DMART SALES ANALYSIS USING POWER BI

A minor project report submitted to

DEPARTMENT
Of

COMPUTER SCIENCE AND ENGINEERING

By

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DECLARATION

I **KOLLU SUREKHA (21MQ1A4213)** declared that the dissertation report entitled **"D-MART SALES ANALYSIS"** is no more than 1,00,00 words in length including quotes and exclusive of, figures, bibliography and references. This dissertation contains no material that has been submit previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated this dissertation in our own work.

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Date :
Place : SVIET, NANDAMURU

TABLE OF CONTENT

Abstract 1

Problem Statement 2

Feasibility Study 3

1. Introduction 5

2. Motivation & Objective

2.1 Motivation 7

2.2 Objective

3. Software and Hardware Requirements

3.1 Software Requirements 8

3.2 Hardware Requirements

4. Keywords & Definitions

4.1 Keywords 10-11

4.2 Definitions

5.

5.1 Designing 13

5.2 Proposed System

6. Methodology 15

7. Result 17

8. Conclusion 20

9. Future Scope 22

ABSTRACT

This analysis examines the sales performance of D-Mart, a leading retail chain in India, with the aim of identifying patterns, trends, and factors influencing its sales. By analysing historical sales data, we explore seasonal demand variations, popular product categories, and customer demographics that impact revenue. The analysis uses key metrics, such as sales growth, average transaction value, and customer footfall, to assess D-Mart's performance across different locations and product segments. Findings reveal patterns in consumer behaviour, peak sales periods, and the impact of promotional strategies on sales. Additionally, insights into the effectiveness of D-Mart's pricing strategies and inventory management are provided, suggesting potential areas for improvement to maximize profitability and customer satisfaction. This study serves as a foundation for making data-driven decisions to optimize D-Mart's operational efficiency and sustain competitive advantage in the retail market.

PROBLEM STATEMENT

Design and implement a comprehensive D-Mart Sales analysis dashboard in Power BI. to identify key drivers and bottlenecks affecting profitability and customer satisfaction. D-Mart aims to understand sales trends, customer preferences, and the effectiveness of promotional strategies to optimize inventory, enhance pricing decisions, and increase revenue.

FEASIBILITY STUDY

Data Availability: D-Mart has access to historical sales data, inventory records, customer transaction information. These datasets are essential for analysing trends, sales patterns, and customer behaviour.

Data Security: Customer and transaction data are sensitive, so data privacy measures compliance with regulations like GDPR are essential to ensure security and maintain customer trust.

Cost of Resources: The costs involved may include hiring data professionals, purchasing software licenses, and investing in storage solutions.

CHAPTER 1

1.INTRODUCTION

D-Mart, a prominent player in India's retail sector, has established itself as a preferred shopping destination for a wide range of everyday goods, from groceries to apparel and household items. As a customer-centric and cost-efficient retail chain, D-Mart has achieved significant growth by focusing on competitive pricing and efficient supply chain management. However, to maintain its competitive edge and continue meeting customer expectations, D-Mart must consistently evaluate and optimize its sales strategies.

The insights from this analysis will provide D-Mart with valuable information for making data driven decisions to enhance sales forecasting, inventory management, and customer satisfaction. This study ultimately aims to equip D-Mart with actionable strategies for sustaining growth, optimizing inventory, and tailoring marketing efforts to align with evolving consumer behaviour and preferences.

CHAPTER 2

2. MOTIVATION & OBJECTIVE

The primary objective of the D-Mart sales analysis is to gain a comprehensive understanding of the factors influencing sales performance to optimize business operations and drive growth.

2.1 MOTIVATION

- Enhanced Decision
- Efficiency and Automation
- Real-time Insights
- Scalability and Flexibility

2.2 OBJECTIVE

- Monitor Financial Performance
- Identify Trends and Patterns
- Optimize Resource Allocation
- Support Strategic Planning
- Improve Forecasting and Prediction
- Enhance Stakeholder Communication

CHAPTER 3

3 SOFTWARE & HARDWARE REQURIMENTS

3.1 SOFTWARE REQURIMENTS

Operating System	**:** Windows
Platform	: Microsoft Power Bi Desktop
Modules	**:** Own Modules created by the programmer for the based on the management system to develop both Window and Web Application.

