

DOCUMENTATION

Problem Statement - A retail manufacturer selling to retailers is seen in the dataset that is attached. They are eager to have a deeper understanding of their company's sales and profitability. To help this organization gain better visibility on this dataset, you have been entrusted with providing insights. Please use your creativity to develop an app with Qlik Sense.

Approach -

Step 1 : Data Understanding

Data is provided in excel sheet format which contains 9 tables. Each table has several records and fields. Detailed description of tables is provided below.

Table Name	No.of Records	No.of Fields
Categories	7	3
Customers	92	12
India City Lat Long	58	4
Employees	47	9
Offices	5	3
Order Details	4022	7
Orders Header	1533	9
Products	77	4
Supplier	30	5

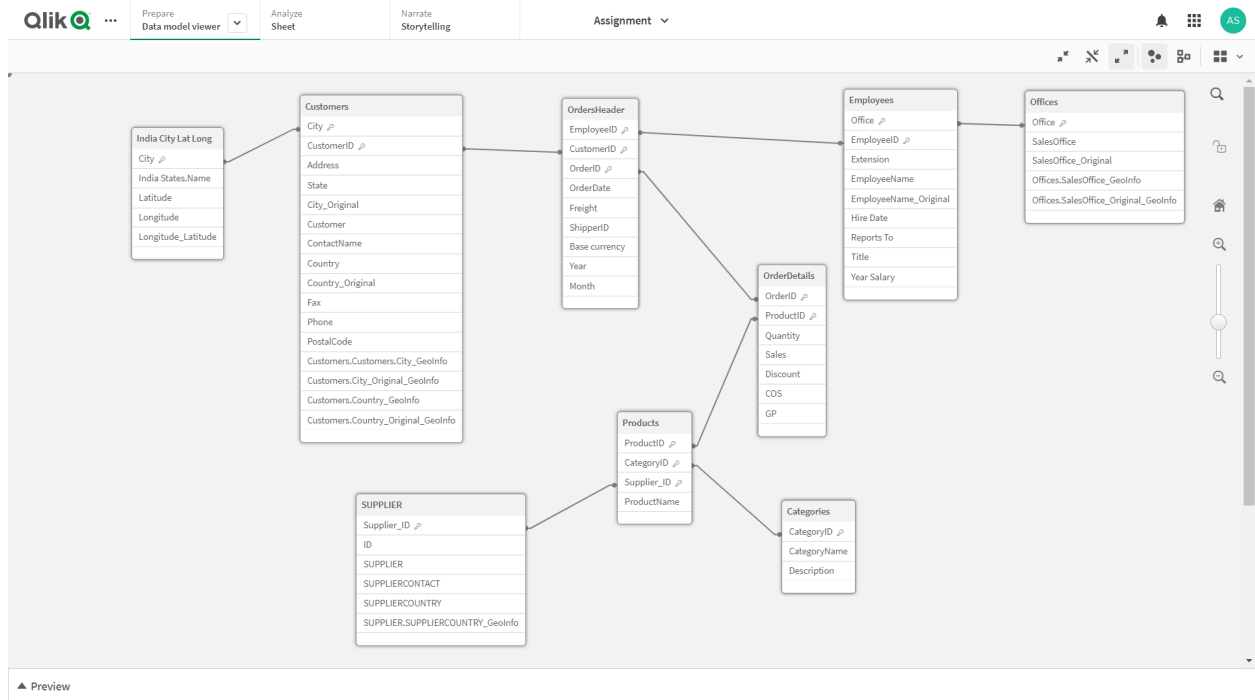
Step 2 : Data Preparation

Data Cleaning has been carried out as part of data preparation using MS Excel, as it works efficiently on smaller datasets. Observations are followed as

- No duplicates are found.
- Irrelevant data types are not found.
- Proper formatting has been done.
- Fixed calculation errors.
- No outliers are detected.
- Handled missing values by replacing them with Null.

Step 3: Exploratory Analysis and Modeling

Identified key fields and made appropriate associations by Qlik Data Manager, below figure gives an abstract view of data fields and associations.



Also created following Master items with calculated fields which can be reused throughout the sheets.

- Sales.
- Cost of Sales.
- Gross Profit.
- Total Customers.
- Total Orders.
- Total Products.

