Learners have to develop a Report to support the answers to the following questions and suggestions.

Objective Questions:

1. What is the total number of attributes in the customer table?

-- Total Number of rows are 113000 and 3 columns are there.

2. How will you get the “Customer’s” ages in the “Order” tables according to customer IDs?

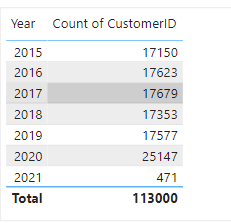
-- Using lookup function I will get the age in order table

3. In analysing the dataset with Power BI, ensure data cleaning to address inconsistencies and missing values before further analysis.

-- I have performed required steps to do the cleaning and missing values

4. How can we calculate the total revenue generated by all the sales?  
-- We can calculate revenue by this formula, Total Sale Price – Total Shipment Cost

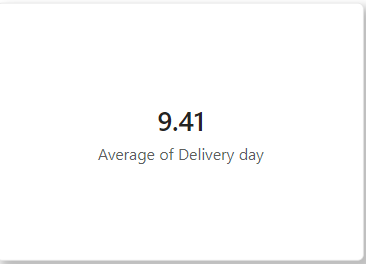


 5. What is the total number of unique customers who made purchases each year? Is there any increase in the number over the years?   
 -- The number of total unique customer purchases each year is

So, there is no fix increase or decrease pattern in the unique customer.

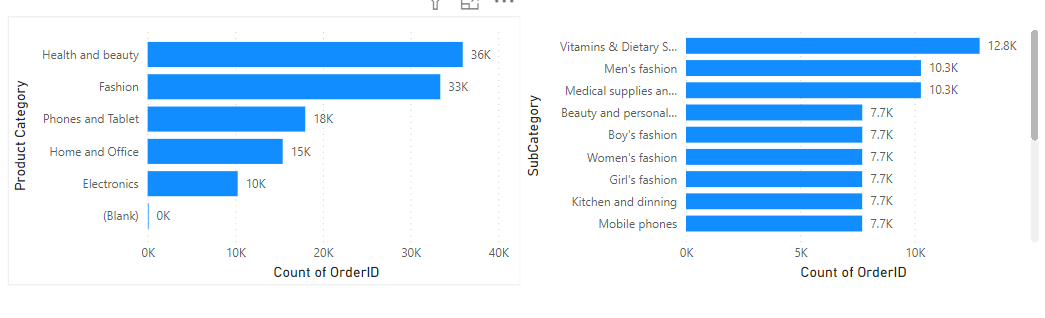
6. How can we determine the total number of unique products available in the company?

-- By using distinct function on product column.

7. What is the average number of days it takes for products to be delivered, get the metric for only the delivered orders?   
  
