Project Report

Project Title

Sales Insights Data Analyst Project

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Contents

Problem Statement

AtliQ Hardware Delhi based company which supplies computer hardware and peripherals to many of their clients namely Surge Stores, Nomad Stores, Excel Stores, Electrical Sara Stores all across India. Atliq Hardware has its head office in Delhi and other regional offices throughout India. Bhavin Patel is the Sales Director at Atliq Hardware. Mr. Patel is tracking sales in this dynamically growing market, and he is finding it difficult to get the exact count. The Sales figures according to Bhavin is not accurately given by regional Sales Manager. According to him the regional sales managers are extrapolating the sales.

Extremely, frustrated with the current scenario Mr. Patel is helpless as the actual sales are declining and he is not able to gain the real insights into the data. Bhavin ha Excel sheets that stores sales data but due to its humungous amount Bhavin is getting frustrated and not able to reach to a solution. Bhavin is interested in simple understandable dashboard which is easy to understand but at the same time shows accurate figures.

The aim of this project will be to:

Purpose

To unlock sales insights that re not visible before for sales team for decision support and automate them to reduce manual time spent in data gathering.

Stakeholders

Sales Director

Marketing Team

Customer Service Team

Data and Analytics Team

IT

Result

An automated dashboard providing quick and latest sales insights to support data driven decision making

Success Criteria

Dashboard uncovering sales order insights with lates data available

Sales team able to take better decisions and prove 10% cost savings of total spend

Sales analysts stop data gathering manually in order to save 20% of their business time and reinvest it value added activity

Tools and Skills:

SQL, Power BI, Data Warehousing, Business Analytics, ETL

ETL

Task 1: Data acquisition

Task 2: Data Cleaning

SQL Query

```
SELECT *
FROM sales.customers
```

Output

	customer_code	custmer_name	customer_type
▶	Cus001	Surge Stores	Brick & Mortar
	Cus002	Nomad Stores	Brick & Mortar
	Cus003	Excel Stores	Brick & Mortar
	Cus004	Surface Stores	Brick & Mortar
	Cus005	Premium Stores	Brick & Mortar
	Cus006	Electricalsara Stores	Brick & Mortar
	Cus007	Info Stores	Brick & Mortar
	Cus008	Acclaimed Stores	Brick & Mortar
	Cus009	Electricalsquipo Stores	Brick & Mortar
	Cus010	Atlas Stores	Brick & Mortar
	Cus011	Flawless Stores	Brick & Mortar
	Cus012	Integration Stores	Brick & Mortar
	Cus013	Unity Stores	Brick & Mortar

SQL Query

```
SELECT *
FROM
sales.markets
```

Output

markets_code	markets_name	zone
Mark004	Delhi NCR	North
Mark005	Kanpur	North
Mark006	Bengaluru	South
Mark007	Bhopal	Central
Mark008	Lucknow	North
Mark009	Patna	North
Mark010	Kochi	South
Mark011	Nagpur	Central
Mark012	Surat	North
Mark013	Bhopal	Central
Mark014	Hyderabad	South
Mark015	Bhubaneshwar	South
Mark097	New York	
Mark999	Paris	
NULL	NULL	NULL

Note: We can see a couple of Null Values here, which we will take care during the data cleaning process.