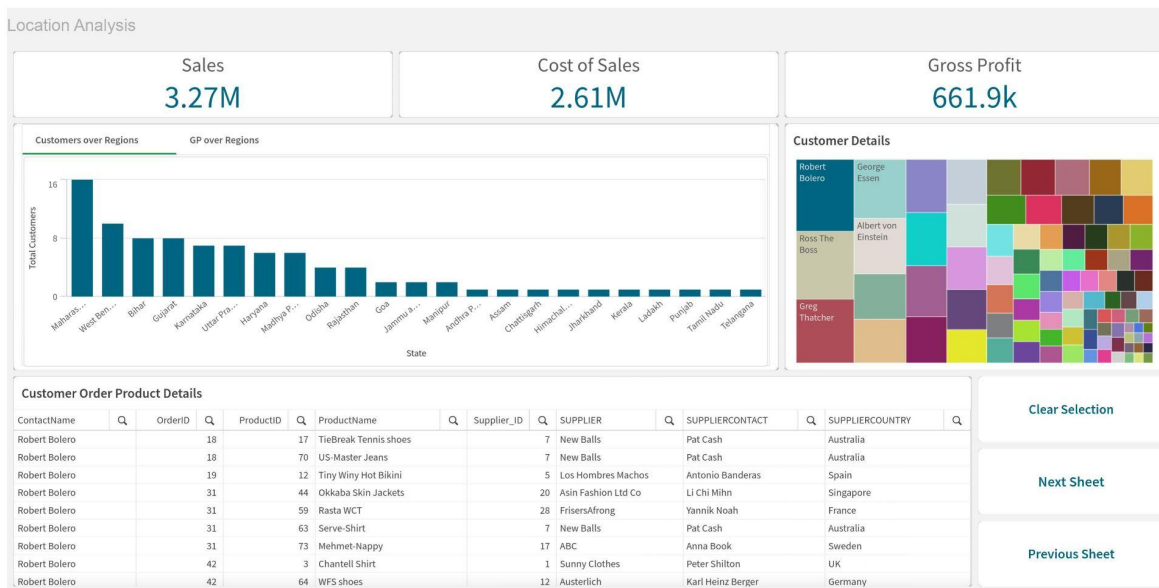
Step 4: Building App on Qlik Sense

As part of building App to gain insights from provided sales data, following sheets are built.

Sheet 1 : Location Analysis

This sheet provides insights of Sales across different regions, following charts have been used in this sheet .

- **Container** is used to hold two bar grapes that highlights the count of customers residing in each state along with Gross Profit earned in that region.
- **KPI** are used to elaborate overall Sales, COS and GP based on selection.
- **Tree Map** is used to elaborate Customer details.
- **Table** is used to get details of Customer, Order, Product and Supplier .
- **Buttons** are used to clear selection and to navigate between sheets.



Customer Order Product Details

ContactName	OrderID	ProductID	ProductName	Supplier_ID	SUPPLIER	SUPPLIERCONTACT	SUPPLIERCOUNTRY
Robert Bolero	18	17	TieBreak Tennis shoes	7	New Balls	Pat Cash	Australia
Robert Bolero	18	70	US-Master Jeans	7	New Balls	Pat Cash	Australia
Robert Bolero	19	12	Tiny Winny Hot Bikini	5	Los Hombres Machos	Antonio Banderas	Spain
Robert Bolero	31	44	Okkaba Skin Jackets	20	Asin Fashion Ltd Co	Li Chi Mihn	Singapore
Robert Bolero	31	59	Rasta WCT	28	FriseursAfrong	Yannik Noah	France
Robert Bolero	31	63	Serve-Shirt	7	New Balls	Pat Cash	Australia
Robert Bolero	31	73	Mehmet-Nappy	17	ABC	Anna Book	Sweden
Robert Bolero	42	3	Chantell Shirt	1	Sunny Clothes	Peter Shilton	UK
Robert Bolero	42	64	WFS shoes	12	Austerlich	Karl Heinz Berger	Germany

Clear Selection

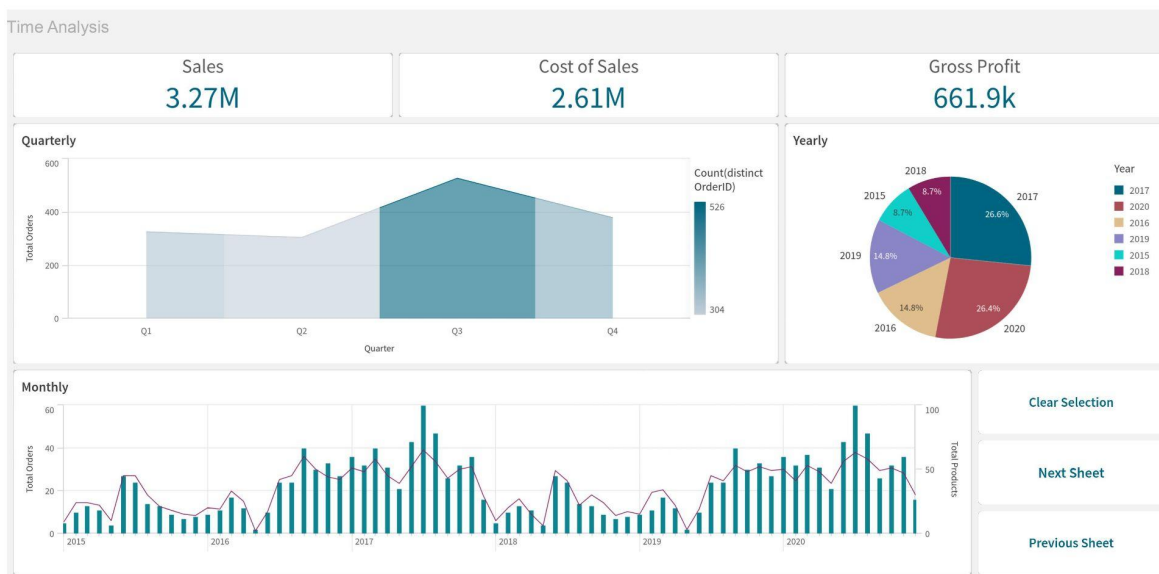
Next Sheet

Previous Sheet

Sheet 2 : Time Analysis

This sheet is used to gain insights in respect to period trends, following charts have been used in this sheet .