Average Delivery Day is 9.41 days

8. Which products, categories, and subcategories are the most popular?

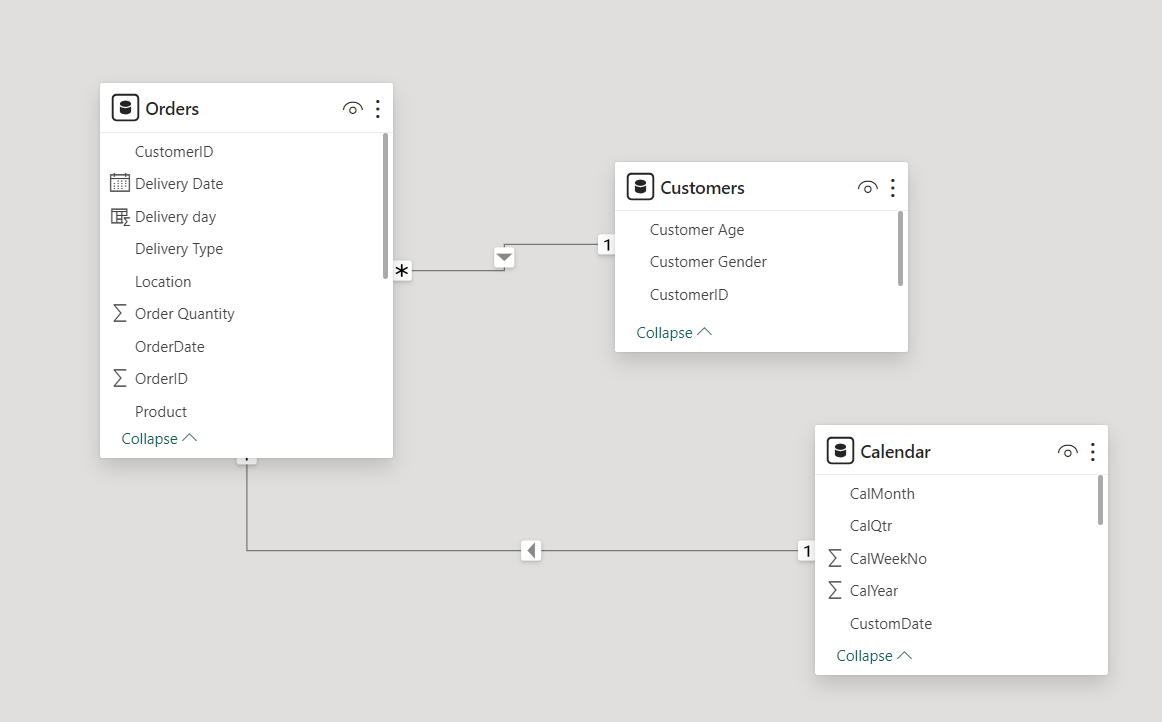
In category, Health and Beauty is the popular & in Sub category Vitamins & Diet is the most popular



9. Which products have seen an increase or decrease in sales over the year?

Product called -- 10.1'' Business Tablet with MT6582 Quad-Core Processor, 100%Cotton 4 Piece Short Sleeve T-Shirts – Multicolour, 6030 3.1 Bluetooth Home Theatre With Remote Control - Black + Free Smartwatch etc have seen an increase or decrease in sales over the year

10. While modelling the data relationships, what will be the type of relationship between the customer ID of Orders and customer tables?   
-- 1 to Many



11. How have you handled the null values in the data?  
-- by filling them with NA values

12. Were there any data format issues in the data, and if there were/are how you would handle them?   
-- There was no such issues.

13. When we add a column in Power Query what’s the code that comes in M language in the formula bar? What do you know about M-query?

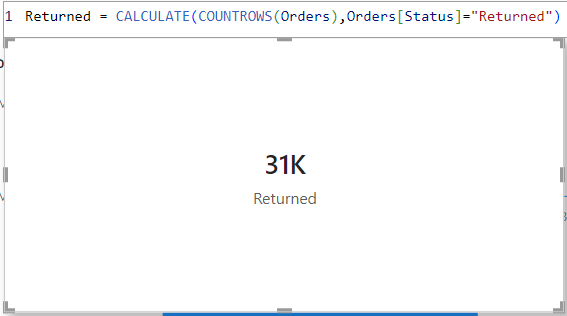
When we add column in Power Query, Table. Add column comes in M language.

M Query is used for transforming the data, cleaning data.

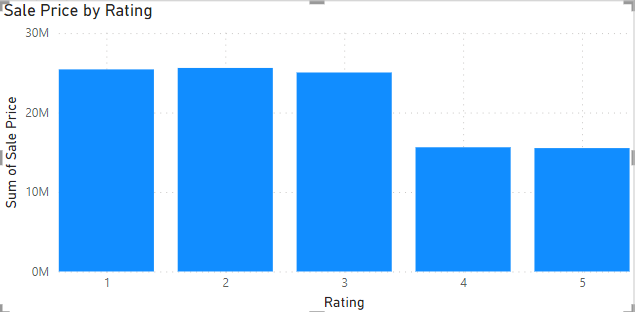
**Subjective Question:**

1. Explain the revenue breakdown by year and by-product. Evaluate how different products contribute to annual revenue and come up with suggestions to increase the sales of the low-selling items.

