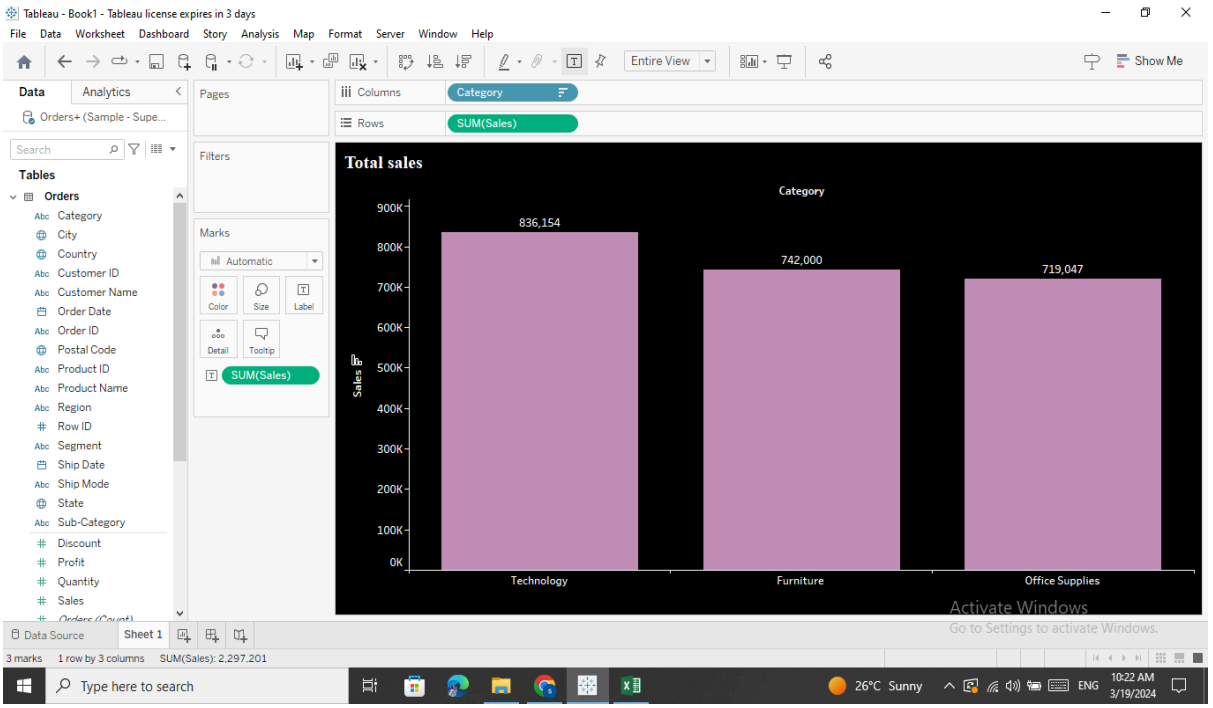
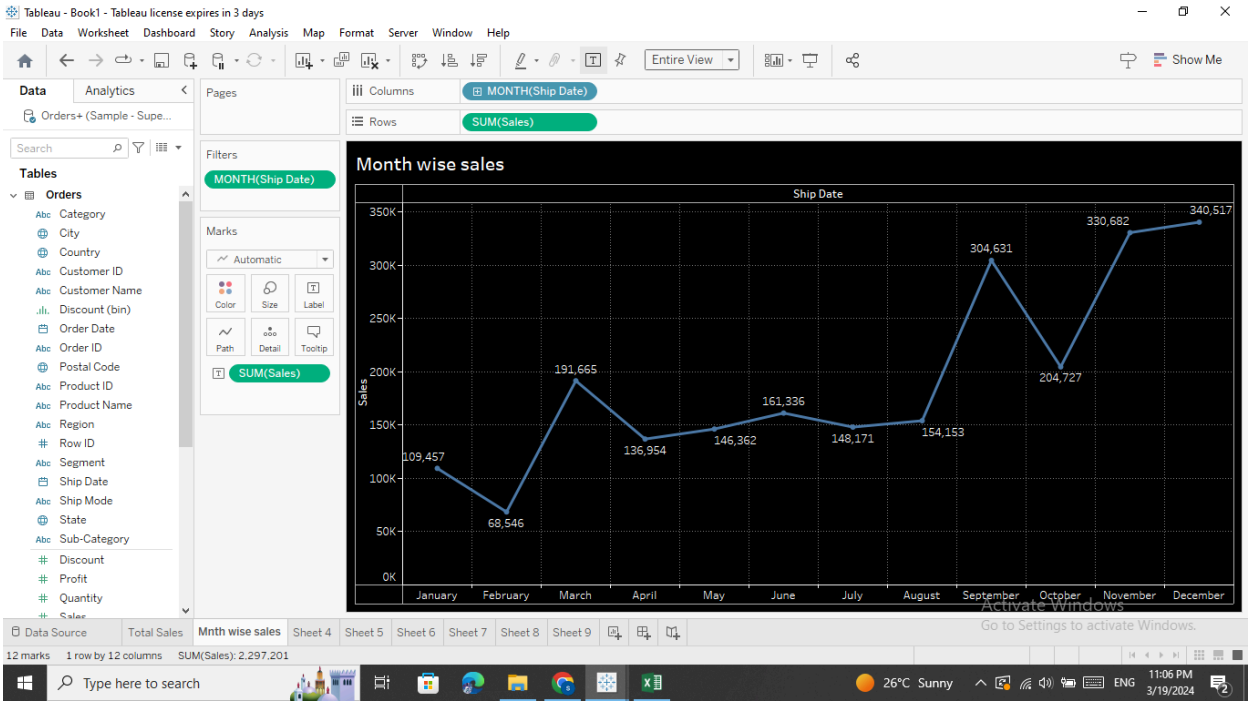
1. Which product categories have the highest total sales in the "Superstore" dataset?

   >> To present this visualisation we can use a bar chart as bar charts are best suited to present categorical data and in this case we have three categories to present Technology, Furniture and office supplies.
   After plotting the bat graph with the superstore data we can clearly see that the highest total sales are made by Technology followed by Furniture and office supplies.



