

Data Analyst Portfolio Project

Walmart Sales Analysis Using SQL



~ Tejas Phatangare

Agenda

1- INTRODUCTION

2-COMPANY OVERVIEW

3-PROBLEM STATEMENT

4-BUSINESS QUESTIONS

5-INSIGHTS

6-CONCLUSION



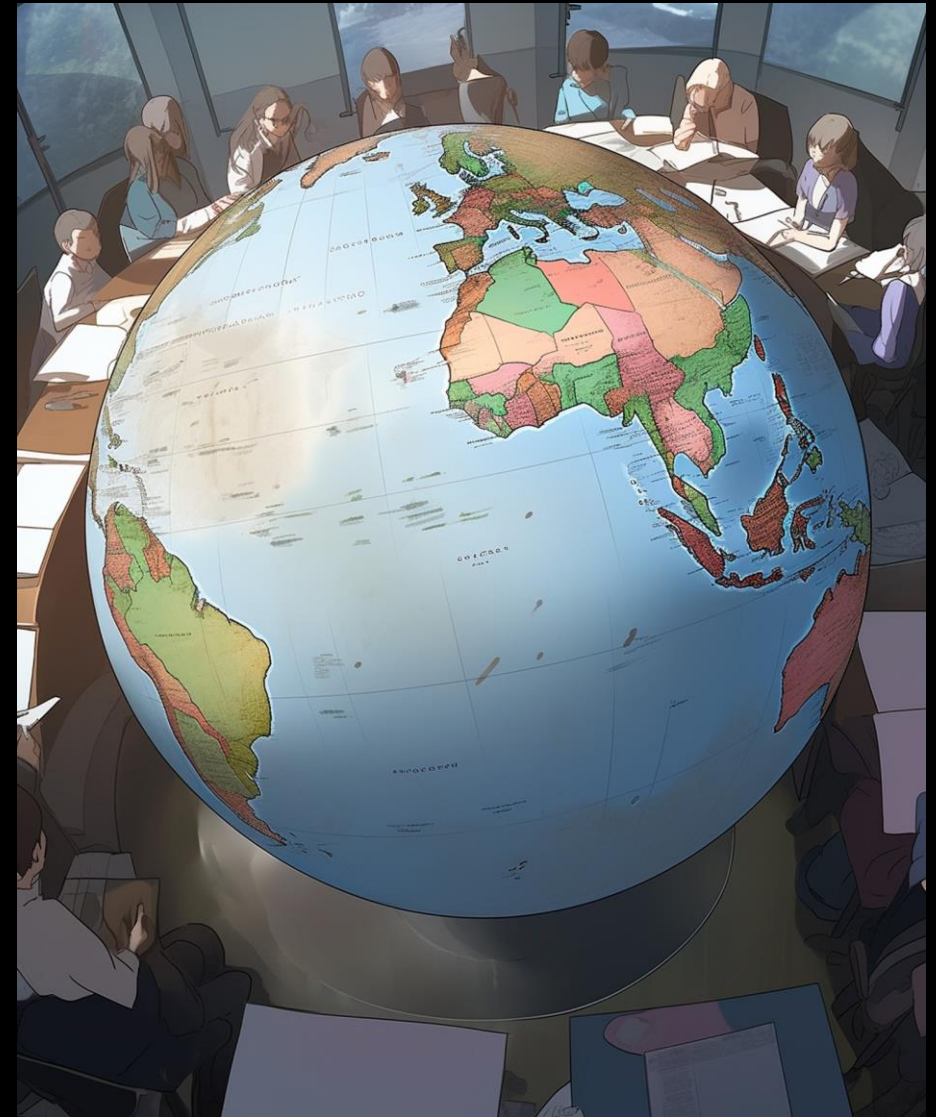


Introduction

Welcome To The Comprehensive Review Of *Walmart's Sales Performance*. This Presentation Will Provide An In-depth Analysis Of Walmart's Sales Trends, Key Metrics, And Strategic Initiatives. Let's Dive Into The Numbers And Insights That Define Walmart's Success In The Retail Industry.