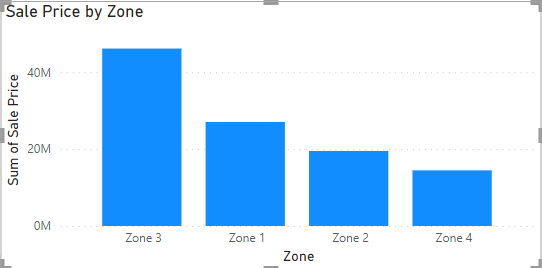
Some product are increasing their annual revenue yearly, while some are decreasing. To increase the sales, we need to give more quality and early delivery.

2. How many products were returned? Use a DAX function to get this metric. Examine the possible reasons for returns and consider how this metric could indicate improvements in product descriptions or quality control.

Returned products are 30500.

3. Whenever a customer goes to Amazon, they’ll filter the most rated products to buy the better category. Can you verify this using any visualization or table that the ratings of products impact their sales value?

4. Investigate how revenue distribution varies across different locations. Explore which geographical areas contribute most to sales and consider the strategic implications for regional marketing and distribution efforts. How might location-based trends inform the company's market segmentation and resource allocation approach?



5. Determine which month could benefit from enhanced promotional offers to boost sales. Can you suggest some targeted marketing strategies here?

During December we can promotionally offers to boost sales.

6. Identify which products may require increased marketing efforts. Which items have high prices yet underperform in sales?

Samsung Galaxy A02 - 64GB HDD - 3GB RAM Smartphone – Black, 6030 3.1 Bluetooth Home Theatre with Remote Control - Black + Free Smartwatch

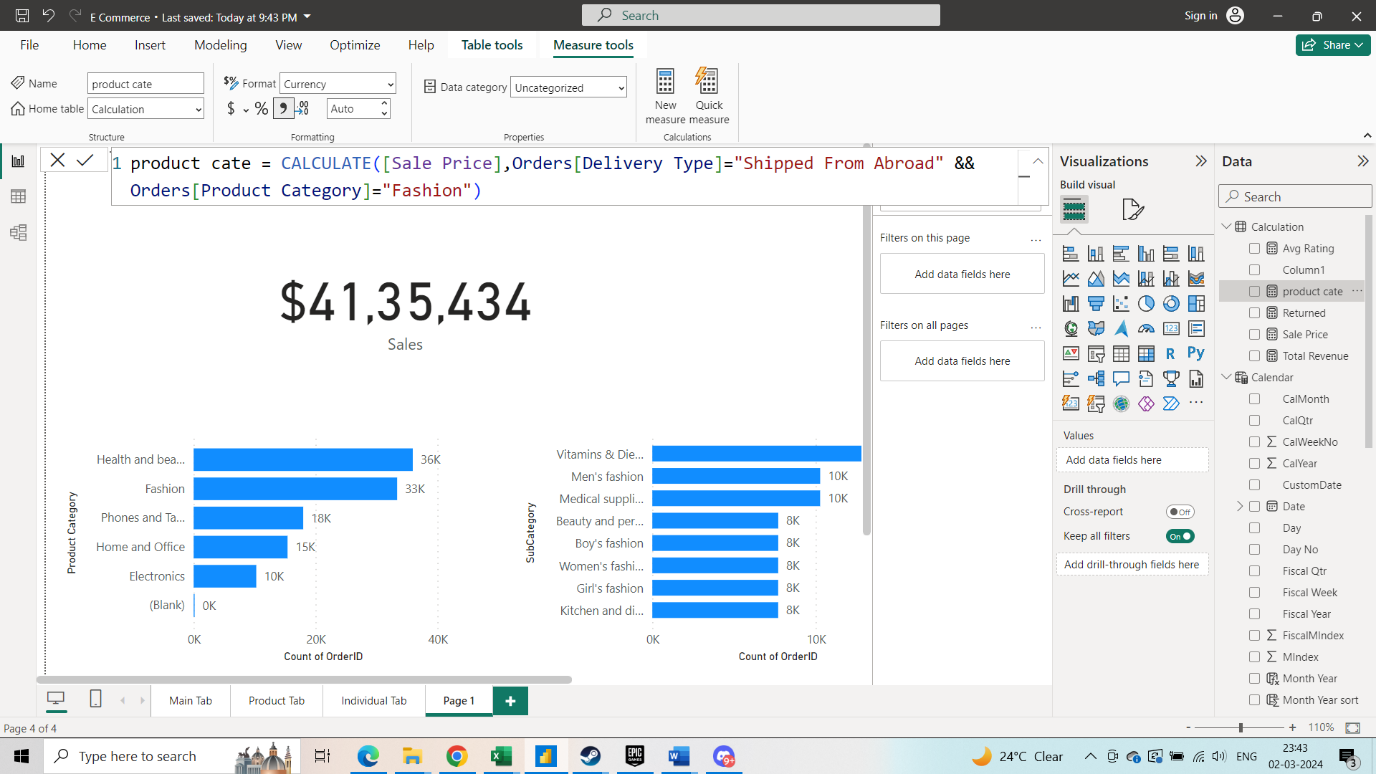
7. Assess which products should have discounts. How can targeted incentives drive sales and customer loyalty for specific products?