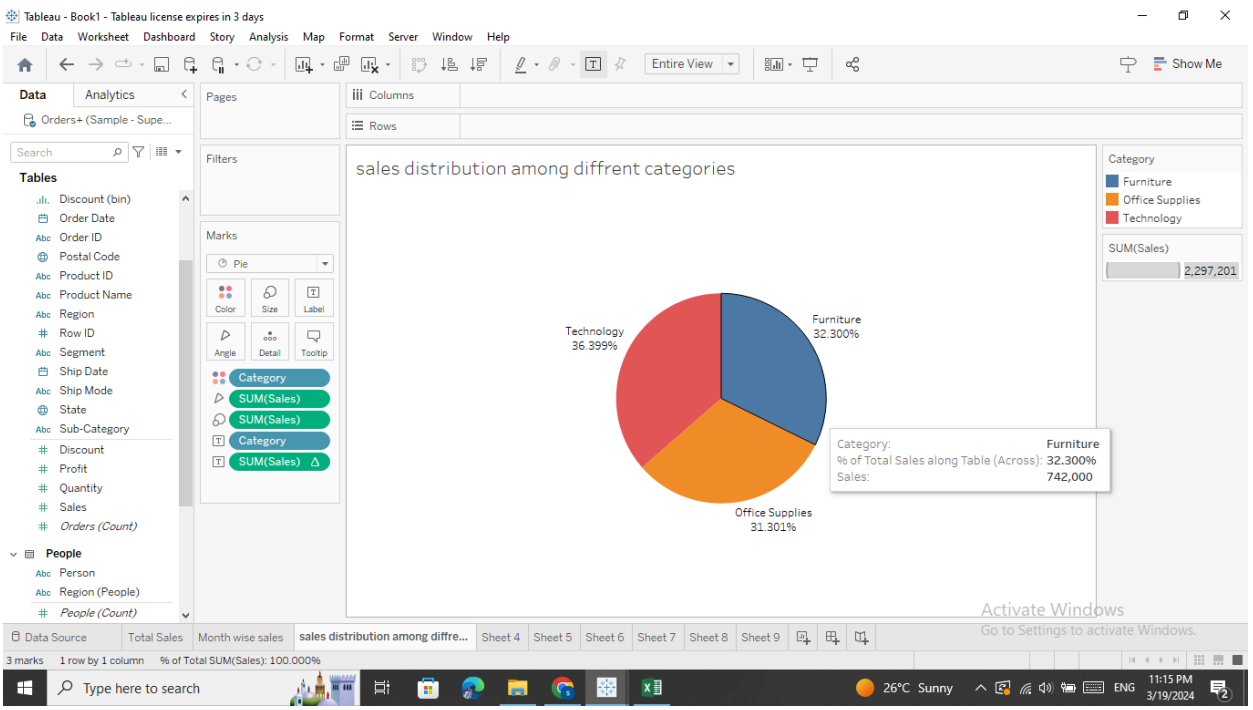
2. How do the monthly sales amounts change over the course of a year?

>>To answer this problem we can use a line chart as it is best suited for showing trends over time and in this case we have to show the change in sales over a span of a year distributed monthwise. From the chart it is clearly visual that the sales were least in the 1st quarter of the year but as the month passes the sales are going to increase and the sales went to the maximum amount in the last quarter.
The least sales was recorded in the month of February while the maximum amount of sales was attained in the month of december.



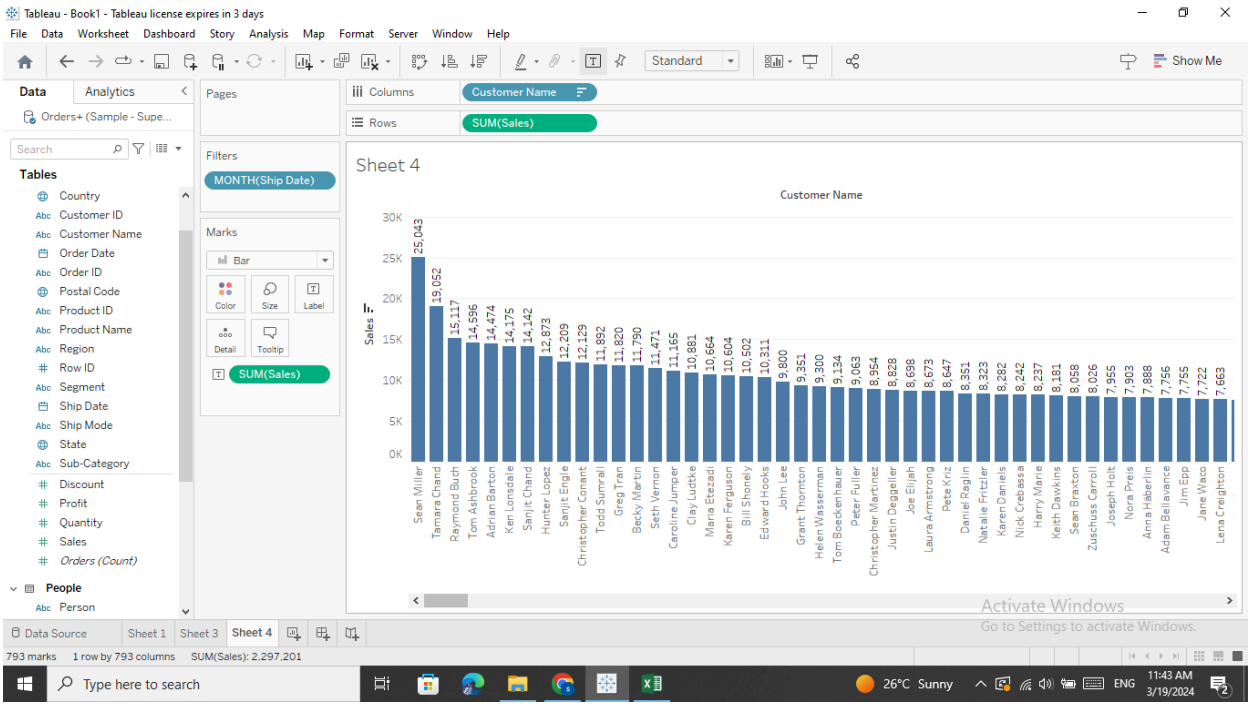
3. How is the total sales amount distributed among different product categories?

