Sales Analysis

Software Requirements Document

V 1.0

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1 Introduction

1.1 About this document

1.1.1 Purpose of the document

The purpose of the software requirements document is to systematically capture requirements for the project and the system “Sales Analysis” to be developed. Functional requirements of this system are captured in this document. It also serves as the input for the project scoping.

1.1.2 Intended Audience

Project Team

1.2 About the Software System

The primary objective of the project is to create a visualization which will give narratives of the sales of an ecommerce site with required data validations as mentioned. The data visualization in turn is used for generating valuable insights from the dataset.

The following are the modules in this proposed system

a) Data Importing

b) Data Transformation

c) Data Visualization

d) Data Validation

1.2.1 Scope of the system

The scope of the system is explained through its modules as follows

- **Data Importing** – This module is to show how the ODBC connection to Qliksense is done and how data modeling is done.

- **Data Transformation** – This module is to analyze the imported data and perform some transformations so that meaningful insights can be drawn from the dataset.

- **Data Visualization** – This module is to present the insights learned from the dataset in a visual way so that the clients can easily check on their data and do required revision to their policies.

- **Data Validation** – This module is to analyze whether the information we get from the data visualization are correct. It is checked in MySql Workbench.

1.2.2 Exclusions

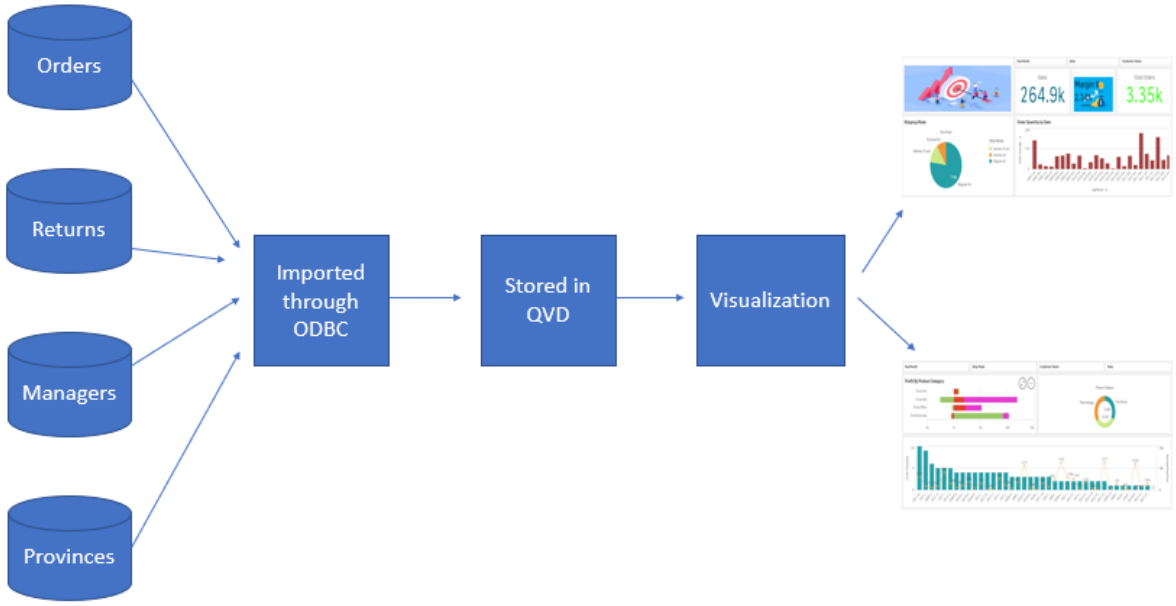
1. The system will operate only on the modules discussed above and will not include any additional functionality.

1.2.3 System Perspective

The system is a data visualization system developed to find valuable insights from the client's data.

1.2.4 Architecture diagram

The system has Tier 2 architecture meaning when you load the data, store it in a QVD and use that in one or several Qliksense apps. 2-Tier Architectures supply a basic network between a client and a server. In this Data Extraction scripts and transformations are stored in different unlike 1 tier Architecture.



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1.2.5 Impact of the System

The data visualization system is developed to get insights from the ecommerce store's data so that revisions may be done to their policies accordingly.

1.2.6 Assumptions, Risks / Constraints

Assumptions: Only Orders, Returns, Managers and Provinces tables are considered.