We should give discounts on those items which has higher ratings and less sales.

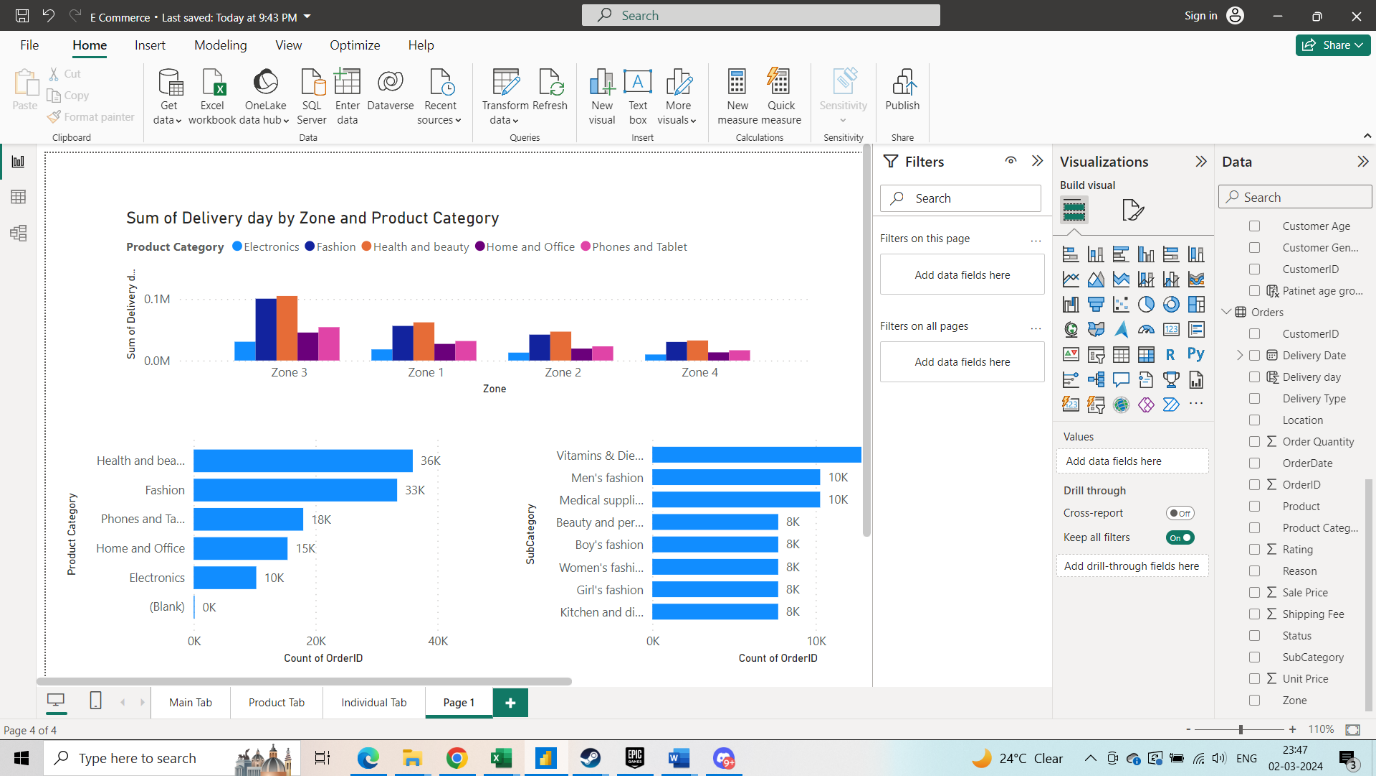
8. Come up with a loyalty program to benefit the company’s customers. From the available lot of customers come up with strategies to bucket them and provide benefits under different loyalty programs.

