ATLIQ HARDWARE POWERBI PROJECT:

What you will attain from this project?

This project will help you to know- how to deal with data in real scenarios and how data can be helpful for company in terms of business growth (data driven-decision).

You will learn about Data Exploration using MySQL , Data Cleaning and ETL(Extract Transform and Load) and will built a final dashboard on Power BI to see all insights at one place .

Let's Proceed with the Project-

1. Problem Statement

AtliQ Hardware is a company which supplies computer hardware and peripherals to many of clients such as Excel stores, Surge stories across India. AtliQ Hardware head office is situated in Delhi, India and they have many regional office throughout the India.

Challenges- Market is growing dynamically and Sales Director is facing issue in terms of tracking the Sales in this dynamically growth market and he is having issues with growth of his business, as overall sales was declining. He has regional managers for North India, South and Central India. Whenever he wants to get insight of these region he would call these people and on the phone regional manager give some insights to him.

Now Problem was that all these thing happening is verbal and there was no proof with facts that how his business is affected and which made him frustrated as he can see that overall sales is declining but when he ask regional manager, he is not getting complete picture of his business. And when he ask to give detail, they give lot of excel file and this AtliQ hardware is big business so to see insight clearly, he needs a dashboard to look at real data. And he will get proper insight and can take data driven decision to increase sales of his company.

2. Project planning with AIMS Grid and Data Discovery

AIMS Grid -is a project management tool and it has four component-

Purpose- to unlock sales insights that are not visible before for the sales team for decision support and automate them to reduced manual time spent in data gathering.

Stakeholders- are people who will involve in this project like sales director, marketing team, customer service team, data analytics team and IT.

End Result- An automated dashboard providing quick and latest sales insights in order to support data driven decision making.

Success Criteria-

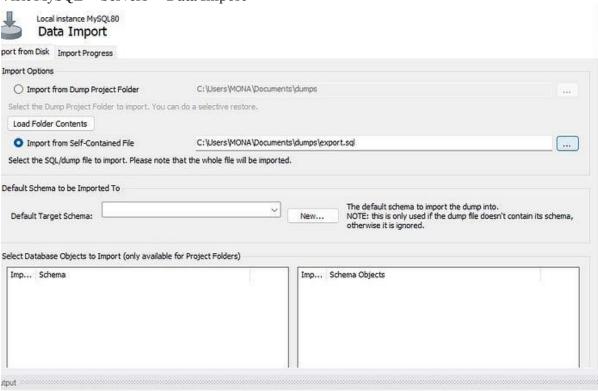
- → Dashboard uncovering sales order insights with latest data available
- → Sales team able to take better decision and prove 10% cost savings of total spend.
- \rightarrow Sales analyst stops data gathering manually in order to save 20% of their business time and reinvest it value added activity.

3. Data Exploration Using MySQL

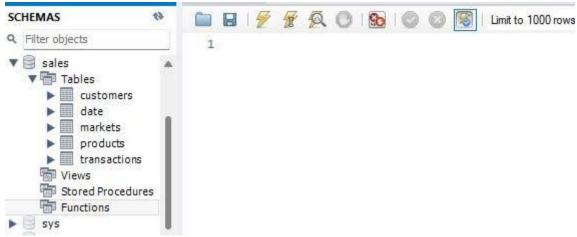
You can access the data from here-**Data**