3.2 HARDWARE REQURIMENTS

Processor	**:** 11th Gen Intel(R) core (TM) i5-1155G7@ 2.50GH
RAM	**:** 8.00GB
Version	**:** 22H2

CHAPTER 4

4. KEYWORDS AND DEFINITIONS

4.1 KEYWORDS

D-Mart Sales analysis involves examining various financial statements and metrics to assess the performance, stability, and viability of a company. Here are some key terms and their definitions:

Revenue: The total income generated by a company through its business activities.

Profitability: The ability of a company to generate profit relative to its expenses and other costs.

Gross Margin: The percentage of revenue that exceeds the cost of goods sold, indicating a company's profitability before operating expenses.

Net Profit Margin: The percentage of revenue that remains as profit after all expenses, taxes, and other deductions have been subtracted.

Operational Efficiency: The measure of how well a company utilizes its resources to produce goods and services, often assessed by metrics such as inventory turnover and asset utilization.

Market Demand: The level of consumer interest and desire for a company's products or services, influencing sales and revenue generation

4.2 DEFINITIONS

The D-Mart Sales Analysis Project is a data-driven initiative aimed at examining the sales patterns, customer behaviour, and operational performance of D-Mart's retail stores. The primary goal of the project is to derive actionable insights that can improve decision-making across key business areas, including inventory management, pricing strategy, and promotional effectiveness. By analysing historical sales data, customer demographics, and seasonal trends, the project seeks to uncover factors that drive revenue, identify areas for operational improvement, and enhance customer satisfaction.

CHAPTER 5

5.1 DESIGINING

Cleanse, transform, and model the data to create a unified dataset suitable for analysis.

This may involve restructuring data, resolving inconsistencies, and creating calculated columns or measures.

Identify and connect relevant data sources to Power BI, including financial systems, databases, spreadsheets, and external sources.

Ensure data accuracy, completeness, and consistency.

5.2 PROPOSED SYSTEM

Design a user-friendly dashboard layout with logical organization, clear navigation, and consistent branding.

Select appropriate visualizations (e.g., charts, graphs, KPIs) to represent facilitate data explore

Enable interactivity with slicers, filters, and drill-down capabilities to empower users to interactively analyse and explore financial data

