



# An ETL(Data Warehousing), Business Intelligence Solution for Retail Business using TERADATA & TABLEAU.

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FYP ID# IT-SP-21-12

## Introduction

In this Project we have learn different concepts related to data warehousing and business intelligence and then implementing those in it. We have perform ETL from Flat files and Databases as well as some spread sheets files for retail. We will develop a Sales Data mart using Tableau. We will also developed intermediate layer (Semantic) for the simplification of complex business logic for the Users so that they have better grasp about their data.

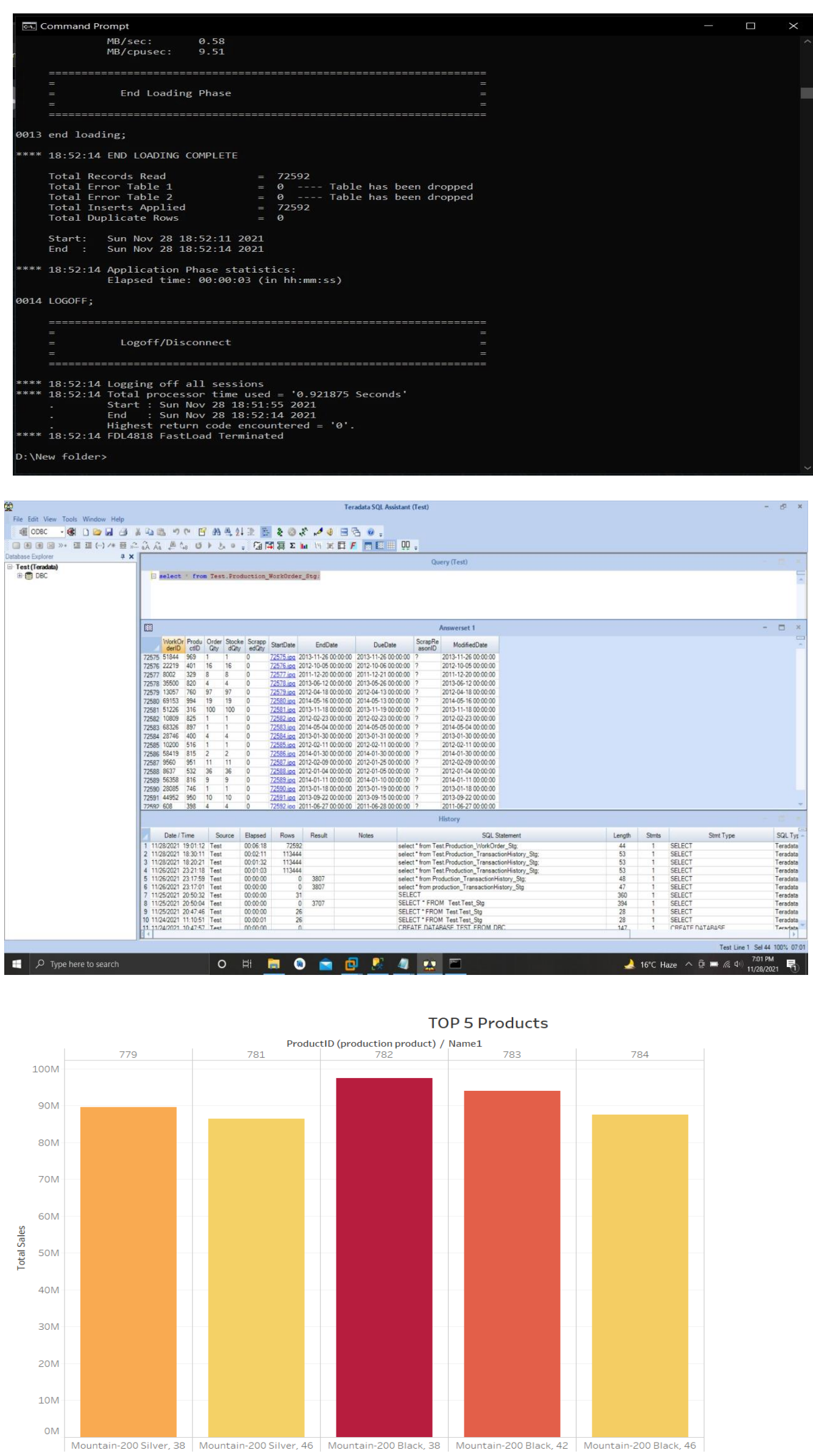
## Abstract

The project is related to the different concepts of Business Intelligence and Data Warehouse. The Dashboard is created from big data. There are millions of record of data in data warehouse. The data has been extracted from different sources as flat files and databases into data warehouse. The process named ETL (EXTRACTION, TRANSFORMATION AND LOADING) is followed to maintain the Data warehouse. The Teradata is the lead tool for Data warehouse which is mostly preferred in Pakistan, we have achieved data warehouse in Teradata. In this project the major problem is that data was not used for the improvement of business. To overcome this problem, we have developed a dashboard which gives all analysis of the business. All the business questions were made according to the need of the organization. We use Tableau for the development of all the dash boarding components including Gauges, Charts and Maps. All the work is done in accordance with industrial standards. ZONG team has helped us in our project to achieve the standards followed in the industry.

## Modules of the Project

- **Development of Data Warehouse:**  
The ETL (EXTRACTION, TRANSFORMATION, AND LOADING) process is used to keep the data warehouse up to date. Teradata is the most popular data warehouse platform in Pakistan, and we have successfully implemented a Teradata data warehouse.
- **Development of Business Intelligence:**  
We created a dashboard that contains all of the company's analysis. All of the business questions were created in response to the organization's needs. Tableau is used to create all of the dash boards components, including as gauges, charts, and maps.

## User Interface



## Results

- After the successful development of this system the retail store will carry out their business process more efficiently and effectively. This system will help in improvement of decisions in Sales, Products, Customers and Accounts. The customer will avail some advantages by using this data warehouse, some of them are:
- Additional documentation of the data.
  - We have followed the industrial standard, following the standard of Zong Ltd.
  - Understanding the data pipeline of an organization.
  - Role of ETL in Data warehouse.
  - Importance of Business Intelligence in business decision making.
  - Importance of Data consistency.
  - Automation of ETL process.
  - Dashboard creation using Tableau



## Conclusion

This system will helps in improvement of decisions in Sales, Products, Customers and Accounts. The customer will avail some advantages by using this data warehouse, some of them Are Enhances end-user access to a wide variety of data. Business decision makers can obtain various kinds of trend reports

**Results:**

- Expansion of Data.
- Improvement of ETL.
- Classify Data on other Attributes as well other than selected.

## Methodology