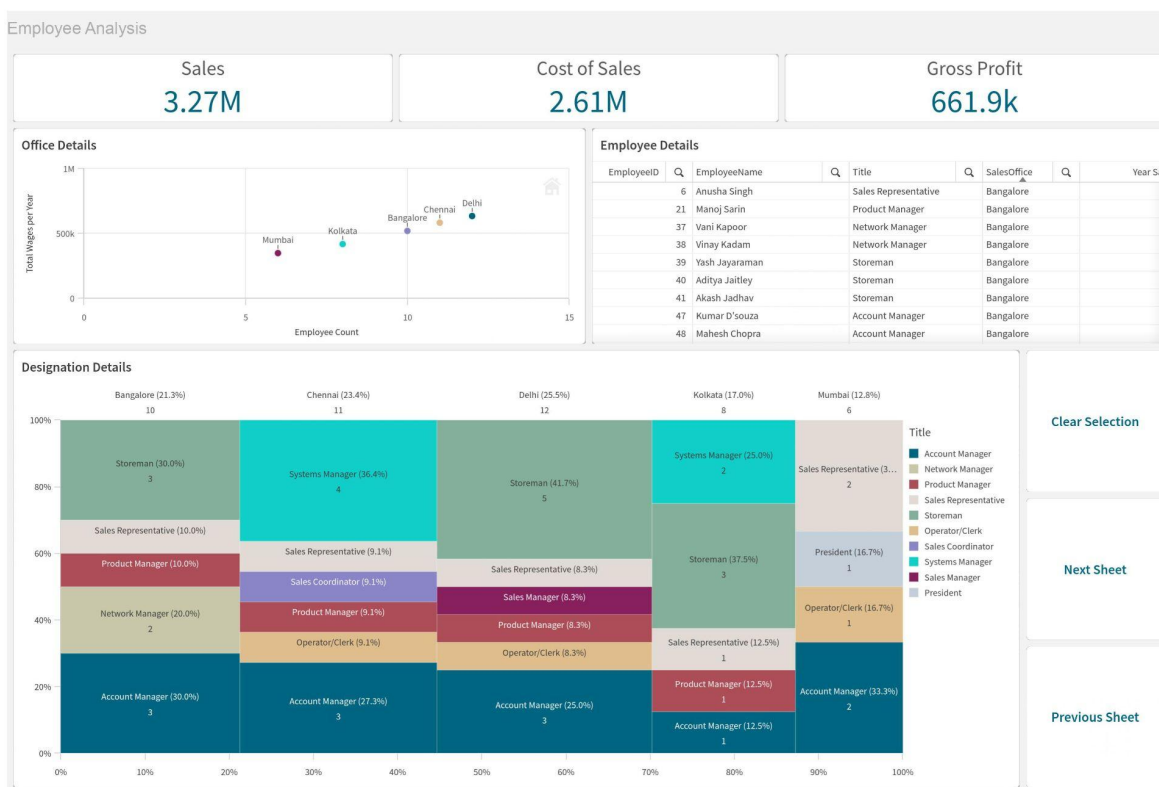
- **Line Chart** is used to see quarterly trends of selected years .
- **Pie Chart** gives a brief analysis on the count of orders placed in different years .
- **Combo Chart** is used to see month wise sales along with orders placed and products sold.
- **KPI** are used to elaborate overall Sales, COS and GP based on selection.
- **Buttons** are used to clear selection and to navigate between sheets.



Sheet 3 : Employee Analysis

This sheet is used to gain insights of internal firm and sales associated with each office, following charts have been used in this sheet .

- **Scatter Plot** is used to find employee count in each office and total wages paid for the entire working staff per year.
- **Mekko Chart** is used to see the title of employees and their count with respect to each office.
- **Table** shows details of employees thoroughly.
- **KPI** are used to elaborate overall sales, COS and GP based on selection.
- **Buttons** are used to clear selection and to navigate between sheets.



Sheet 4 : Product Analysis

This sheet provides in depth analysis of each product and which category of products are more profitable, following charts have been used in this sheet .

- **Pie chart** is used to find the most profitable categories .
- **Line Chart** is used to see the most profitable product in each category .
- **Gauge** is used to find Total Customers who bought that product, how many orders are placed to buy that product and total products in each category.
- **KPI** are used to elaborate overall sales, COS and GP based on selection.
- **Buttons** are used to clear selection and to navigate between sheets.