Company Overview

A glimpse into Walmart history and footprint in the retail market. With over 11,000 stores and clubs in 27 countries, Walmart is a global leader in the retail industry. The company's commitment to low prices and customer satisfaction has driven its success and growth.



Problem Statement

- **The Walmart Superstore wants to analyze its sales data to gain insights into its performance and identify opportunities for growth. The company has a vast amount of sales data, including information on products, customers, stores, and transactions. The main objective is to extract meaningful insights from this data to analyse the overall sales of walmart superstore.**

- Check for duplicate records in tables.
- Check for missing values.
- Check data types and formats.



Data Exploration

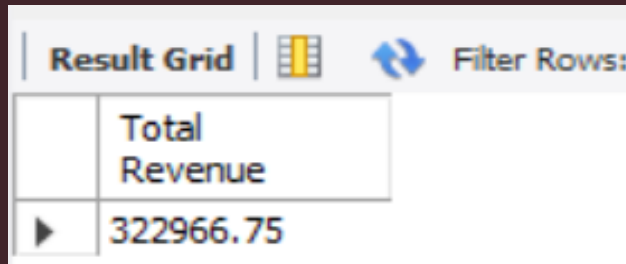
- Explore the data in this phase to understand the columns of each table, data types, formats and relationships among the tables.

Data Analysis Process

- In this process, we will solve each one of the key questions step by step to gather information from the data.
- The answers to these questions will give us the opportunity to provide our insights and recommendations to the Walmart Sales Analysis.

Generic Questions

1. Find The Total Sum Of Revenue..?

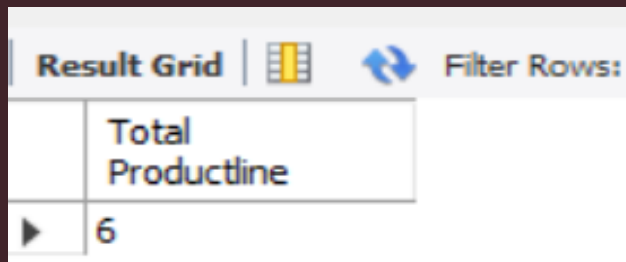


The screenshot shows a 'Result Grid' with a 'Filter Rows' button. The grid contains two rows: the first row is labeled 'Total Revenue' and the second row shows the value '322966.75'.

	Total Revenue
▶	322966.75

→ The overarching revenue stands at \$322,966.75.

2. How many unique product lines does the data have?

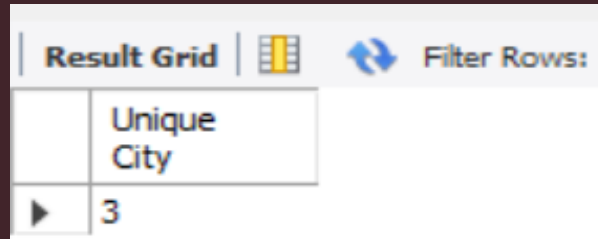


The screenshot shows a 'Result Grid' with a 'Filter Rows' button. The grid contains two rows: the first row is labeled 'Total Productline' and the second row shows the value '6'.

	Total Productline
▶	6

→ The dataset comprises a total of 6 unique product lines.

3. How many unique cities does the data have?

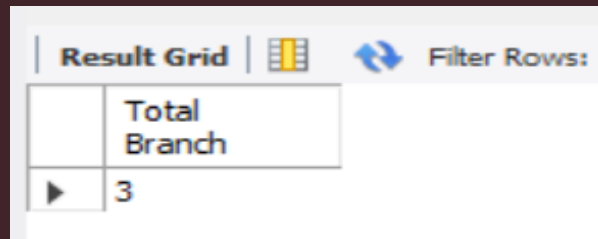


The screenshot shows a 'Result Grid' with a toolbar containing a 'Filter Rows' button. The grid has two columns: 'Unique City' and a count column. The count column displays the value '3'.