Loyal customers expect a positive experience from your brand every time they interact with it. They want to feel like you value them as much — if not more — than they value you. If they sense their business isn't appreciated, you might lose them to competitors.

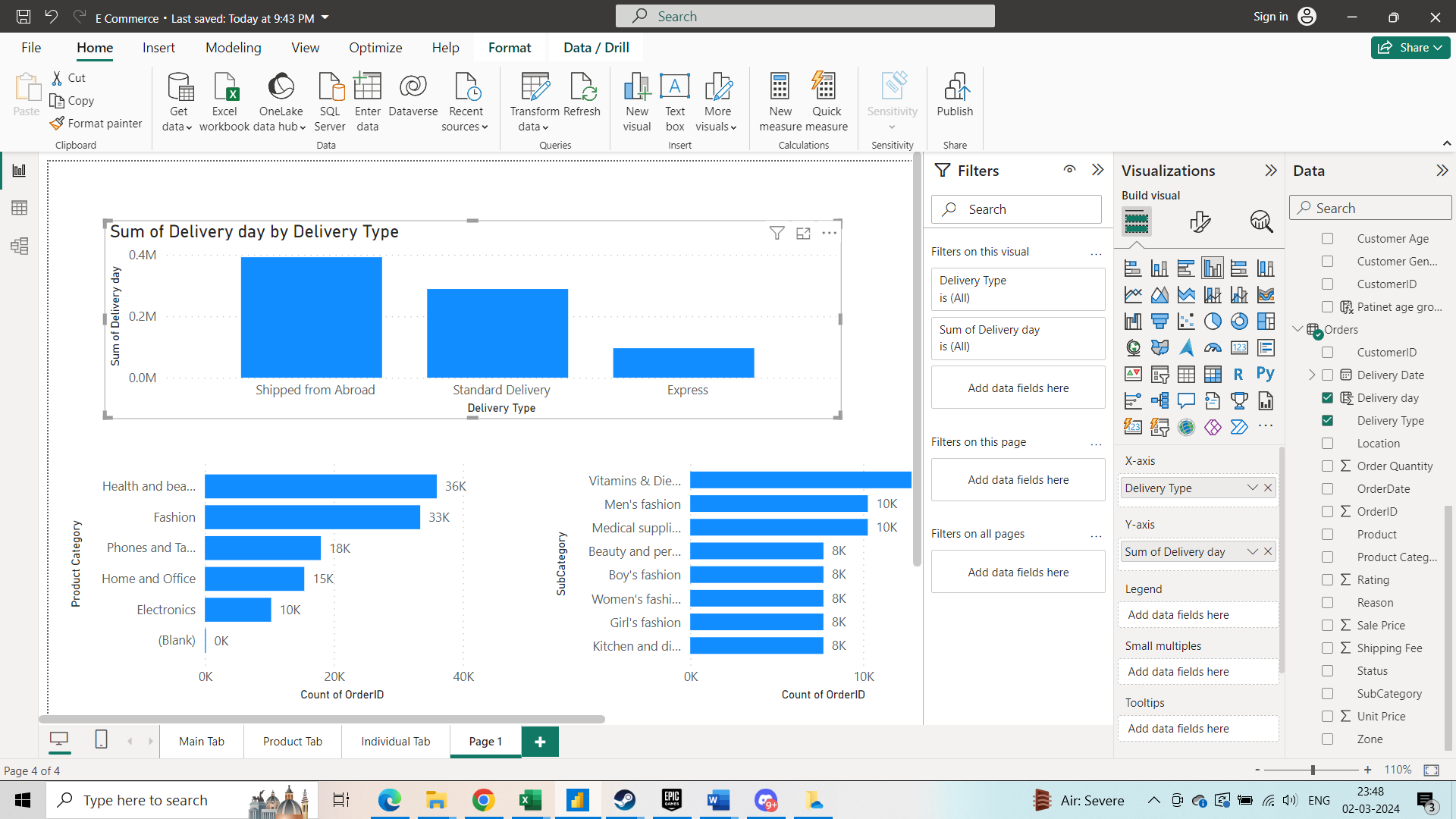
9. Using the DAX functions Calculate and a row iteration DAX function calculate the total sales for the Product Category “Fashion” and delivery type “Shipped from Abroad”. What are the other types of DAX functions you have used in the project?