1.2.7 Source File Structure

Orders

Table: orders

Columns:

Row ID	int
Order ID	int
Order date	text
Order Priority	text
Order Quantity	int
Sales	double
Discount	double
Ship Mode	text
Profit	double
Unit Price	double
Shipping Cost	double
Customer Name	text
Province	text
Region	text
Customer Segment	text
Product Category	text
Product Sub-Category	text
Product Name	text
Product Container	text
Product Base Margin	double
Ship Date	text

Returns

Table: returns

Columns:

Order ID	int
Status	text

Managers

Table: managers

Columns:

Region	text
Manager	text

Provinces

Table: provinces

Columns:

Row ID	int
Province	text

1.2.8 Data Importing

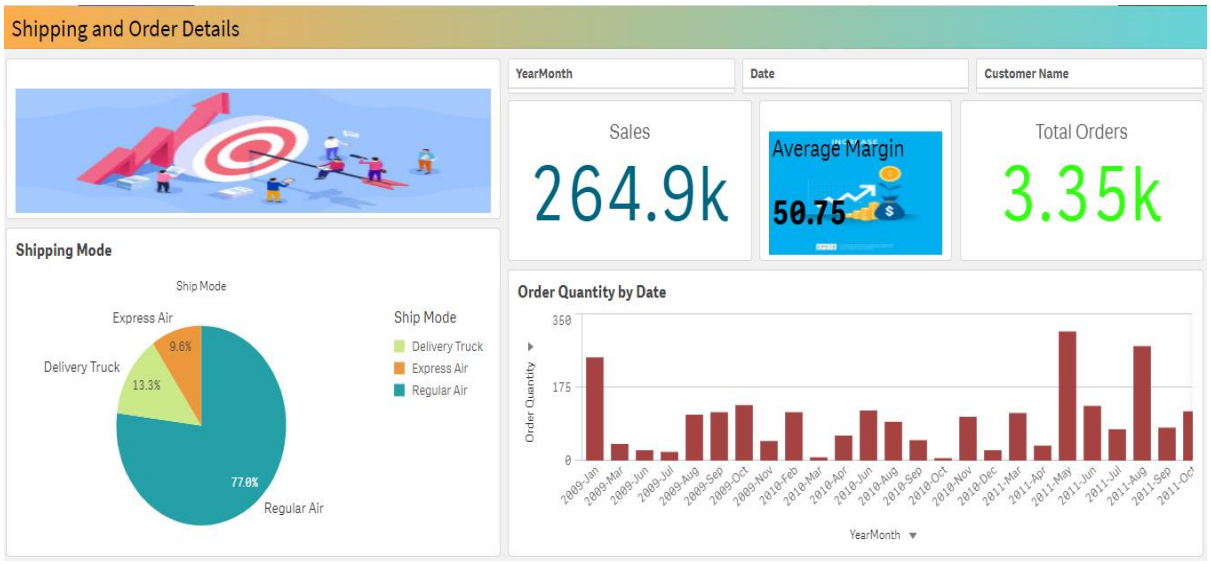
- Dataset was downloaded from google.