>> To present the distribution of a category among total it is best suited to use a pie chart. To show the total sales amount distributed among different product categories we used a pie chart which divides the three categories in the percent of their sales. The highest sales of 36.4% sales made by technology which is shown by red colour followed by 32.3% sales for furniture which is shown by blue colour and then 31.3% sales made by Office Supplies which is shown by green colour in the chart



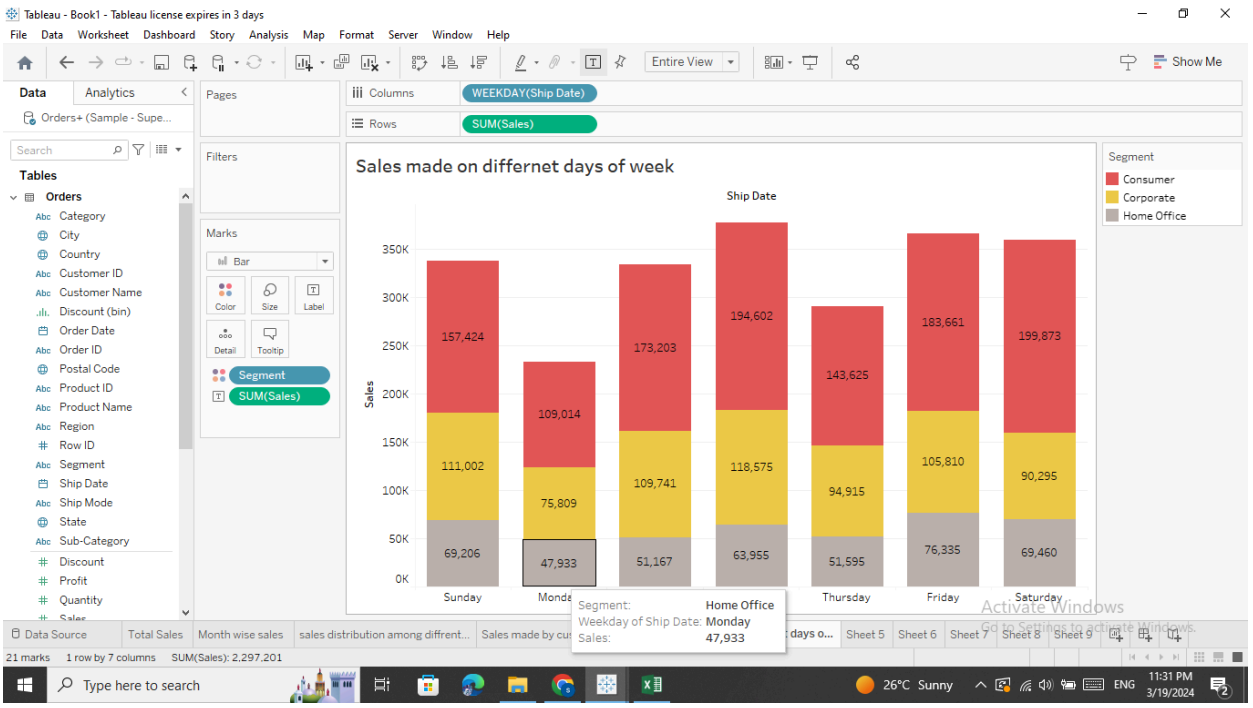
4. Can we analyze the sales performance of individual customers over time?

>> We can analyse the sales performance of individual customers over time using a bar chart and placing the ship date column in the filter pane so we can analyse the sales performance of customers over month, day or year individually. After analysing the data we can say that the maximum sales was made by Sean Miller in a particular month with an amount of $25043 and the least was made by Lela Donovon and Thais Sissman with an amount of $ 5.



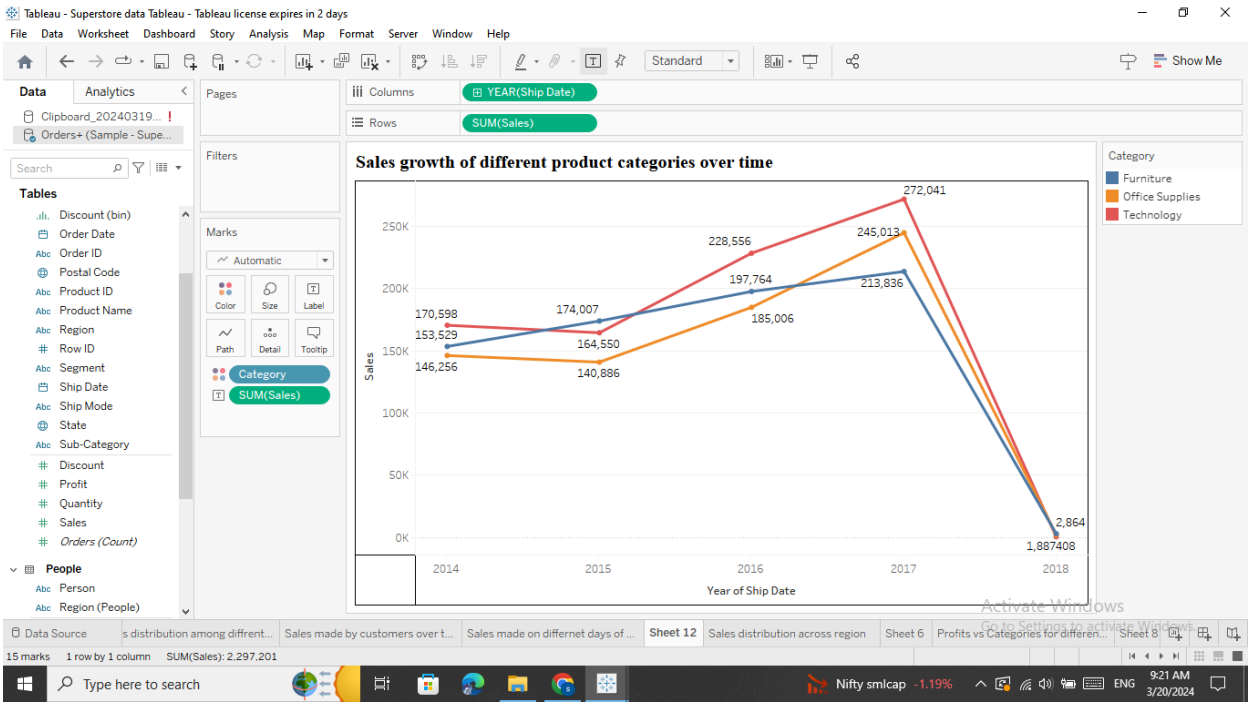
5. How do sales vary based on different days of the week and product categories?