SQL Query

```
SELECT *
FROM
sales.transactions;
```

Output

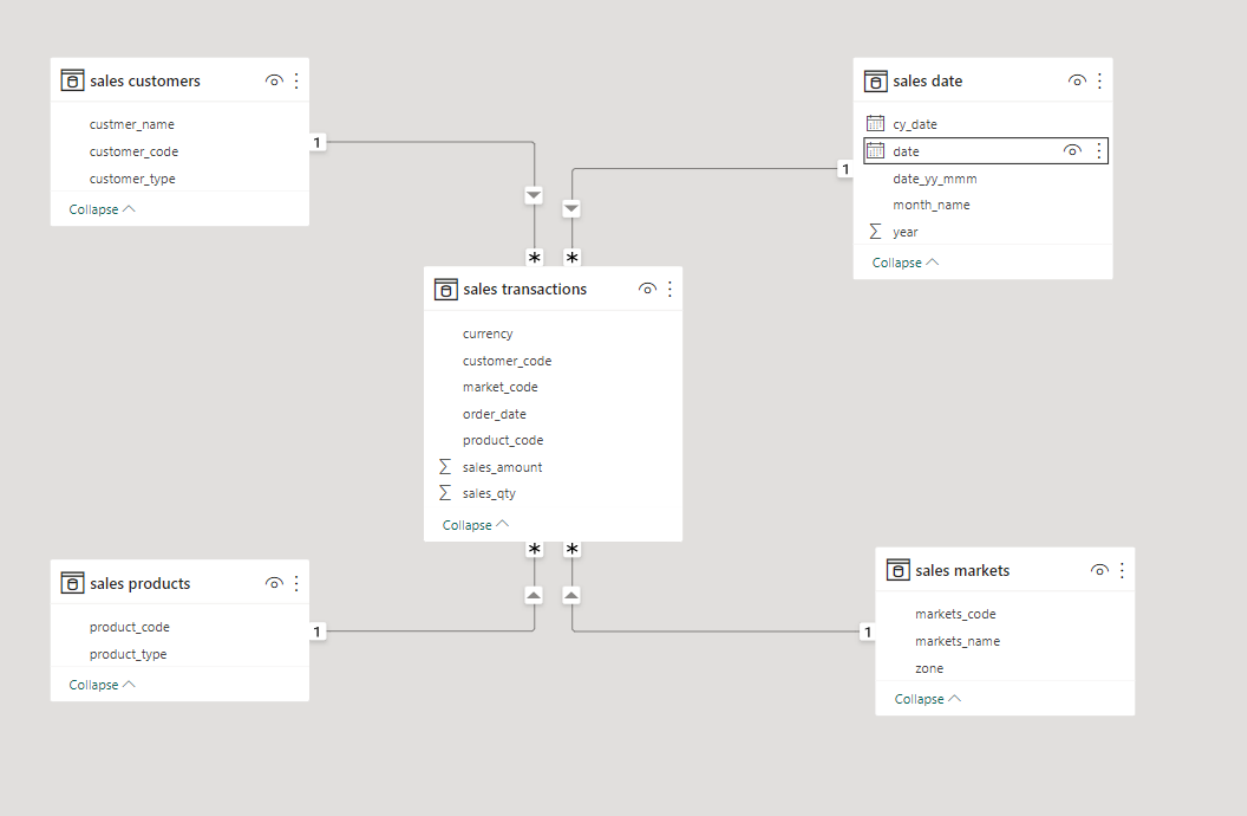
product_code	customer_code	market_code	order_date	sales_qty	sales_amount	currency
Prod001	Cus001	Mark001	2017-10-10	100	41241	INR
Prod001	Cus002	Mark002	2018-05-08	3	-1	INR
Prod002	Cus003	Mark003	2018-04-06	1	875	INR
Prod002	Cus003	Mark003	2018-04-11	1	583	INR
Prod002	Cus004	Mark003	2018-06-18	6	7176	INR
Prod003	Cus005	Mark004	2017-11-20	59	500	USD
Prod003	Cus005	Mark004	2017-11-22	36	250	USD
Prod003	Cus005	Mark004	2017-11-23	39	21412	INR
Prod003	Cus005	Mark004	2017-11-27	35	19213	INR
Prod003	Cus005	Mark004	2017-11-28	310	170185	INR
Prod003	Cus005	Mark004	2017-11-29	184	101194	INR
Prod003	Cus005	Mark004	2017-11-30	35	19213	INR
Prod004	Cus005	Mark004	2017-11-29	17	9426	INR
Prod004	Cus005	Mark004	2017-12-19	1	218	INR
Prod005	Cus005	Mark004	2018-08-07	5	3093	INR

Note: The sales amount for the 2nd row is a negative value. We know amount has to be either 0 or positive value, this means that the negative values are garbage values which we need to take care of.