CHAPTER 6

6. METHODOLOGY

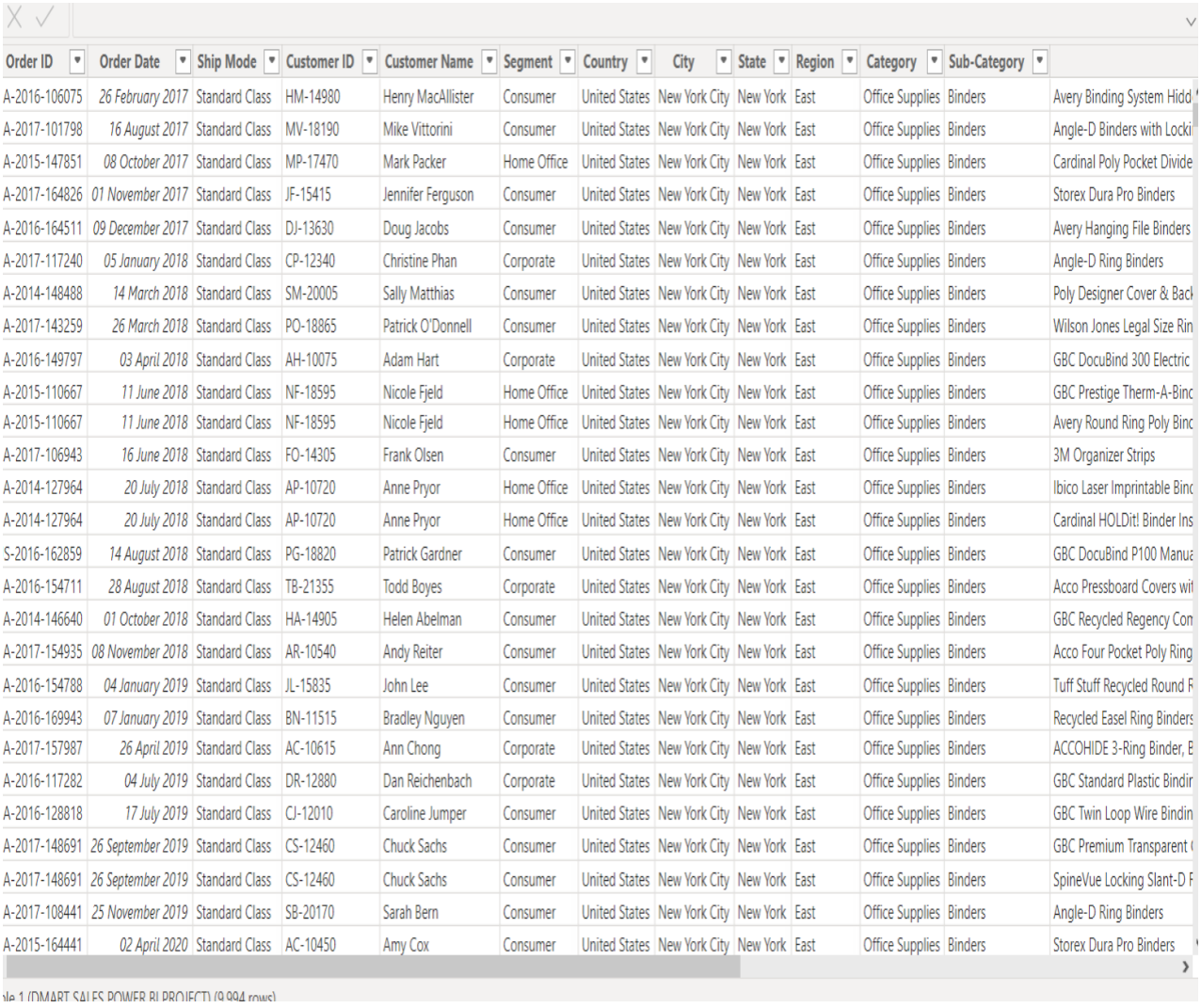
Define Objectives:
Clearly define the objectives of the D-Mart Sales analysis, including the KPIs, and insights stakeholders require.

Data Gathering:
Identify and gather relevant Sales data from internal and external sources, such as accounting systems, ERP systems, spreadsheets, and market data sources.

Data Preparation:
Cleanse and preprocess the data to remove duplicates, handle missing values, and standardize formats. Transform and reshape the data as needed to create a unified dataset suitable for analysis.