>> By using a Stacked bar chart we can plot three different categories of data in a single chart. In this scenario we had plotted a stacked bar chart which shows the variation of sales made on different days of week and product categories. The bars show the total sales made in the particular day while the different colours show the category of sales. Blue part of the bar shows Consumer, Yellow was shown by Corporate and red was shown by the Home Office. The maximum sales were made on Wednesday.



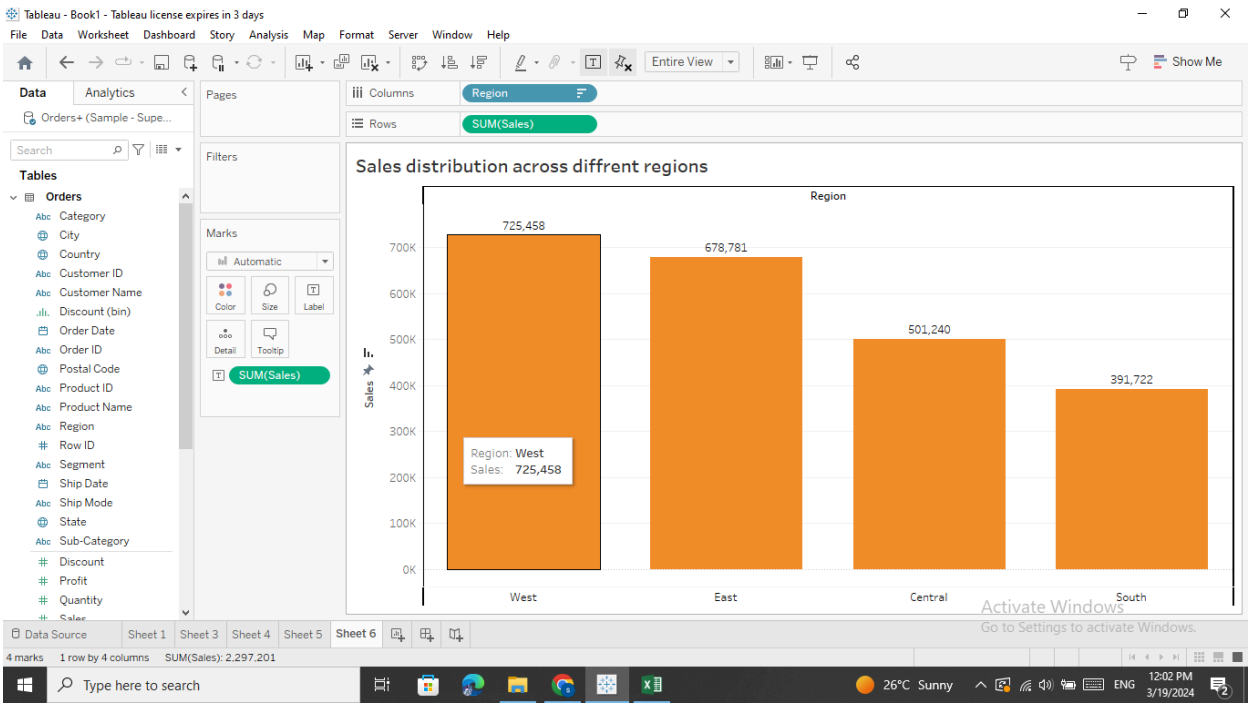
6. Can we visualise the sales growth of different product categories over time?

>> To answer this question we had used a Line chart. We had plotted the year of the ship and sales on the x and y axis. Three different colours of line are drawn on the plot where each line represents a different category of data.
Blue line shows the sales of Furniture in different years, Orange is shown by Office Supplies and Red is shown by Technology.The maximum amount of sales was made in the year 2017 for all the three categories. The Growth of sales was increasing yearly.