After downloading data into your local system, now import data into MySQL-

Visit MySQL →Servers →Data Import

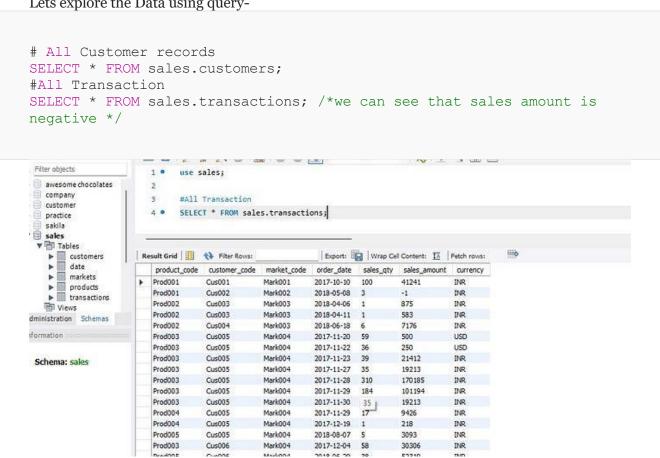


Importing Data



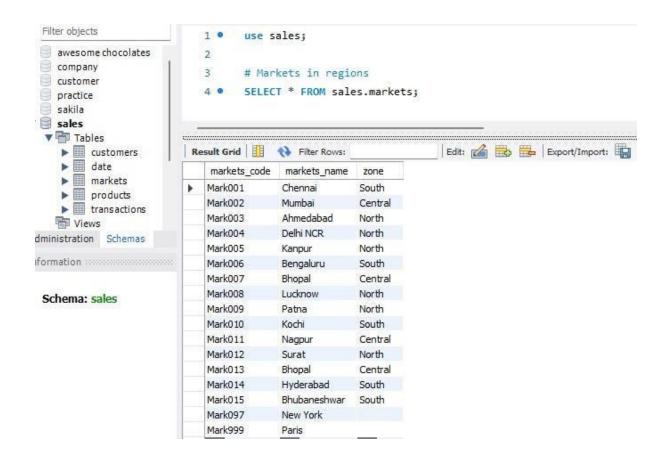
Data is imported into MySQL

Lets explore the Data using query-



Observation- Sales Qty is in negative which is invalid and also currency is in USD ,so we need to convert it into INR as in finding insight it will be problematics(total sum of revenue)

```
# Markets in regions
SELECT * FROM sales.markets;
```



Observation- Company is doing Sales in India and also might have done in New York and Paris for 1–2 time, so here we will remove it because right now company is doing business only in India so these data are not useful.

To see Few more query which can be helpful to understand your data- SQL File.

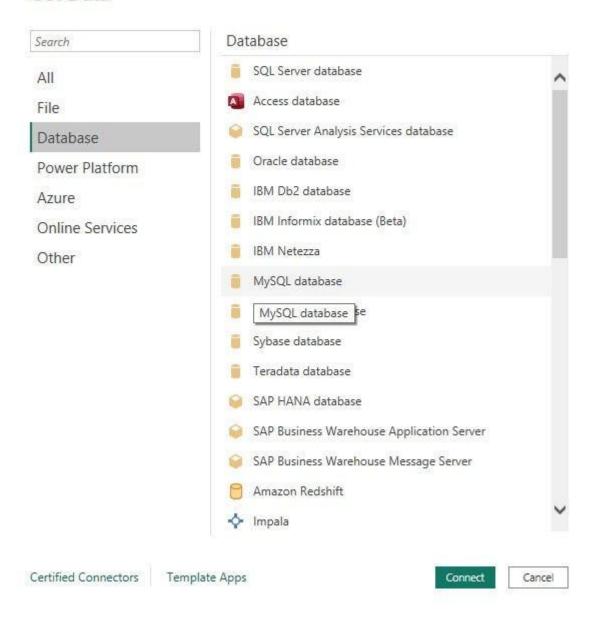
4. Data Cleaning and ETL

Now we will pull data into Power BI and also do **Data Cleaning known as ETL**(*Extract Transform and Load*).

We need to transform data as it is messy and need to convert into different format so that we can perform Data Analysis in Power BI.

Get data \rightarrow More Option \rightarrow Databases \rightarrow MySQL database

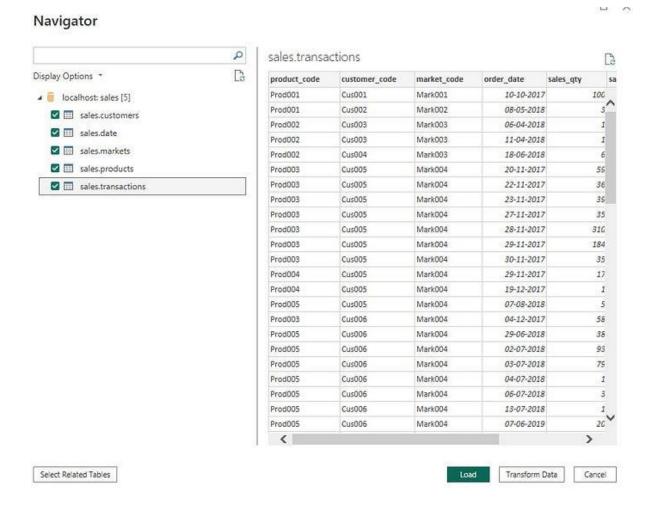
Get Data



X

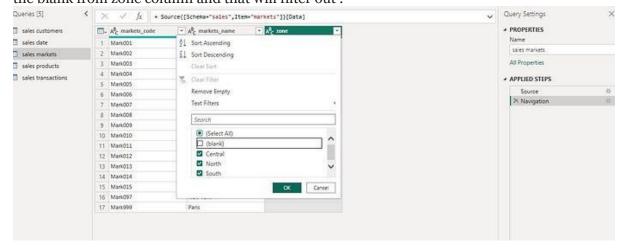
 \rightarrow Now Enter your server and database name and connect it with your database.

