String, Number, Decimal

Source : CSV file

Format : Comma Separated Values.

Frequency : Normal, individual

### Output specification

1. To populate the data into oracle database by using ETL process

Source : Ab-Initio

Frequency : Normal, individual

1. User viewing / modifying reports

Source : Qlik View

Frequency : based upon the user query

## Limitations In Functionality And Features

### BUSINESS

The limitations are:

* + - * Data is accepted only from a .CSV file. The system is not designed to accept files of any other format.
      * Country id should be from nationality.

### TECHNOLOGY

* Dashboard functionality not available.

## Non-functional requirements

### Testing requirements

* Database connectivity must be up and running.
* Testing requires sample test data from the user or developer

### Documentation requirements

* A brief document regarding the usage and constraints of the application should be provided to the customer during delivery

### Abnormality/error processing requirements

* + If a file other than .CSV format is given as input the user is prompted to enter a valid file format.
* Insertion or upload of data already existing in the database, an error message with its description is entered in a log file and error message is displayed to use

# ASSUMPTIONS

* No repetition of records in the CSV file
* If there are null values then the values will be supplemented by N/A
* Once the record is modified, the details present in the record before modification is not needed by the user again

# REFERENCES

* The Data Ware House Life Cycle Toolkit by RALPH KIMBALL
* Ab-Initio Lab book

# ACRONYMS

* CSV – Comma Separated Values file