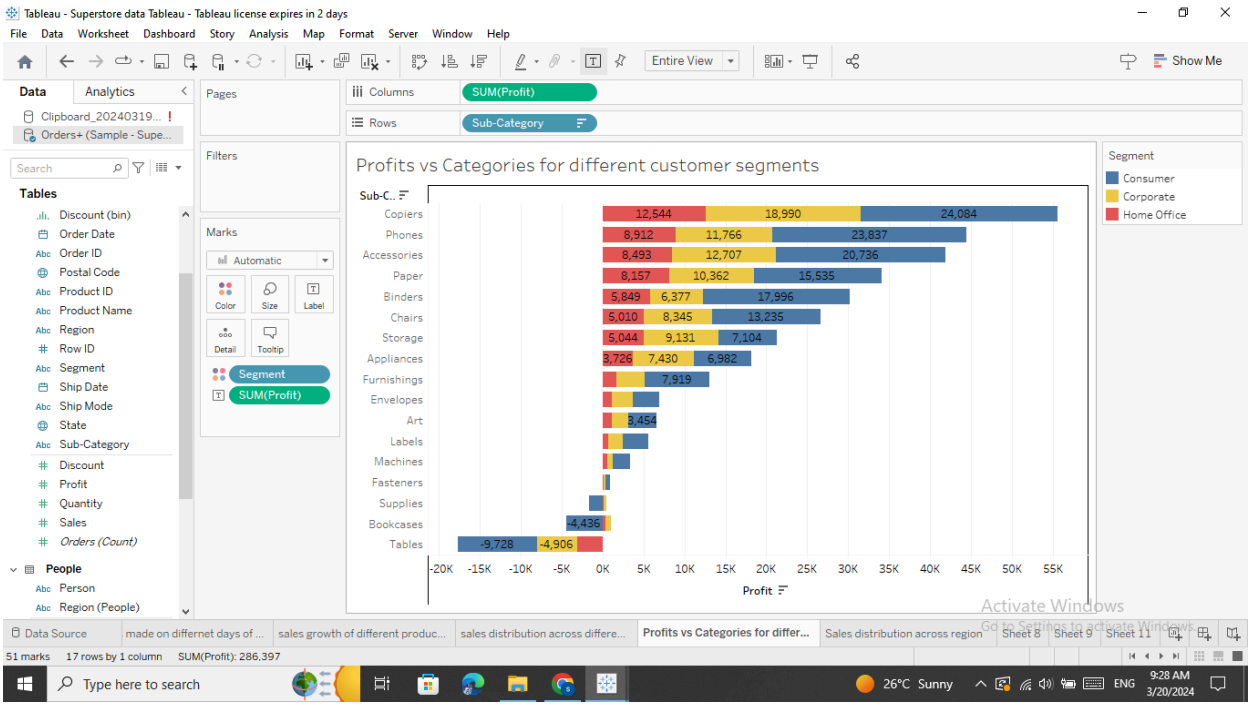


7. How does the sales distribution vary across different regions in the "Superstore" dataset?

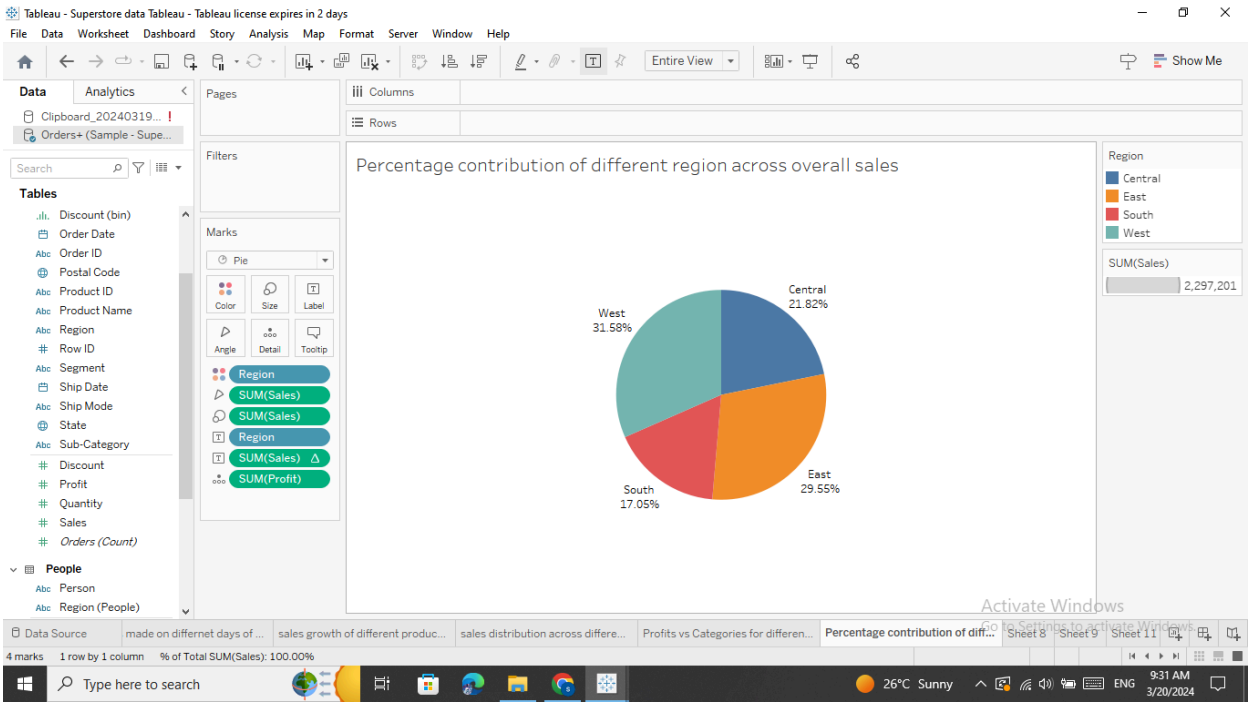
>>From the Superstore dataset we had plotted a bar graph to show the distribution of sales across different regions. Here West region has the highest amount of sales with an amount of $725458 followed by East region with a sales of $678781 followed by Central region with a ales of $501240 and the ;east sales was made by South region with a sales of $391722.



8. Can we visualise the composition of profits across various subcategories within different customer segments?
   >> The visualisation can be best presented by a stacked bar chart. It can show the various segments in a single bar which can be easy to understand and compare with other segments.in the stacked bar chart the categories were plotted in Y axis while the profits were in X axis and customer segment shows the stack of the bars.
   From the chart it is clearly shown that copiers made the most profit while there are some categories which made negative profit(loss). The products who made losses are supplies,bookcases,and tables. The maximum profit was made by copiers .



9. What is the percentage contribution of each region to the overall sales?
   >>To present the sales percentage contribution of each region we can use a pie chart as it is best suited to present the share among the total.
   The maximum sales was made by the west region with a percentage contribution of 31.58% followed by the east region with a sales of 29.55% followed by central with a sales of 21.82% and the least sales was made by the south region with 17.05%.