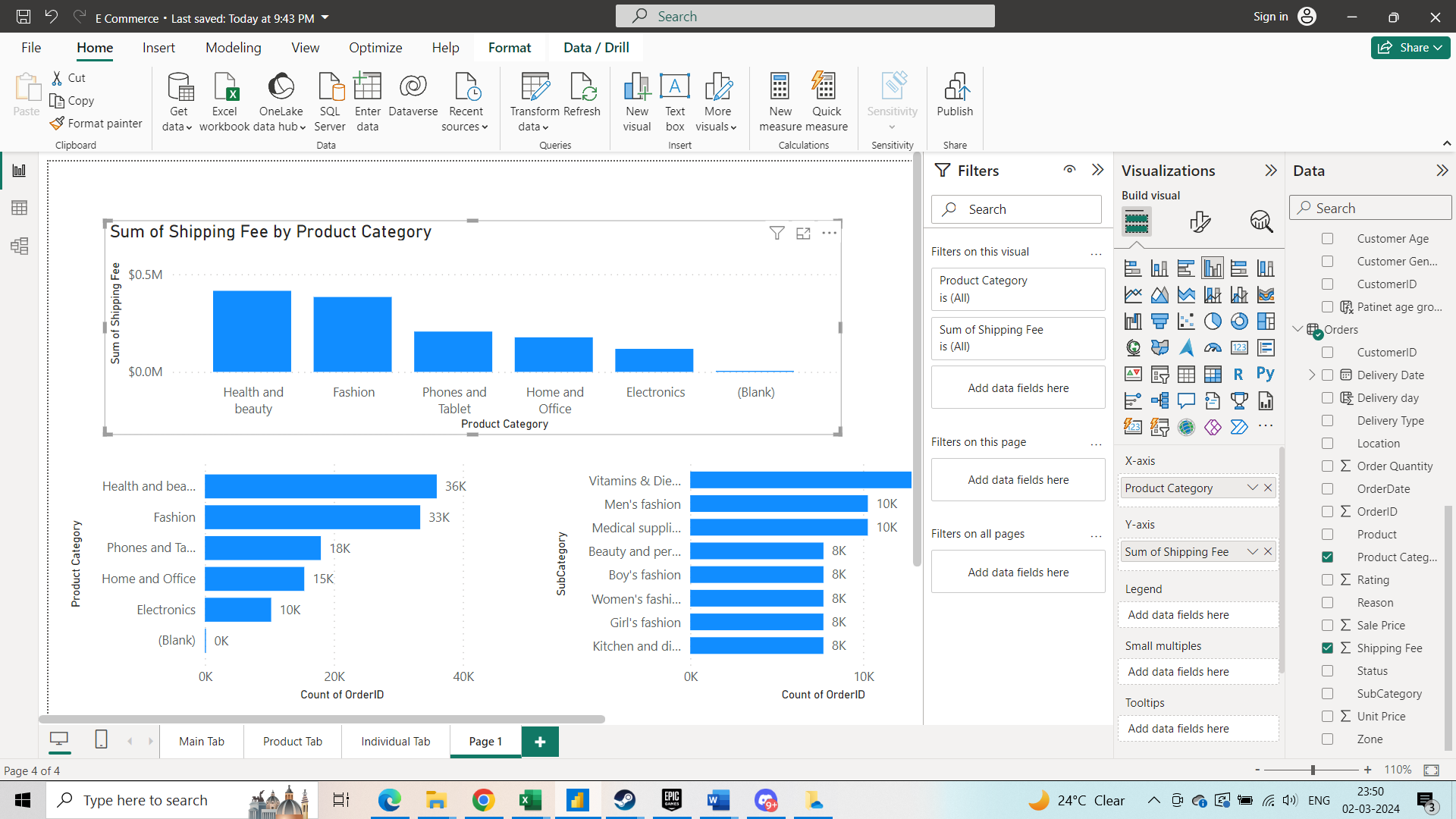
10. Wait Times Correlated with Demographics and Care: Explore how average wait times vary across different product categories to optimize scheduling and staffing.



