

Ecommerce Sales Analysis Module 1 Project

Project Objective: Analyzing different sales trend based on the given dataset using Dashboard.

Dataset Description: The given Dataset contains four sheets and four tables such as Customer table, Product table, Store table and Sales fact table each containing many rows and columns.

Column Description:

Column name	Description
Customer ID	Customer ID of the customers
Name	Name of the customers
Age	Age of the customers
Gender	Gender of the customers
City	City of the customers
State	State of the customers
Country	Country of the customers
Loyalty Level	Loyalty Level of the customers
Product ID	Product ID of the products
Product Name	Product Name of the products
Category	Category of the products
Sub Category	Sub Category of the products
Brand	Brand of the products
Cost	Cost of the products
Stock	Stock of the products
Store ID	Store ID of the Stores
Store Name	Name of the stores
Region	Location of the stores

City	City of the stores
Store Type	Type of the stores
Sales ID	ID of each sale
Order Date	Date of each order
Quantity	Quantity sold
Unit Price	Unit Price of product sold
Discount	Discount given for each sale
Payment Type	Mode of payment
Total Amount	Total Amount of sales

Data cleaning & transformation:

Customer Table:

1. Converted entire data into table format
2. Changed all data types, removed duplicates in customer ID column
3. Corrected inconsistencies and made Name column into proper case using clean, trim and proper functions
4. Replaced C- into CUST in customer Id column using find and replace method.
5. Found blank values in Loyalty level column and replaced with “unknown” using formula
 $=if(isblank(H1),"unknown",H1)$ Since it is non -numerical value.
6. Copied formula to every row and pasted as values.

Product Table:

1. Converted entire data into table format
2. Changed all datatypes, removed duplicates in product ID column
3. Replaced P- into PROD in product Id column using find and replace method

4. Found blank values in “cost” and “stock” column and replaced with average value

```
=if(isblank(F2),Average(F1:F101),F2)  
=if(isblank(G2),Average(G1:G101),G2)
```

5. Copied formula to every row and pasted as values

6. Since it is numerical value

Store Table:

1. Converted entire data into table format
2. Removed duplicates in store ID column
3. Changed all data types

Sales-fact Table:

1. Converted entire data into table format
2. Changed all data types
3. Changed order date from YYYY-MM-DD format to DD-MM-YYYY format
4. Sorted date column from latest to oldest
5. Found missing values in quantity and price column and replaced with average value

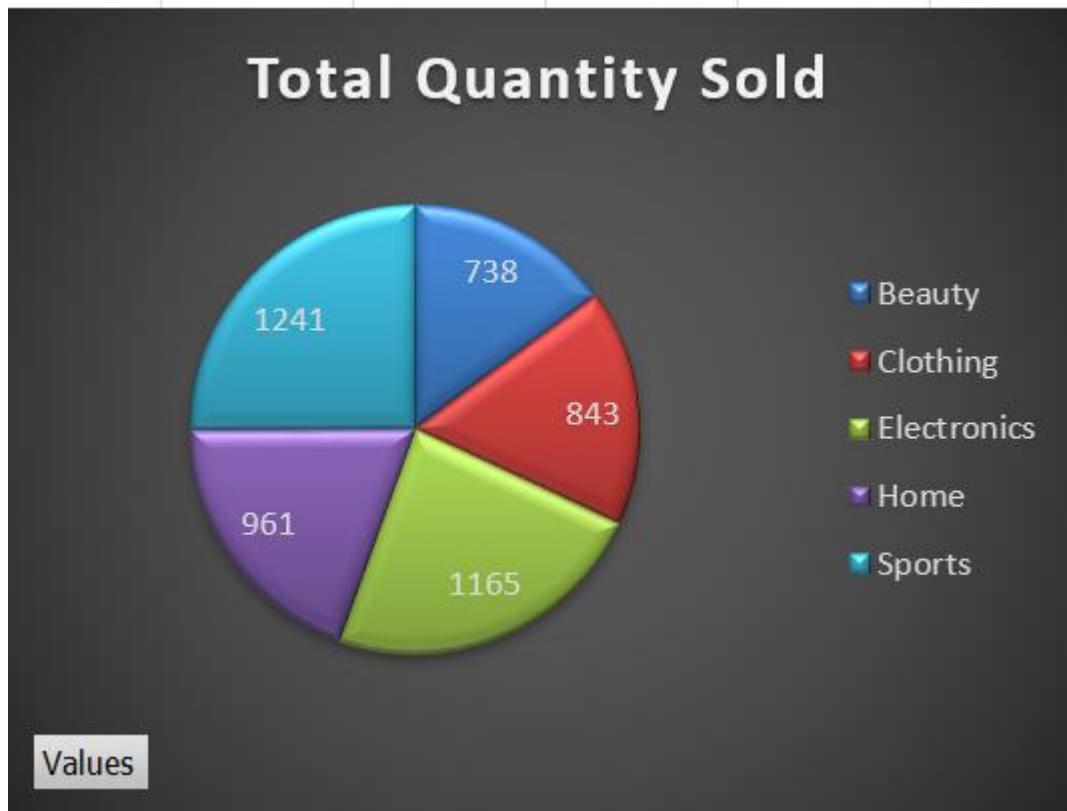
```
=if(isblank(F2),Average(F2:F2001),F2)  
=if(isblank(G2),Average(G2:G2001),G2)
```