Chapter 7

7. RESULT



Order ID	Order Date	Ship Mode	Customer ID	Customer Name	Segment	Country	City	State	Region	Category	Sub-Category	
A-2016-106075	26 February 2017	Standard Class	HM-14980	Henry MacAllister	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Avery Binding System Hidd
A-2017-101798	16 August 2017	Standard Class	MV-18190	Mike Vittorini	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Angle-D Binders with Locki
A-2015-147851	08 October 2017	Standard Class	MP-17470	Mark Packer	Home Office	United States	New York City	New York	East	Office Supplies	Binders	Cardinal Poly Pocket Divide
A-2017-164826	01 November 2017	Standard Class	JF-15415	Jennifer Ferguson	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Storex Dura Pro Binders
A-2016-164511	09 December 2017	Standard Class	DJ-13630	Doug Jacobs	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Avery Hanging File Binders
A-2017-117240	05 January 2018	Standard Class	CP-12340	Christine Phan	Corporate	United States	New York City	New York	East	Office Supplies	Binders	Angle-D Ring Binders
A-2014-148488	14 March 2018	Standard Class	SM-20005	Sally Matthias	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Poly Designer Cover & Back
A-2017-143259	26 March 2018	Standard Class	PO-18865	Patrick O'Donnell	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Wilson Jones Legal Size Rin
A-2016-149797	03 April 2018	Standard Class	AH-10075	Adam Hart	Corporate	United States	New York City	New York	East	Office Supplies	Binders	GBC DocuBind 300 Electric
A-2015-110667	11 June 2018	Standard Class	NF-18595	Nicole Fjeld	Home Office	United States	New York City	New York	East	Office Supplies	Binders	GBC Prestige Therm-A-Binc
A-2015-110667	11 June 2018	Standard Class	NF-18595	Nicole Fjeld	Home Office	United States	New York City	New York	East	Office Supplies	Binders	Avery Round Ring Poly Binc
A-2017-106943	16 June 2018	Standard Class	FO-14305	Frank Olsen	Consumer	United States	New York City	New York	East	Office Supplies	Binders	3M Organizer Strips
A-2014-127964	20 July 2018	Standard Class	AP-10720	Anne Pryor	Home Office	United States	New York City	New York	East	Office Supplies	Binders	Ibico Laser Imprintable Binc
A-2014-127964	20 July 2018	Standard Class	AP-10720	Anne Pryor	Home Office	United States	New York City	New York	East	Office Supplies	Binders	Cardinal HOLDit! Binder Ins
S-2016-162859	14 August 2018	Standard Class	PG-18820	Patrick Gardner	Consumer	United States	New York City	New York	East	Office Supplies	Binders	GBC DocuBind P100 Manua
A-2016-154711	28 August 2018	Standard Class	TB-21355	Todd Boyes	Corporate	United States	New York City	New York	East	Office Supplies	Binders	Acco Pressboard Covers wit
A-2014-146640	01 October 2018	Standard Class	HA-14905	Helen Abelman	Consumer	United States	New York City	New York	East	Office Supplies	Binders	GBC Recycled Regency Con
A-2017-154935	08 November 2018	Standard Class	AR-10540	Andy Reiter	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Acco Four Pocket Poly Ring
A-2016-154788	04 January 2019	Standard Class	JL-15835	John Lee	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Tuff Stuff Recycled Round F
A-2016-169943	07 January 2019	Standard Class	BN-11515	Bradley Nguyen	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Recycled Easel Ring Binders
A-2017-157987	26 April 2019	Standard Class	AC-10615	Ann Chong	Corporate	United States	New York City	New York	East	Office Supplies	Binders	ACCOHIDE 3-Ring Binder, E
A-2016-117282	04 July 2019	Standard Class	DR-12880	Dan Reichenbach	Corporate	United States	New York City	New York	East	Office Supplies	Binders	GBC Standard Plastic Bindir
A-2016-128818	17 July 2019	Standard Class	CJ-12010	Caroline Jumper	Consumer	United States	New York City	New York	East	Office Supplies	Binders	GBC Twin Loop Wire Bindin
A-2017-148691	26 September 2019	Standard Class	CS-12460	Chuck Sachs	Consumer	United States	New York City	New York	East	Office Supplies	Binders	GBC Premium Transparent
A-2017-148691	26 September 2019	Standard Class	CS-12460	Chuck Sachs	Consumer	United States	New York City	New York	East	Office Supplies	Binders	SpineVue Locking Slant-D F
A-2017-108441	25 November 2019	Standard Class	SB-20170	Sarah Bern	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Angle-D Ring Binders
A-2015-164441	02 April 2020	Standard Class	AC-10450	Amy Cox	Consumer	United States	New York City	New York	East	Office Supplies	Binders	Storex Dura Pro Binders