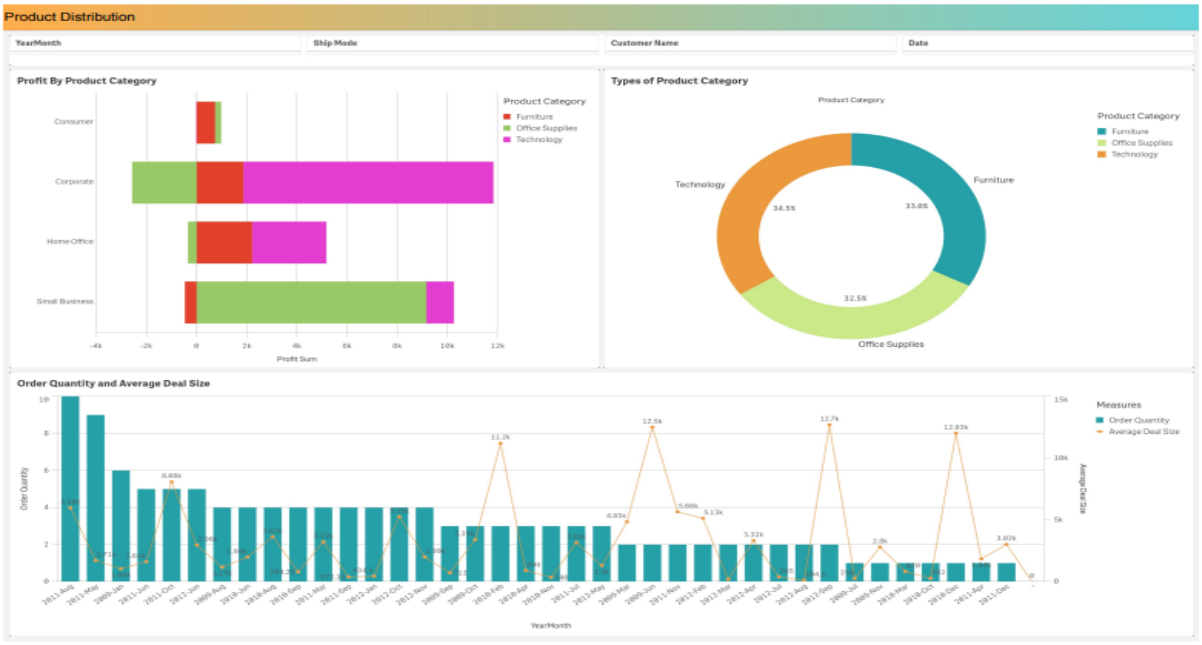
- It was loaded in a schema named “projteam2” in MySql Workbench and it was connected to Qliksense using ODBC connector.

1.2.9 Data Transformation

- After connecting the data source to Qliksense vaiorus data transformations were done.
- Renamed field name or column name by using Alias, one example is mentioned below.
    - `Order Priority` as Priority
- “Order date” and “Ship Date” in “Orders” table had date in text format, it was converted to date format.
    - DATE(DATE#(`Order date`, 'DD-MM-YYYY'), 'DD-MM-YYYY') as [Order Date]
    - DATE(DATE#(`Ship Date`, 'DD-MM-YYYY'), 'DD-MM-YYYY') as [Ship Date]
- “Order Priority” had some null values hence those rows were dropped.
- “Sales”, “Profit”, “Unit Price” and “Shipping Cost” were rounded off.
    - Round(Sales) as Sales
    - Round(Profit) as Profit
    - Round(`Unit Price`) as [Unit Price]
    - Round(`Shipping Cost`) as [Shipping Cost]
- “Profit in %” was found by dividing the profit factor (“Profit”) and total sales (“Sales”) and then it was rounded off.
    - Round(Profit) as Profit,
    - Round((Profit/Sales)*100) as [Profit in %]
- “Product Base Margin” was converted into percentage and given an alias as “Product Base Margin in %”.
    - `Product Base Margin`*100 as [Product Base Margin in %]
- “Discount” was converted into percentage and given an alias as “Discount in %”.
    - Discount*100 as [Discount in %]