	Unique City
▶	3

→ The dataset encompasses data from 3 distinct cities.

4. Find The Total Branches Available In This data.



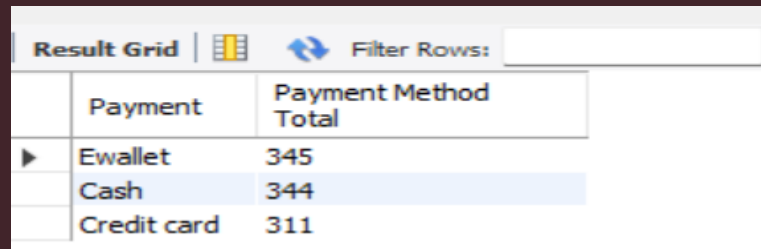
The screenshot shows a 'Result Grid' with a toolbar containing a 'Filter Rows' button. The grid has two columns: 'Total Branch' and a count column. The count column displays the value '3'.

	Total Branch
▶	3

→ The data includes a total of three branches: A, B, and C.

Product Questions

1) What is the most common payment method?



	Payment	Payment Method Total
▶	Ewallet	345
	Cash	344
	Credit card	311

~ "E-wallet stands out as the most common payment method, utilized a total of 345 times, whereas Credit Card trails as the least favored option.

~ To incentivize Credit Card usage, consider adding exclusive offers such as cashback rewards, discounts on future purchases, or bonus points redeemable for exciting perks."

2) What is the most selling product line?



	Sub_category	Most Selling Productline
▶	Fashion accessories	178
	Food and beverages	174
	Electronic accessories	170
	Sports and travel	166
	Home and lifestyle	160
	Health and beauty	152

The Fashion Accessories product line category leads in terms of quantity sold, representing the highest-selling product, whereas Health & Beauty lags behind as the lowest-selling product.

3) What is the most common product line by gender?

	Sub_Category	Gender	Gender Common Product Line
▶	Fashion accessories	Female	96
	Food and beverages	Female	90
	Health and beauty	Male	88
	Sports and travel	Female	88
	Electronic accessories	Male	86
	Electronic accessories	Female	84
	Food and beverages	Male	84
	Fashion accessories	Male	82
	Home and lifestyle	Male	81
	Home and lifestyle	Female	79
	Sports and travel	Male	78
	Health and beauty	Female	64



Fashion Accessories emerge as the most common product line among females, with a frequency of 96 occurrences, while Health & Beauty ranks as the least common product line.


4) What product line had the largest revenue?

Result Grid		
	Sub_Category	Product Line With Revenue
▶	Food and beverages	56144.8
	Sports and travel	55122.8
	Electronic accessories	54337.5
	Fashion accessories	54305.9
	Home and lifestyle	53861.9
	Health and beauty	49193.7

Food & Beverages reigns as the top revenue category, boasting a significant \$56.144K in sales, while Health & Beauty lags behind as the lowest performer, with only \$49.193K in sales.



5) What product line had the largest VAT?


Result Grid   Filter Rows: <input type="text"/>		
	Sub_category	Product Line With Max Tax
▶	Fashion accessories	49.6
	Food and beverages	49.3
	Home and lifestyle	48.8
	Sports and travel	47.7
	Health and beauty	45.2
	Electronic accessories	44.9



The Fashion Accessories category carries the highest tax rate at 49.6%, while Electronic Accessories have the lowest tax rate at 44.9%.


6) What is the total revenue by month?

Result Grid   Filter Rows: <input type="text"/>		
	month_name	Month Revenue
▶	January	116291.87
	March	109455.51
	Feburary	97219.37



The month of January emerges as the highest revenue-generating month, accumulating a total of \$116,291.87, while February records the lowest revenue with \$97,219.


7) What month had the largest COGS?