Fig 7.1-D-Mart Sales Analysis data set

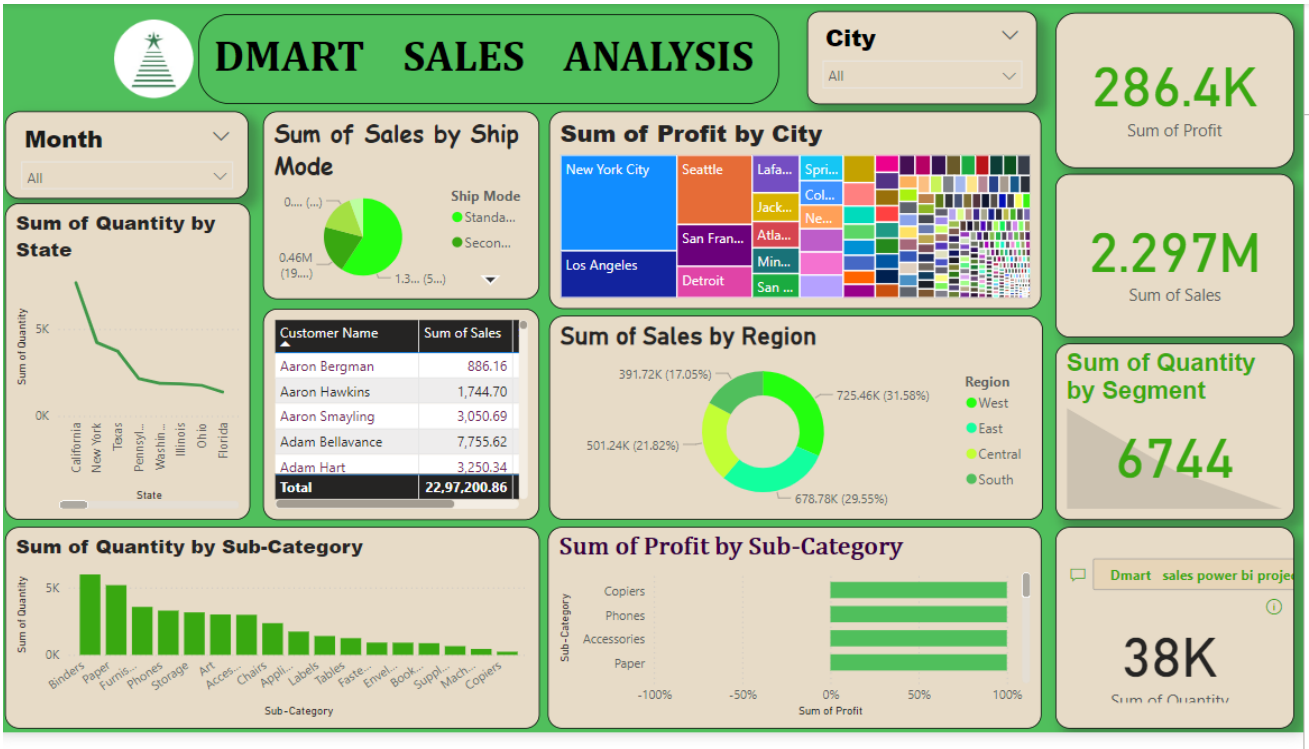


Fig 7.2 D-Mart Sales Dashboard

CHAPTER 8

8.CONCLUSION

In conclusion, Power BI offers a robust platform for financial analysis, providing advanced data visualization, integration with multiple data sources, and evolving capabilities for forecasting and predictive analytics.

With its user-friendly interface and flexibility, Power BI empowers financial analysts to uncover valuable insights, make informed decisions, and enhance overall financial performance.

As Power BI continues to innovate and improve, its role in financial analysis is expected to grow, offering even greater opportunities for organizations to leverage data for strategic decision-making.

CHAPTER 9

9.FUTURE SCOPE

The future scope for D-Mart Sales analysis in Power BI is promising. With its advanced data visualization capabilities and integration with various data sources, Power BI enables sales analysts to gain deeper insights, make data-driven decisions, and streamline reporting processes.

Additionally, as Power BI continues to evolve with new features and updates, its potential for financial analysis will only expand further, offering more advanced tools for forecasting, predictive analytics, and Realtime monitoring of sales performance