Task3: Building PowerBI Dashboard

Data Model

Our data model represents a STAR Schema



Data Transformation

Removing Null values from the Column [zone] in our sales_markets Table

```
= Table.SelectRows(sales_markets, each ([zone] <> ""))
```

	markets_code	markets_name	zone
1	Mark001	Chennai	South
2	Mark002	Mumbai	Central
3	Mark003	Ahmedabad	North
4	Mark004	Delhi NCR	North
5	Mark005	Kanpur	North
6	Mark006	Bengaluru	South
7	Mark007	Bhopal	Central
8	Mark008	Lucknow	North
9	Mark009	Patna	North
10	Mark010	Kochi	South
11	Mark011	Nagpur	Central
12	Mark012	Surat	North
13	Mark013	Bhopal	Central
14	Mark014	Hyderabad	South
15	Mark015	Bhubaneshwar	South

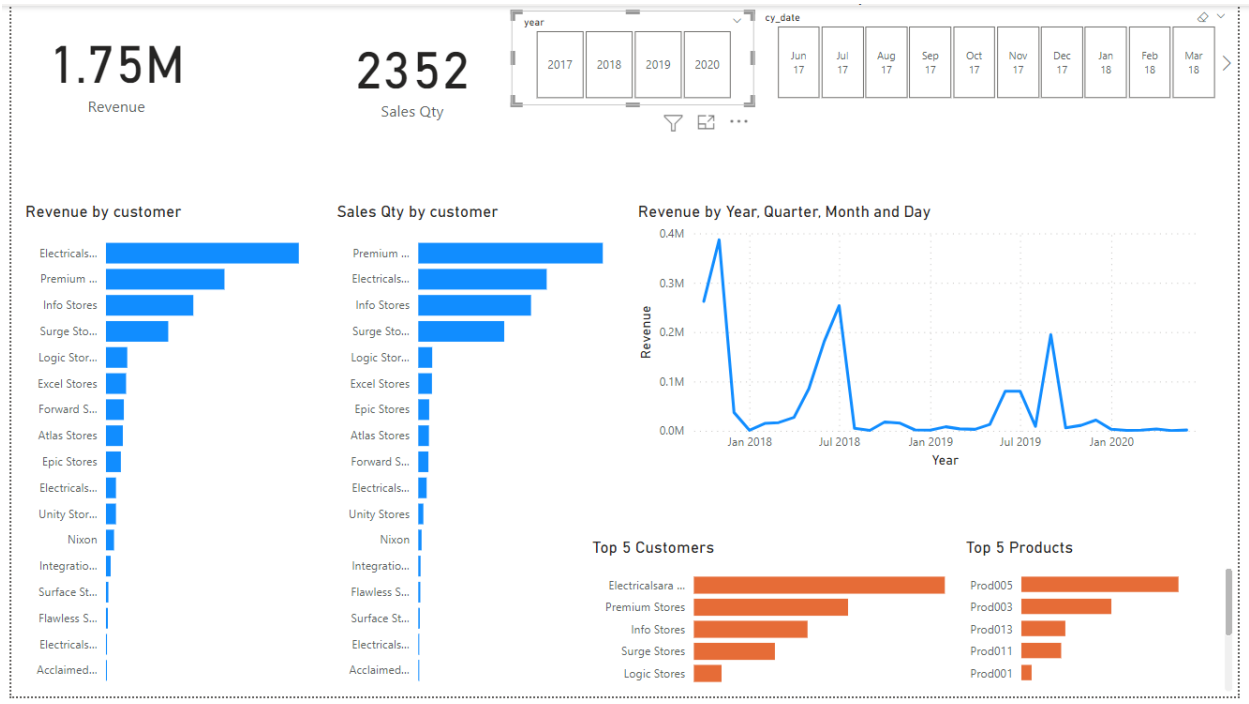
Removing non positive sales_amount values from sales_transactions tables

```
= Table.SelectRows(sales_transactions, each ([sales_amount] <> -1 and [sales_amount] <> 0))
```

Adding conditional column to convert USD values to INR

```
= Table.AddColumn(#"Filtered Rows", "norm_sales_amount", each if [currency] = "USD" then [sales_amount]*75 else [sales_amount])
```

Final Dashboard



References

- https://github.com/codebasics/DataAnalysisProjects/tree/master/1_SalesInsights
- https://www.youtube.com/watch?v=68m2UCtedj0&list=PLeo1K3hjS3uva8pk1FI3iK9kCOKQdz1I9&index=9