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# SALES INSIGHTS USING DATA ANALYSIS

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*Abstract*-- In this project, we're going to use Power Bi to construct a dashboard that will allow us to get data insights from a business and receive positive feedback that will help the project go in the direction of profitability. We primarily utilised the SQL workbench to check the data, after which we loaded the data using the Power BI tool, used the measures to create innovative dashboards, and then used these dashboards in the presentation to encourage the firm to make data-driven decisions.

## I. INTRODUCTION

The company's sales manager has a lot of obstacles to overcome. In a market that is expanding quickly, he is having trouble tracking sales. He is having problems with his company's insights. He has several of the company's regional managers in North, South, and Central India working for him to accomplish this. He phones them and inquires about the insights he is interested in. They inform him of the growth and sales for the most recent quarter. Therefore, the verbal nature of the talks that are taking place is the problem. As a result, the regional managers are sugarcoating the information, and the corporate manager does not have a complete understanding of the information. He is unable to take action while being aware of the dropping sales because he lacks a comprehensive understanding of them. When he requests the records, the regional manager gives him excel files. But he can't make sense of little things this way.

All the manager needs, is an understanding of the area that requires the most improvement so the business may raise sales and reverse the downward trend. He seeks understanding that is digestible, clear, and uncomplicated. Because data tells the truth, he is therefore more interested in a dashboard where he can go and check the actual data. He only needs a straightforward data visualisation tool that he can use every day. Therefore, adopting such tools and technology allows one to make data-driven decisions that aid in boosting the company's sales. So, in this project, we'll assist a business in creating a PowerBI sales dashboard.

## II. LITERATURE SURVEY

Satkaur, Anuj Mehta helps the to understand ETL process. In his paper he talks about ETL tools ETL process [1].

Sagar Bhujbal, Dhanesh Gite, Yadnesh Kadam, Bhushan Narkhede in there paper explained ETL tools, ETL process and Data Warehouse ETL models [2].

Preeti Dhanda, Neetu Sharma through there helps to understand the ETL process using ETL tool. This paper explains best ETL tool: Informatica [3].

Priyanshu Gupta focused on explaining data warehousing and involved ETL processing This paper attempts to describe an approach used for migration of historical and current data of organisation to data warehouse product [4].

Qin Halnin, Jin Xianzhen, Zhang Xianrong has discussed key technologies of ETL, including data extraction, data transformation, data incremental loading and breakpoints transmission. [5].

## III.TOOLS/APPLICATION USED

### MySQL Workbench

A unified visual tool for database architects, developers, and DBAs is MySQL Workbench. Data modelling, SQL development, and extensive administrative tools for server configuration, user management, backup, and other tasks are all provided by MySQL Workbench. There are versions of MySQL Workbench for Windows, Linux, and Mac OS.

### Power BI

A complete business intelligence and data visualisation tool called Microsoft Power BI was created by Microsoft. Users can generate interactive reports and dashboards for data analysis and presentation, connect to a variety of data sources, transform, and model data. Users may quickly connect to several data sources, such as databases, cloud services, Excel files, and more, using Power BI. To ensure real-time analysis, it enables data import or live connections. Users may easily shape, clean, and alter data using the platform's user-friendly data transformation capabilities to meet their analytical objectives.

## III.METHODOLOGY

First, in order to get a clear understanding of the tables that we will be working with, we take the company's data set and browse through the database's tables. We manually load the database in the MySQL workbench with the data set that is supplied by the company, and then we use the commands to navigate through the tables that are present in the database.

When we use the SQL codes, we get the following data as shown in figure 1

SELECT * FROM sales.transactions.

SELECT * FROM sales.customers;

SELECT * FROM sales.date;

SELECT * FROM sales.products;

SELECT * FROM sales.markets;

Then, using the login information and the database name, we connect the power Bi tool to the MySQL workbench and load the data into the tool. After loading the data, we clean it using the power query editor, which is accessed by clicking the transform the data button. Next, we clean the data using Dax keywords, and if the data population is small, we also check for redundant data. After all of this data cleaning and wrangling, we move on to the next step, which is the graphical representation of the data.

We then use different types of graphs depending on the requirement, create the axis that the graph will be dependent on using the measures, edit the axis by dragging the table names to the legend blank, plot

those graphs, and edit the X and Y axis for the clear view of the data as we remove the names of the axis so that we can see the graph in a clear way.

After that, we upload the dashboard to the server using the work account, share it with the stakeholders, and then make improvements to the dashboard to make it more effective by adding new features. In this case, we primarily plotted the top customers and the products that are sold, then calculated the revenue in each state, along with the profit margin for each state, and compared the revenue from the previous year with the current year revenue.

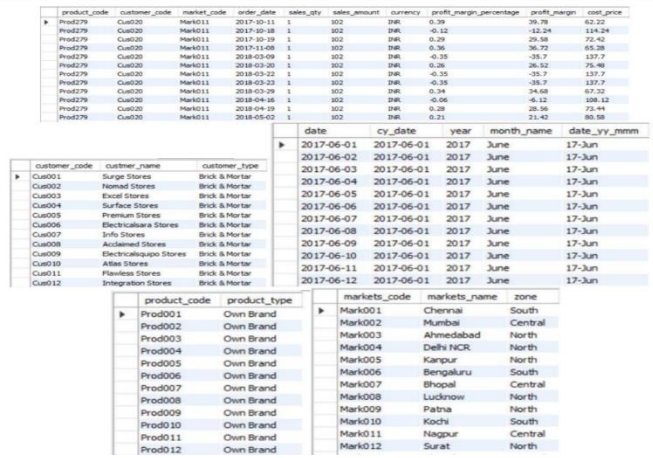

*Figure 1:Tables after using SQL commands*

## IV. IMPLEMENTATION

This dashboard was created in Power Bi using measures and data that were taken from the SQL workbench, as shown in Figure 4.1. It is useful for achieving business profits because it shows the locations with the highest and lowest revenue levels, allowing the company to determine where to expand and where to cut back on operations in order to maximize profits. Additionally, this dashboard shows the top 5 customers and the items that are sold so that it is clear where offers should be made in order to keep their top customers from defecting and how best to care for the top 5 products in order to sustain income over time.

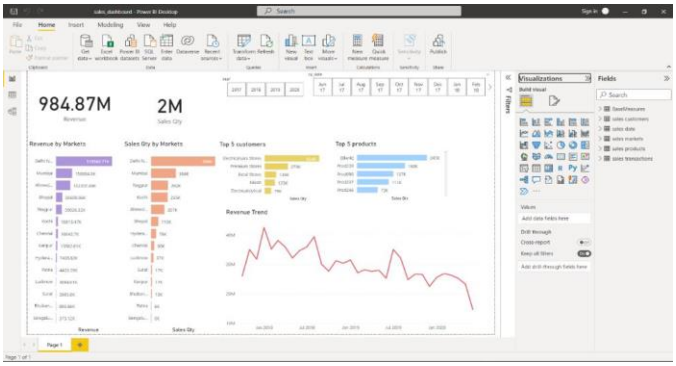


*Figure 2:The Dashboard built using Power Bi*

## IV.CONCLUSION

In this project, we learned how to use the powerful business intelligence tool and how the power query editor helps to organize data and accomplish tasks using the data set provided by the MySQL server. We also learned that the tool is flexible enough to allow us to use data from any source, which has helped us realize how valuable data insights will be and how they will improve the company's growth. Additionally, the development of the firm is greatly aided by these dashboards.

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