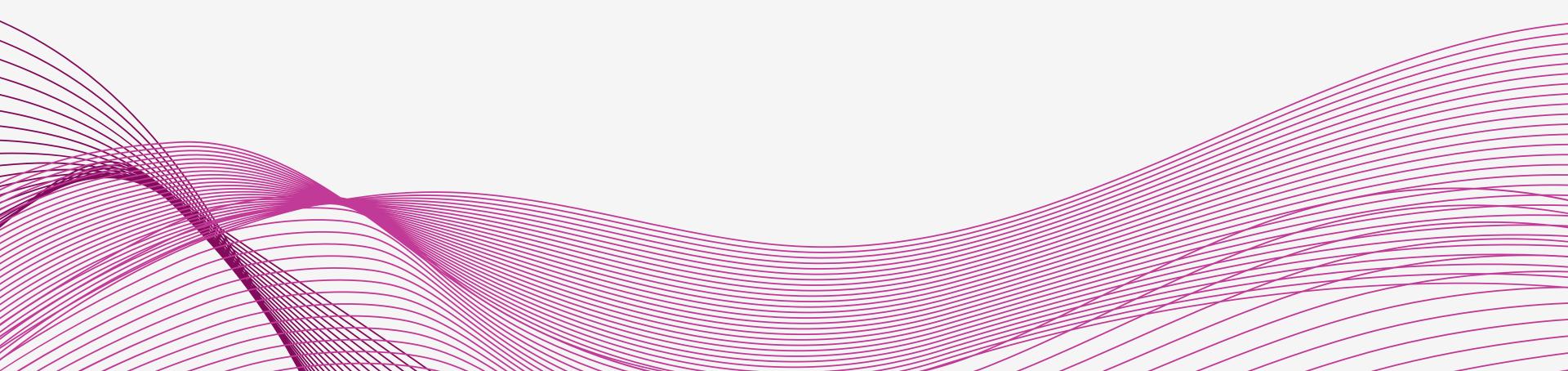
### **Supermarket Sales Analysis**

**Your Name**: Swanand Potnis

**Date**: 08 June 2024



#### Introduction:

#### **Objective:**

The objective of this project is to analyze supermarket sales data to uncover insights about sales trends, customer behavior, and branch performance.

**Dataset**: The dataset used in this analysis includes sales data from a supermarket, with details such as transaction dates, times, product lines, quantities, and payment methods.

#### **Dataset Description:**

•Source: Supermarket sales data

•Size: 1,000 rows and 17 columns

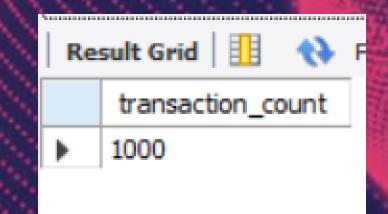
•Time Period: January 1, 2019, to March 30, 2019

#### **Tools Used:**

- Python
- pandas library
- •MySQL

#### **Count of Transactions**

SELECT COUNT(\*) AS transaction\_count
FROM supermarket\_sales;



#### **Total Sales by Branch**

SELECT Branch, SUM(Total) AS total\_sales
FROM supermarket\_sales
GROUP BY Branch;

Result Grid		Filter
	Branch	total_sales
•	Α	106200.57
	С	110568.86
	В	106198.00

#### **Average Rating by Product Line**

```
SELECT Product_line, AVG(Rating) AS average_rating
FROM supermarket_sales
GROUP BY Product_line;
```

	Product_line	average_rating
Þ	Health and beauty	7.00329
	Electronic accessories	6.92471
	Home and lifestyle	6.83750
	Sports and travel	6.91627
	Food and beverages	7.11322
	Fashion accessories	7.02921

### **Total Quantity Sold by City**

```
SELECT
    City, SUM(Quantity) AS total_quantity_sold
FROM
    supermarket_sales
GROUP BY City;
```

	City	total_quantity_sold
•	Yangon	1859
	Naypyitaw	1831
	Mandalay	1820

#### Sales by Payment Method

```
SELECT
    Payment, SUM(Total) AS total_sales
FROM
    supermarket_sales
GROUP BY Payment;
```