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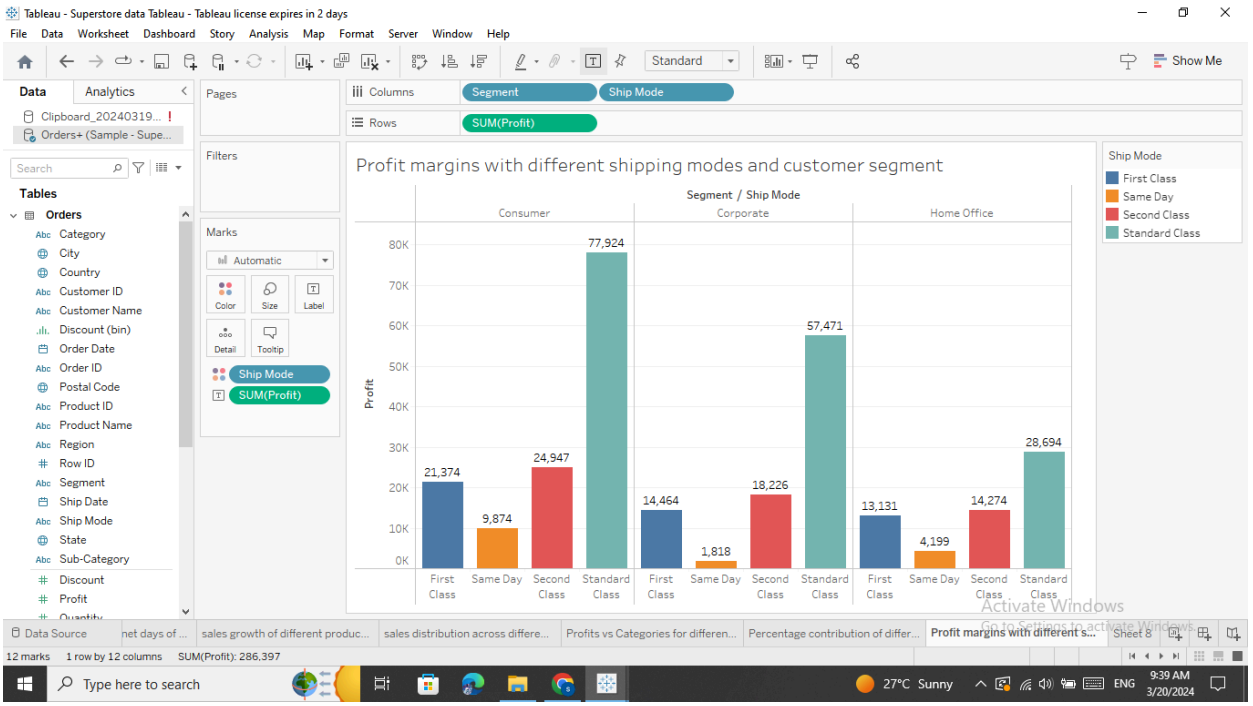
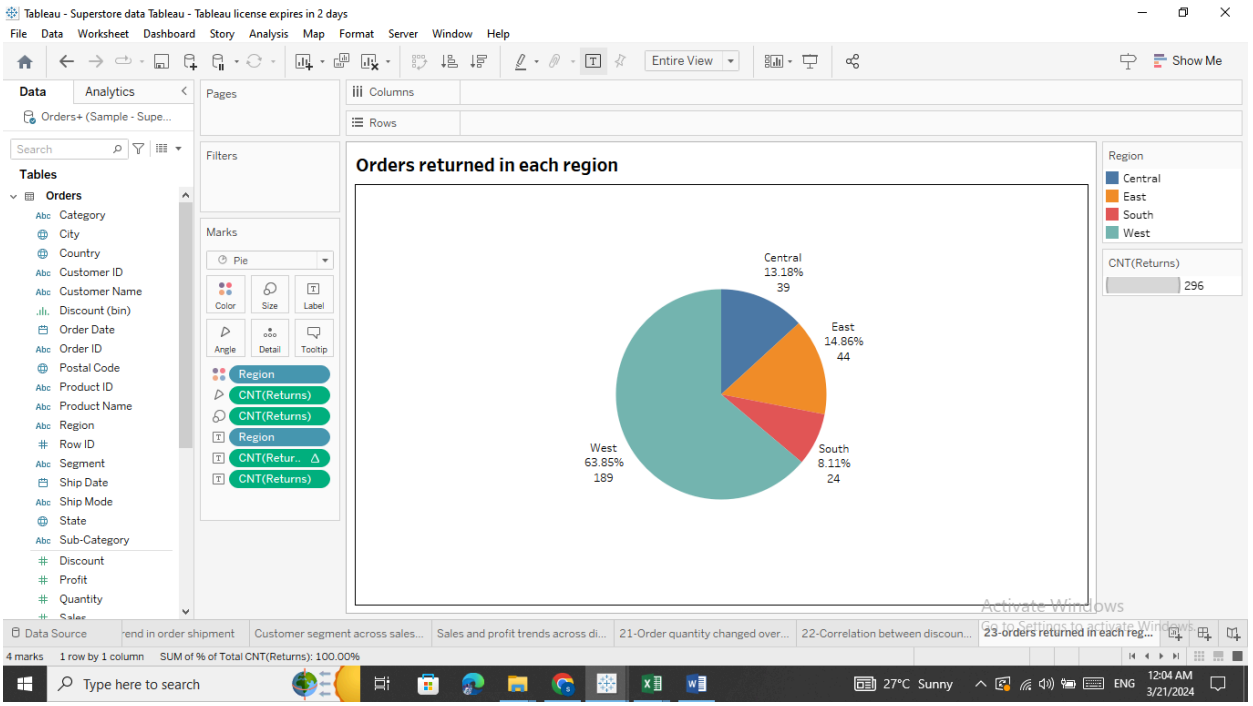
10. Can we visualise the profit margins associated with different shipping modes and customer segments?

>>we have to present three different categories of data which are linked with each other so we are going to use a bar chart. The different bars of the chart show the different ship modes which are divided in colours which are further divided in customer segments . The first class is shown in blue the same day with orange colour, second class with red colour and standard with grey colour . the maximum profit was made by standard class in all the three customer segments and the least profit was made by same day .