Result Grid  Filter Rows: <input type="text"/>		
	month_name	Month With Max COGS
▶	Feburary	993
	January	985.2
	March	973.8



In February, the Cost of Goods Sold (COGS) peaks at 993 units, while March marks the lowest COGS month, amounting to 973.8 units.

8) What is the city with the largest revenue?

Result Grid  Filter Rows: <input type="text"/>		
	city	City With Revenue
▶	Naypyitaw	110568.71
	Yangon	106200.37
	Mandalay	106197.67



NAPPYITAW city boasts the largest revenue generated, totaling 110,568 units, while MANDALAY records the lowest revenue, amounting to 106,197 units.

9) Which branch sold more products than average product sold?

Result Grid			Filter Rows
	Branch	Avg Product Sold	
▶	A	1859	
	C	1831	
	B	1820	



BRANCH A has sold an average of 1,859 products, while BRANCH B has sold an average of 1,820 products.

10) What is the average rating of each product line?

Result Grid			Filter Rows:
	Sub_category	Average Rating	
▶	Food and beverages	7.11	
	Fashion accessories	7.03	
	Health and beauty	7	
	Electronic accessories	6.92	
	Sports and travel	6.92	
	Home and lifestyle	6.84	



The FOOD & BEVERAGES category has the highest average rating at 7.11, whereas the HOME & LIFESTYLE category receives the lowest rating at 6.84.

Sales Questions

1) Number of sales made in each time of the day per weekday



	day_name	time_of_day	Sales Made
▶	Saturday	Evening	81

	Wednesday	Morning	22
--	-----------	---------	----



"Saturday evening, with a total of 81 sales, emerges as the peak selling time, while Wednesday morning records the lowest sales, with only 22 transactions."

2) Which of the customer types brings the most revenue?

Result Grid   Filter Rows: <input type="text"/>		
	Customer_type	Cust With Most Revenue
▶	Member	164223.44
	Normal	158743.31



The MEMBER customer type generates the most revenue, totaling \$164,223, compared to the NORMAL customer type.

3) Which city has the largest tax percent/ VAT (Value Added Tax)?

Result Grid			Filter Rows:
	City	City With Max Tax	
▶	Naypyitaw	16.05	
	Mandalay	15.23	
	Yangon	14.87	



In Napyitaw City, the average tax rate is 16.05%.

4. Which customer type pays the most in VAT?

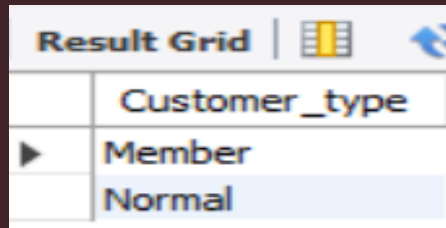
Result Grid			Filter Rows:
	Customer_type	Customer Type With Most Tax	
▶	Member	15.61	
	Normal	15.15	



The Member customer type has the highest average tax rate compared to other types, standing at 15.61%.

Customer Questions

1. How many unique customer types does the data have?



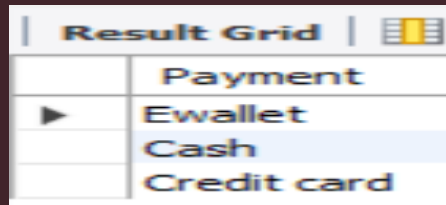
A screenshot of a 'Result Grid' window. The title bar says 'Result Grid'. The grid has a header row with 'Customer_type'. Below it are two rows: 'Member' and 'Normal'. The 'Normal' row is highlighted in blue.

	Customer_type
▶	Member
	Normal



We have two distinct customer types: Members and Normals.

2. How many unique payment methods does the data have?



A screenshot of a 'Result Grid' window. The title bar says 'Result Grid'. The grid has a header row with 'Payment'. Below it are three rows: 'Ewallet', 'Cash', and 'Credit card'. The 'Cash' row is highlighted in blue.