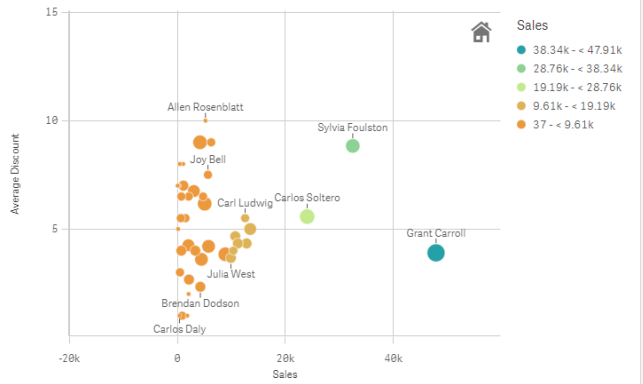
1.2.10 Data Visualization





Customer wise sales

Discount and Order Quantity



Customer wise Margin

Customer Name | Region | Values

Customer Name	Region	Sales	Margin %	Last Order Placed
Grant Carroll	Northwest Territories	41,133.00	1%	10-09-2011
	Nunavut	6,781.00	1%	21-07-2012
Sylvia Foulston	Northwest Territories	26,091.00	1%	15-10-2011
	Nunavut	6,393.00	3%	14-02-2012
Carlos Soltero	Northwest Territories	23,669.00	1%	15-04-2010
	Nunavut	370.00	16%	08-11-2010
Beth Thompson	Northwest Territories	13,489.00	2%	23-10-2012
Michelle Lonsdale	Northwest Territories	12,821.00	1%	19-09-2012
Carl Ludwig	Nunavut	12,540.00	1%	09-03-2011
Eugene Barchas	Northwest Territories	5,407.00	1%	07-08-2010
	Nunavut	5,778.00	2%	09-10-2009
Barry Weirich	Northwest Territories	340.00	11%	17-03-2012
	Nunavut	10,373.00	1%	08-06-2010
Barry French	Nunavut	10,368.00	1%	01-10-2012
Julia West	Northwest Territories	6,359.00	2%	17-03-2011
	Nunavut	3,554.00	2%	19-07-2011

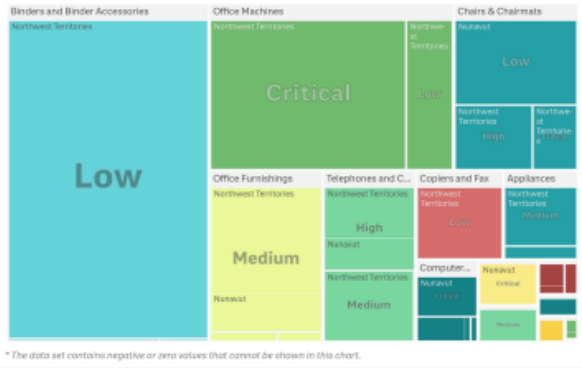
Product Insights

Year

Product Details

Product Category	Product Sub-Category	Average Discount	Profit Sum	Average Deal Size
Totals		5.2	24864	3,888.76
Technology	Telephones and Communication	4.6	5794	3,187.18
Furniture	Tables	10.0	-513	2,183.00
Office Supplies	Storage & Organization	5.3	-2986	1,258.92
Office Supplies	Scissors, Rulers and Trimmers	4.0	-1760	9,621.00
Office Supplies	Rubber Bands	2.5	-35	187.00
Office Supplies	Pens & Art Supplies	6.0	-43	189.00
Office Supplies	Paper	5.1	-1038	378.26
Technology	Office Machines	5.0	6591	12,549.00
Furniture	Office Furnishings	4.7	2871	1,873.27
Office Supplies	Labels	6.0	146	378.20
Office Supplies	Envelopes	5.0	353	752.00
Technology	Copiers and Fax	3.5	713	16,767.50
Technology	Computer Peripherals	7.7	923	836.71
Furniture	Chairs & Chairmats	5.0	4299	4,522.30
Furniture	Bookcases	3.5	-2383	4,876.25
Office Supplies	Binders and Binder Accessories	5.3	10620	2,328.25
Office Supplies	Appliances	4.0	1152	2,418.50

Order Priority as per Provinces *



* The data set contains negative or zero values that cannot be shown in this chart.

Sales as per Month

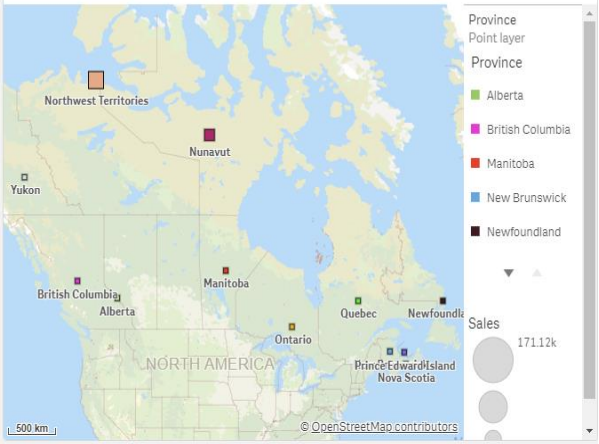
Revenue Details

Total Profit	Average Discount
24.86k	5.21

Product Sub-Category

- Appliances
- Binders and Binder Accessories
- Bookcases
- Chairs & Chairmats
- Computer Peripherals
- Copiers and Fax
- Envelopes
- Labels
- Office Furnishings
- Office Machines

Delivery Provinces



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