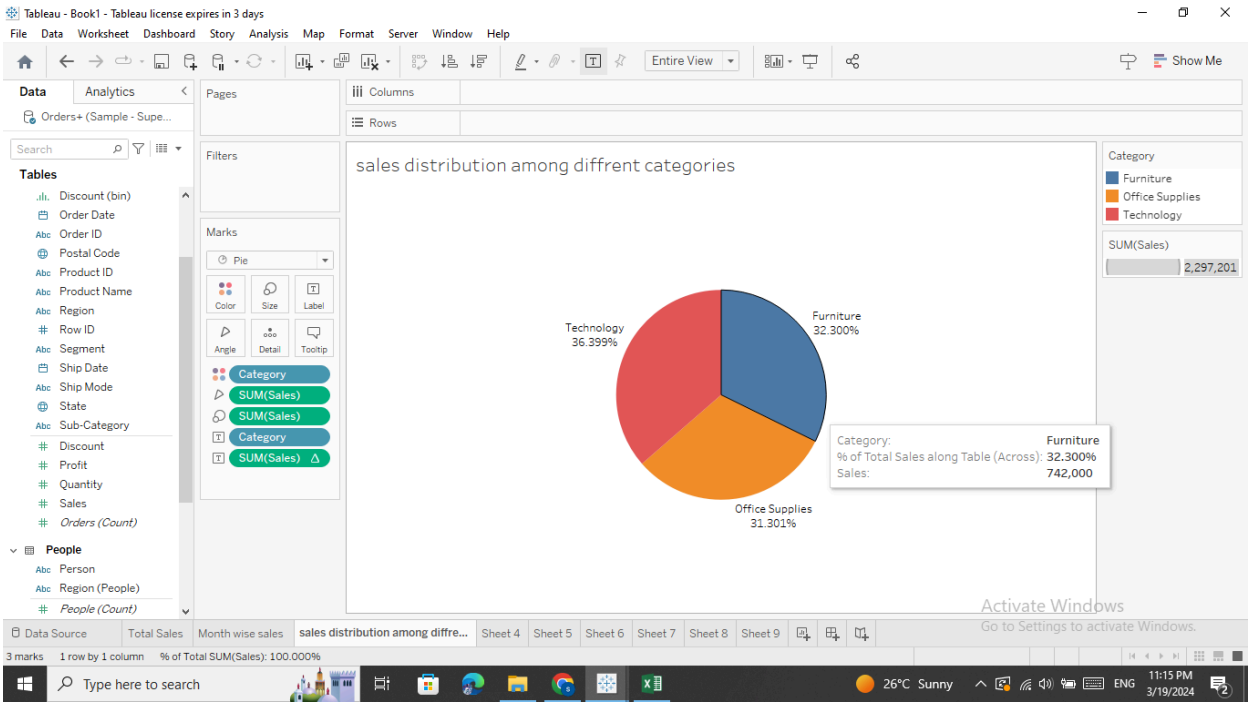
11. What is the proportion of orders returned in each region within the Superstore dataset?

>>A pie chart is used to present the proportion of order returned in each region as pie chart is best suited to show the quantity as part of the whole.
In this case grey colour is used to represent the west region with order return count of 189 and return percentage of 69.85% which is the highest return followed by the green colour part which is represented by the East region with a return count of 44 and contribution of 14.86% Of total return, the blue part was represented by central region with 13.18% return and the least return where recorded from South Region which is denoted by red colour which has the return percentage of 8.11%.



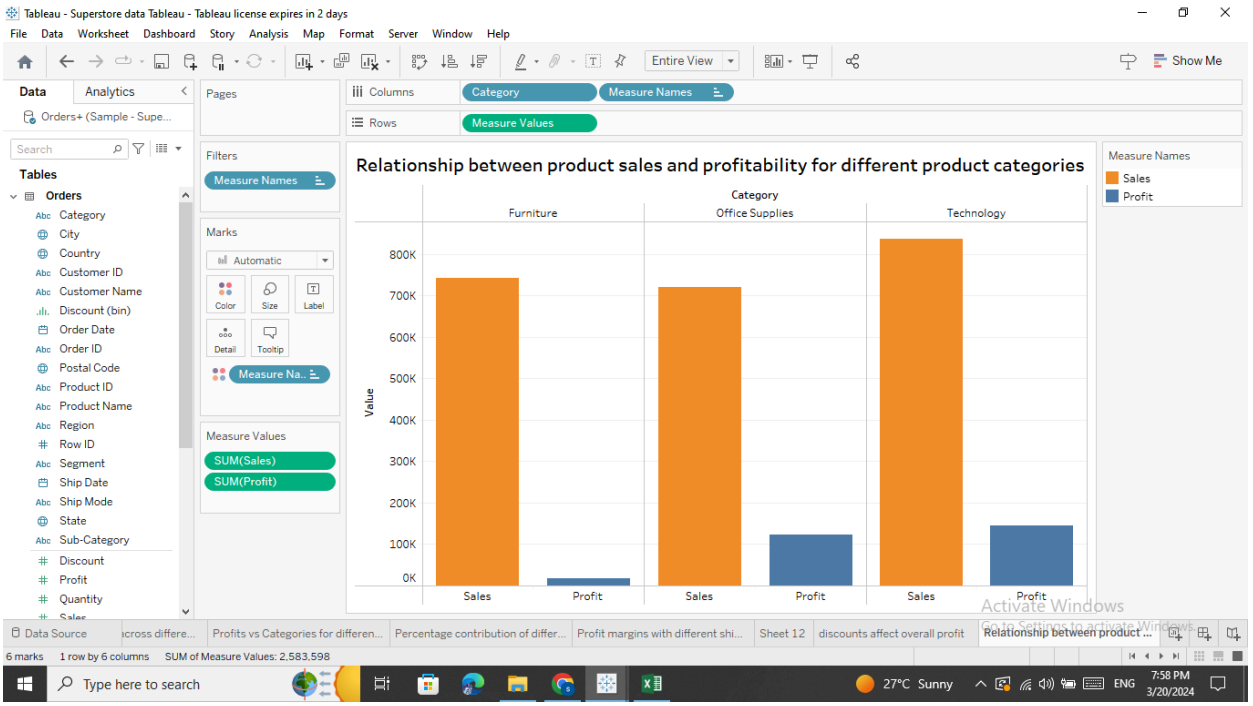
12. How is the total sales amount distributed among different product categories?