	Payment
▶	Ewallet
	Cash
	Credit card



"Customers can choose from eWallet, Credit Card, or Cash for payments."

3. Which customer type buys the most?

Result Grid			Filter Rows:
	customer_type	Cust With Most Buys	
▶	Member	501	
	Normal	499	



MEMBER Customer_Type Buys The Most & Female Is the Max Customer With Total Of 501.

4. What is the gender of most of the customers?

	gender	Cust Gender Count
▶	Female	501
	Male	499



5. What is the gender distribution per branch?

	Branch	gender	Cust Gender Count
▶	A	Male	179
	C	Female	178
	B	Male	170
	B	Female	162
	A	Female	161
	C	Male	150



At Branch A, we serve the highest number of male customers, totaling 179. Meanwhile, Branch C sees the lowest number of male customers, with only 150.

6. Which time of the day do customers give most ratings?

	time_of_day	Day Time Rating
▶	Afternoon	7.03
	Morning	6.96
	Evening	6.93



During the afternoon, customers give the highest average rating of 7.03.

7. Which time of the day do customers give most ratings per branch?

	time_of_day	Branch	Day Time Rating
▶	Afternoon	A	7.19
	Evening	C	7.12
	Afternoon	C	7.07
	Morning	A	7.01
	Morning	C	6.97
	Evening	A	6.89
	Morning	B	6.89
	Afternoon	B	6.84
	Evening	B	6.77



In the afternoon, Branch A receives the highest rating of 7.19, closely followed by Branch C in the evening.

8. Which day of the week has the best avg ratings?

	day_name	Best Avg_Rating
▶	Monday	7.15
	Friday	7.08
	Sunday	7.01
	Tuesday	7
	Saturday	6.9
	Thursday	6.89
	Wednesday	6.81



On Mondays, we achieve the highest average rating of 7.15, while Wednesdays see the lowest average rating of 6.81 for the week.

9. Which day of the week has the best average ratings per branch?


	day_name	Branch	Avg_Rating
►	Monday	B	7.34
	Friday	A	7.31
	Friday	C	7.28
	Saturday	C	7.23
	Monday	A	7.1
	Sunday	A	7.08
	Tuesday	A	7.06
	Wednesday	C	7.06
	Monday	C	7.04
	Sunday	C	7.03
	Tuesday	B	7

	Thursday	A	6.96
	Tuesday	C	6.95
	Thursday	C	6.95
	Wednesday	A	6.92
	Sunday	B	6.89
	Saturday	A	6.75
	Thursday	B	6.75
	Saturday	B	6.74
	Friday	B	6.69
	Wednesday	B	6.45




"The best average rating for the week occurs on Monday at Branch B, with an impressive rating of 7.34, closely followed by Friday at Branch A."


Insights


 **Rocketing Revenue:** January shines as our superstar, bringing in a whopping \$116,291.87, while February takes a breather with \$97,219.

 **Branching Out:** Branch A and Branch B are both rockstars, selling an average of 1,859 and 1,820 products respectively.

 **Tasty Trends:** Food & Beverages steal the show with an impressive 7.11 average rating, while Home & Lifestyle embraces a cozy 6.84.

 **Member Magic:** Members are our VIPs, contributing the lion's share with a generous \$164,223 in total revenue and boasting a high average tax rate of 15.61%.

 **Time Tells All:** Saturday evenings are bustling with 81 transactions, while Wednesday mornings enjoy a serene pace with only 22 sales.

 **City Sensations:** Napyitaw City leads the way with an average tax rate of 16.05%, adding a sweet touch to our financial landscape.

Conclusion

"Our comprehensive analysis has unearthed invaluable insights into Walmart's operations and strategic endeavors. In an ever-evolving retail environment, Walmart's continued success hinges upon its adept utilization of data-driven intelligence and customer-centric approaches, ensuring it maintains its growth trajectory and secures its position as a market leader."

Thanks!