11.Explore if there is any relationship between the Delivery type and waiting time between ordering and receiving an item.



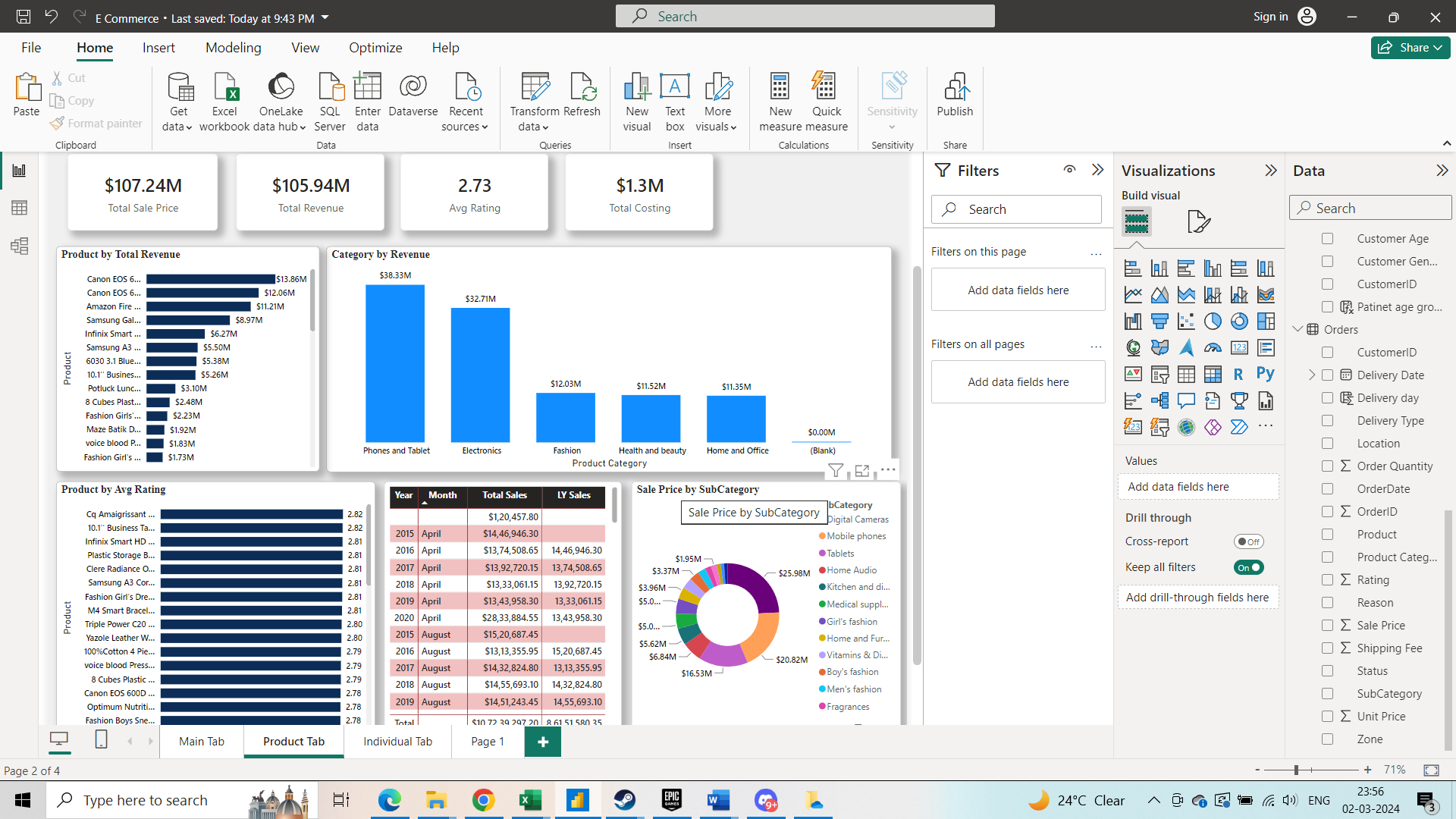
12.Is there any relationship between shipping charges and product type?



13. Come up with strategies to decrease the low rating orders after analysing different factors like waiting time, shipping type, unit price, etc.

Heavier packages generally cost more to ship unless you have opted for [flat-rate shipping](https://shippingeasy.com/blog/4-ways-youre-overspending-on-shipping/). If you are printing the labels and shipping everything from your garage or a shop, you might want to consider buying a postage scale. This will give you a better idea about the weight of each package, and allow you to calculate the costs more accurately.

14.Using the time intelligence DAX function, create a table to compare each month’s sales with the previous year’s same month’s total sales. So there will be four columns in the output year, month, total sales, and previous\_years\_sales.



15. What do you understand by Power BI gateway? What are its use cases?

The Power BI gateway supports both importing data on a schedule and running live queries against your local data sources, a capability Microsoft refers to as Direct Query.

It creates the connection between Power Bi service and Data source. It helps us to refresh the data on cloud.

The stakeholders have asked for three tabs in the Reporting:

● Main Tab

● Product Tab

● Individual product Tab

❖ Using the Main tab in the Report, Stakeholders should be able to look at the total sales, revenue produced till now, and customer satisfaction for all product categories. This tab should have a slicer of product category and date.

❖ Using the product Tab, the management at the company should be able to look at the individual product category-wise performance like customer satisfaction, the number of customers purchasing that product, and which product requires improvement. This tab should have a slicer of gender, delivery type, product category, and age group

❖ Using the Individual product Tab, the Management and Stakeholder in the company want to look at the best product profile which would involve their total purchase, ID of that product, category/subcategory of that product, average rating, and how much revenue was generated by this product.

All the metrics using which they can address the product very carefully in their orders. Make sure that all the visualizations look decent and are placed in a proper order. Each tab has different POCs (Point Of Contact), so make sure you involve all the metrics that POC may look at in that tab along with those mentioned in the tab description