6. Copied formulas for entire row and pasted as values. Since it is numerical value
7. Corrected total amount column for replaced blank values in quantity and unit price using formula

$$=([\text{@}[unit_Price]] - ([\text{@}Discount]*[\text{@}[unit_price]])) * [\text{@}Quantity]$$

Visualization and Insights Arrived with screenshot of visualization

- Comparing total quantity sold and total amount based on product category the Sports category has highest sales and Beauty category has lowest sales

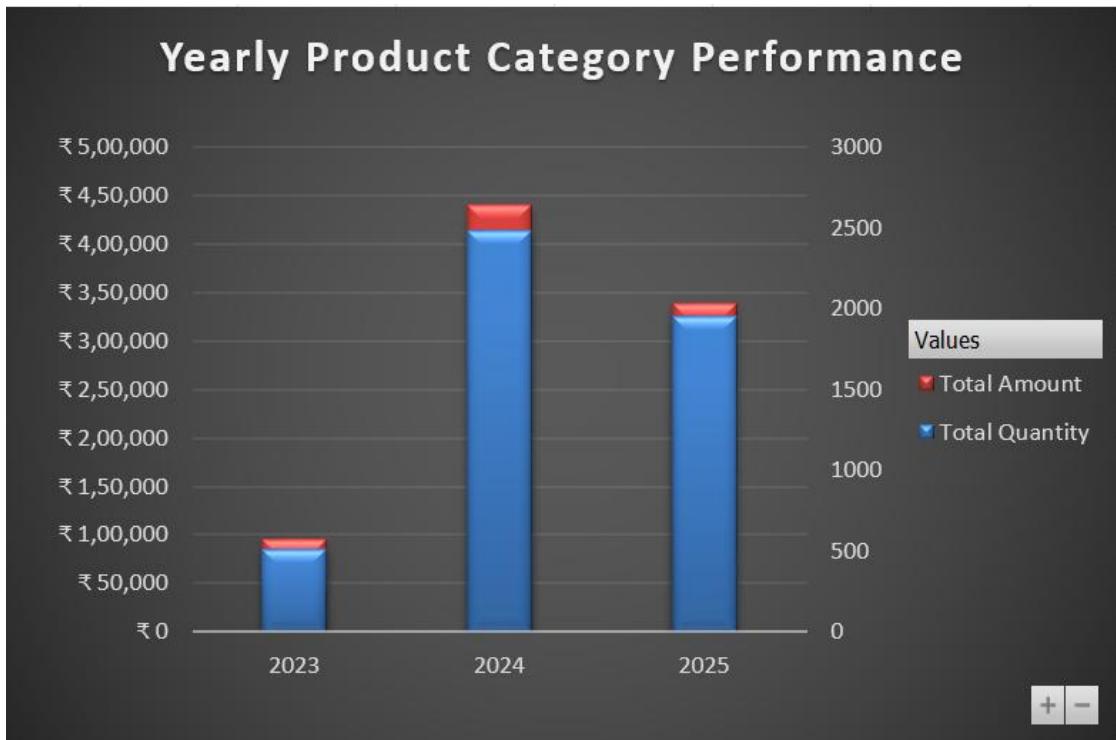


- Comparing average sales of product category based on stores the Flagship stores ranked higher than Online and Outlet stores.



- The overall sales performance seems to be quite linear. So, no changes required in the current strategy.
- 2024 has highest sales compared to 2023 and 2025.





- Comparing the sales of different regions the west region seems to be significantly low. So, it would be effective when focused on some ideologies like discounts and promotions.



Conclusion:

Based on the analysis of given dataset the sales are very good in the North region and comparatively low in the West region. Similarly, Flagship store ranks good in sales compared to outlet store.

The sales trend looks linear so changes may not be required in the current strategies.

The sports category products also show good sales volume compared to other categories. The Beauty category product shows low sales.