	Payment	total_sales
•	Ewallet	109993.38
	Cash	112206.76
	Credit card	100767.29

#### **Top 5 Products by Sales Amount**

```
SELECT
    Product_line, SUM(Total) AS total_sales
FROM
    supermarket_sales
GROUP BY Product_line
ORDER BY total_sales DESC
LIMIT 5;
```

	Product_line	total_sales
١	Food and beverages	56144.96
	Sports and travel	55123.00
	Electronic accessories	54337.64
	Fashion accessories	54306.03
	Home and lifestyle	53861.96

#### **Monthly Sales Trend**

```
DATE_FORMAT(Date, '%Y-%m') AS month,
SUM(Total) AS total_sales

FROM

supermarket_sales

GROUP BY month
ORDER BY month;
```

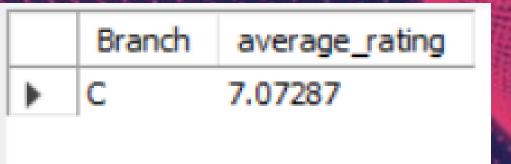
	month	total_sales
•	2019-01	116292.11
	2019-02	97219.58
	2019-03	109455.74

## Branch with Highest Average Rating

```
SELECT

Branch, AVG(Rating) AS average_rating
FROM

supermarket_sales
GROUP BY Branch
ORDER BY average_rating DESC
LIMIT 1;
```



## Top 3 Cities by Number of Transactions

```
City, COUNT(*) AS transaction_count
FROM
supermarket_sales
GROUP BY City
ORDER BY transaction_count DESC
LIMIT 3;
```

	City	transaction_count
<b>•</b>	Yangon	340
	Mandalay	332
	Naypyitaw	328

## Gender Distribution by Product Line

```
SELECT
    Product_line, Gender, COUNT(*) AS gender_count
FROM
    supermarket_sales
```

GROUP BY Product\_line , Gender;

		1 ml 2 12 11.	EBBROSCO CO.	
	Product_line	Gender	gender_count	
•	Health and beauty	Female	64	
	Electronic accessories	Female	84	
	Home and lifestyle	Male	81	
	Health and beauty	Male	88	
	Sports and travel	Male	78	
	Electronic accessories	Male	86	
	Home and lifestyle	Female	79	
	Food and beverages	Female	90	
	Fashion accessories	Female	96	
	Food and beverages	Male	84	
	Sports and travel	Female	88	
	Fashion accessories	Male	82	

# Sales Contribution of Each Product Line in Each City

```
SELECT
    City, Product_line, SUM(Total) AS total_sales
FROM
    supermarket_sales
GROUP BY City , Product_line
ORDER BY City , total_sales DESC;
```

	Topological Control	A CONTROL DO	
	City	Product_line	total_sales
•	Mandalay	Sports and travel	19988.26
	Mandalay	Health and beauty	19980.70
	Mandalay	Home and lifestyle	17549.21
	Mandalay	Electronic accessories	17051.52
	Mandalay	Fashion accessories	16413.38
	Mandalay	Food and beverages	15214.93
	Naypyitaw	Food and beverages	23766.88
	Naypyitaw	Fashion accessories	21560.11
	Naypyitaw	Electronic accessories	18968.99
	Naypyitaw	Health and beauty	16615.35
	Naypyitaw	Sports and travel	15761.99
	Naypyitaw	Home and lifestyle	13895.54
	**	110 11	

#### **Yearly Sales Analysis**

```
YEAR(Date) AS year, SUM(Total) AS total_sales
FROM
supermarket_sales
GROUP BY year
ORDER BY year;
```

	year	total_sales
•	2019	322967.43

### **Insights and Observations**

- •Sales Trends: Sales peaked in March 2019. The "Food and beverages" product line contributed the most to total sales.
- •Customer Behavior: Most transactions were made using Ewallets. Gender distribution was relatively balanced across product lines.
- •Branch Performance: Branch A had the highest average rating, while all branches had nearly equal total sales.

### Thank You