→Load all the data



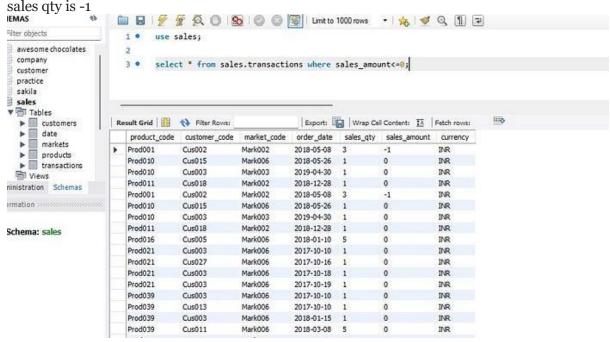
 \rightarrow Now, Transform Data which will launch into Power Query Editor where we will do Data Cleaning .

In **sales.market table**, we need to remove New York and Paris, and for that we will remove the blank from zone column and that will filter out .

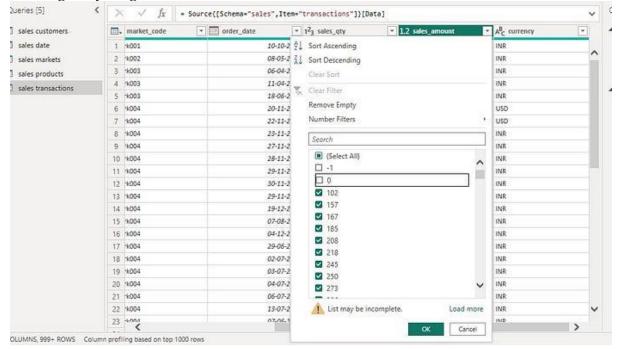


In $transaction\ table$, we will remove 0 and -1 from sales_amount as we can see that in below picture that-

5 sales qty done but sales_amount = 0 which is illogic and there are only 2 product which

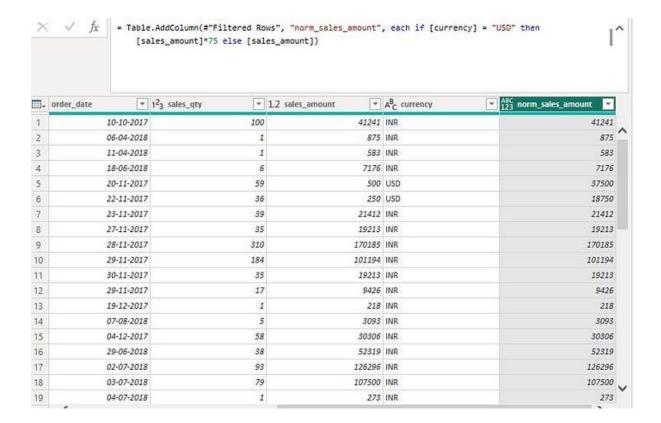


Filtering everything which has -1 and o

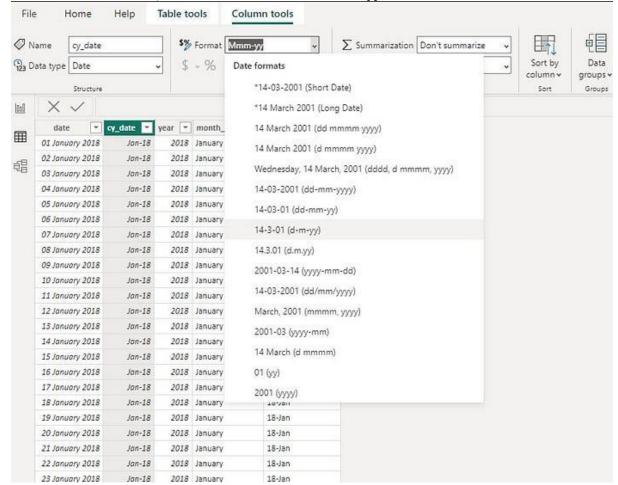


Convert USD into INR-

Add new column \rightarrow Conditional column \rightarrow normalized currency where sales amount will be in INR



Also in sales.date table, convert date format into mmm-yy for better visualisation



If you explore the data, you fill find that there are duplicates of USD and INR

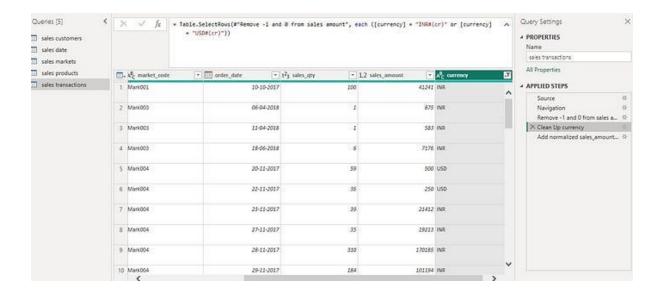
```
SELECT count(*) from sales.transactions where
sales.transactions.currency="INR\r";
#150000 - cant removed as it is large amount
SELECT count(*) from sales.transactions where
sales.transactions.currency="INR";
#279 -we can remove it as it is small record and can be considered as
bad data
SELECT count(*) from sales.transactions where
sales.transactions.currency="USD\r";
# 2
SELECT count(*) from sales.transactions where
sales.transactions.currency="USD";
# 2
#LET SEE USD AND USD/r RECORDS
SELECT * from sales.transactions where
sales.transactions.currency='USD\r' or
sales.transactions.currency='USD';
```

K	esult Grid 🏭	N Filter Rows:		Export:	Wrap Ce	ll Content: IA	
	product_code	customer_code	market_code	order_date	sales_qty	sales_amount	currency
•	Prod003	Cus005	Mark004	2017-11-20	59	500	USD
	Prod003	Cus005	Mark004	2017-11-22	36	250	USD
	Prod003	Cus005	Mark004	2017-11-20	59	500 500	USD
	Prod003	Cus005	Mark004	2017-11-22	36	250	USD

Duplicates

So we can see that it is duplicate and for analysis its better to delete anyone of them so lets delete USD and keep USD/r.

Finally we will keep data with INR/r and USD/r-



5. Build Dashboard

Create Measure table →where we will use DAX Formula

```
Profit Margin % = DIVIDE([Total Profit Margin], [Revenue],0)

Profit Margin Contribution % = DIVIDE([Total Profit Margin], CALCULATE([Total Profit Margin], ALL('sales products'), ALL('sales customers'), ALL('sales markets')))

Revenue = SUM('Sales transactions'[norm_sales_amount])

Revenue Contribution % = DIVIDE([Revenue], CALCULATE([Revenue], ALL('sales products'), ALL('sales customers'), ALL('sales markets')))

Sales Qty = SUM('sales transactions'[sales_qty])

Total Profit Margin = SUM('Sales transactions'[Profit_Margin])
```

Visualization -

Total Revenue

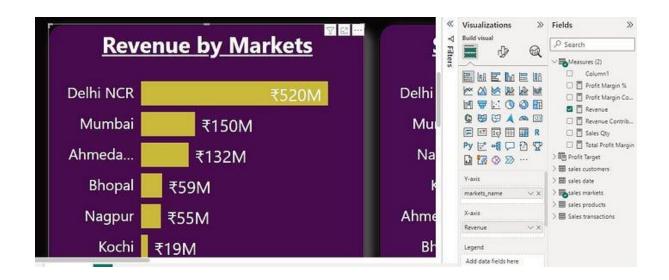


Total Sales Qty



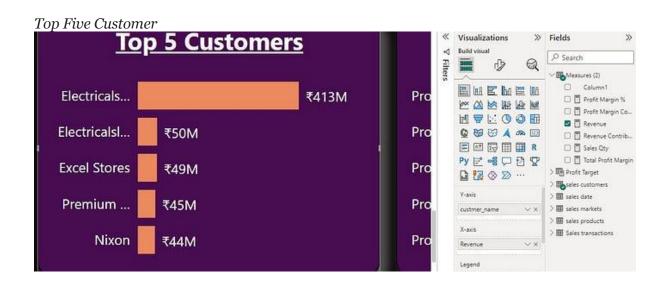


Revenue by Market



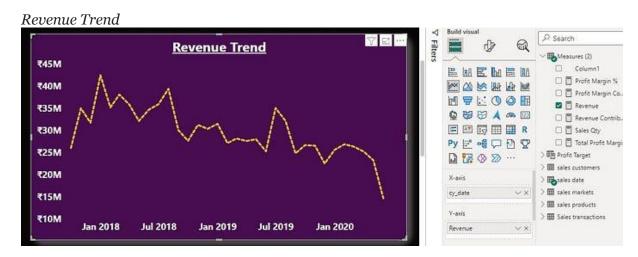






Top Five Product





Finally, You can access to **Dashboard** and to check other files click on - **Git hub Link**.

Conclusion-

If you check the dashboard, you will come to know that Sales are declining and now sales director will come to know in which region sales are high and sales are low so that they can work on the product and enhance their business in this dynamically growth market.

I hope you like this project and will be helpful for your better understanding of Data Analysis .

Keep Learning and Keep Growing...