>> To present the distribution of a category among total it is best suited to use a pie chart. To show the total sales amount distributed among different product categories we used a pie chart which divides the three categories in the percent of their sales. The highest sales of 36.4% sales made by technology which is shown by red colour followed by 32.3% sales for furniture which is shown by blue colour and then 31.3% sales made by Office Supplies which is shown by green colour in the chart



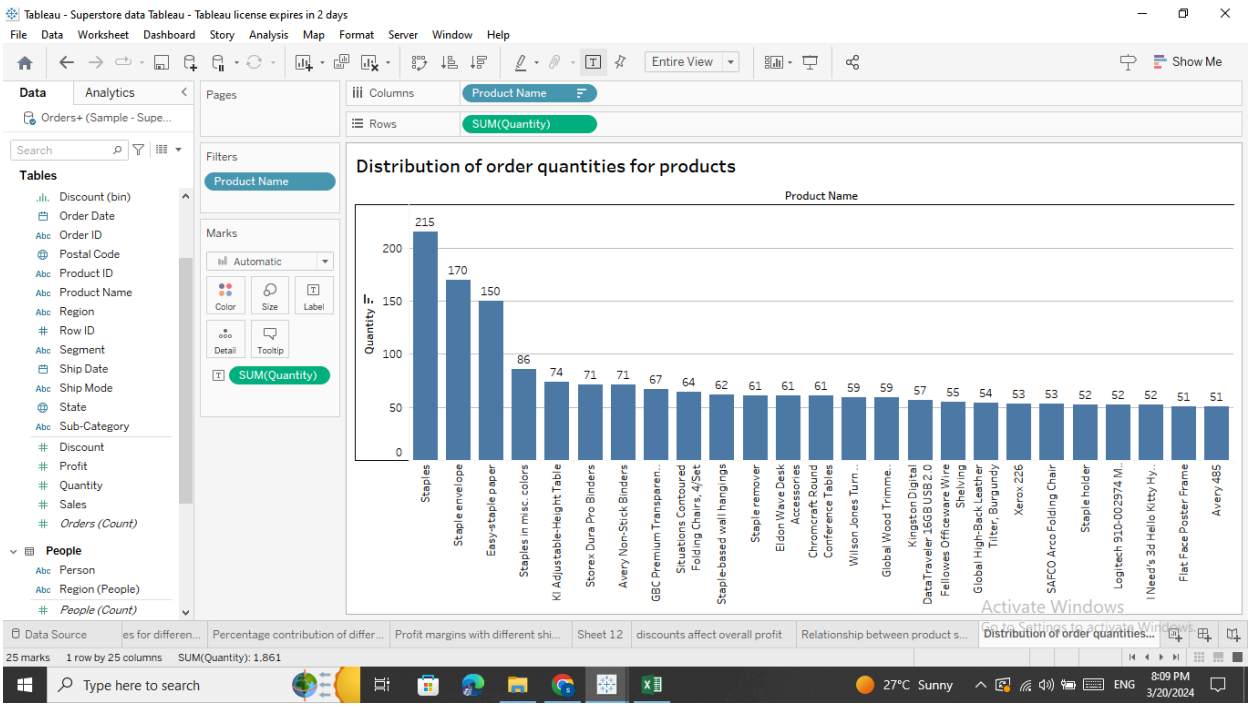
13. Can we visualise the relationship between product sales and profitability for different product categories?

>>To visualise the relationship between product sales and profitability for different product categories we can use a dual bar chart over which one bar will show the product sales while the other one will show the profitability among different product categories. The Give bar chart chart product sales is represented by orange coloured bar while profit is represented by blue coloured. The bar chart tells that the maximum amount of sales occurred for technology and the most profit was gained through technology only.



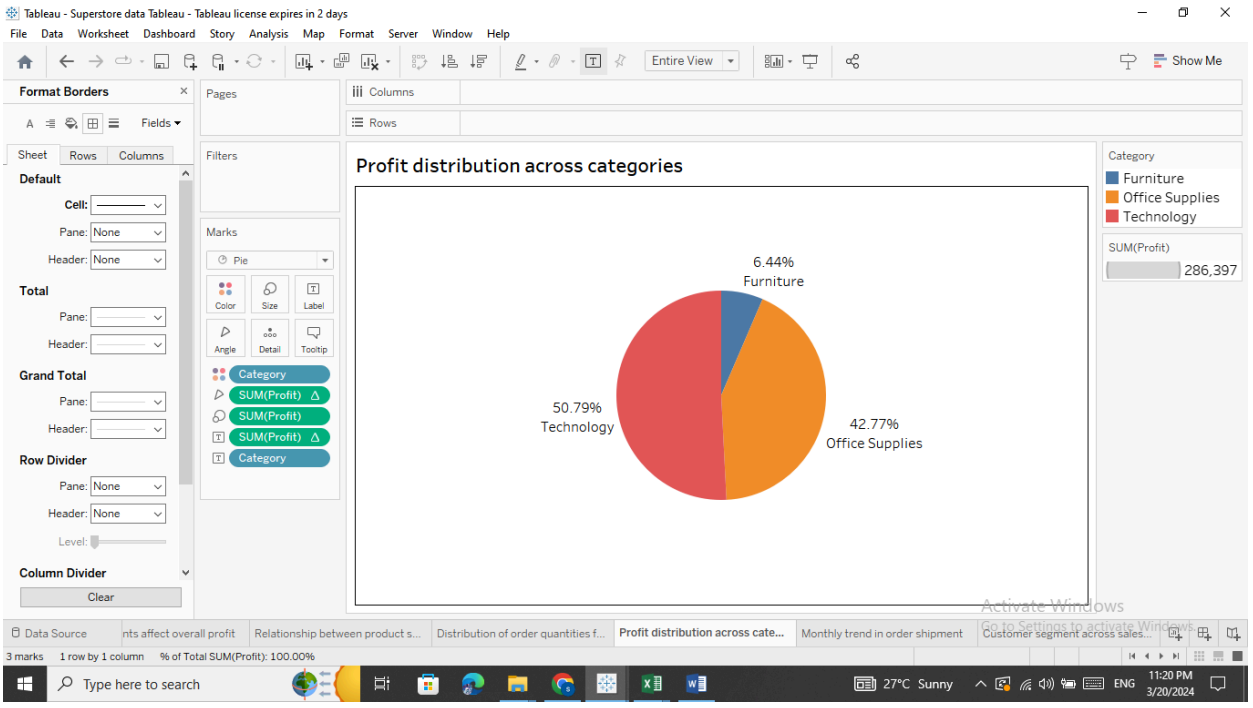
14. What is the distribution of order quantities for products in the dataset?

>> We had used a bar chart to present this categorical data. The order quantity was put in x-axis while the products were put in the y-axis and the order quantity was denoted by blue coloured bars. The chart tells us that the maximum number of orders were placed for staples with the maximum order count of 215 followed by staple envelope and Easy-staple paper.



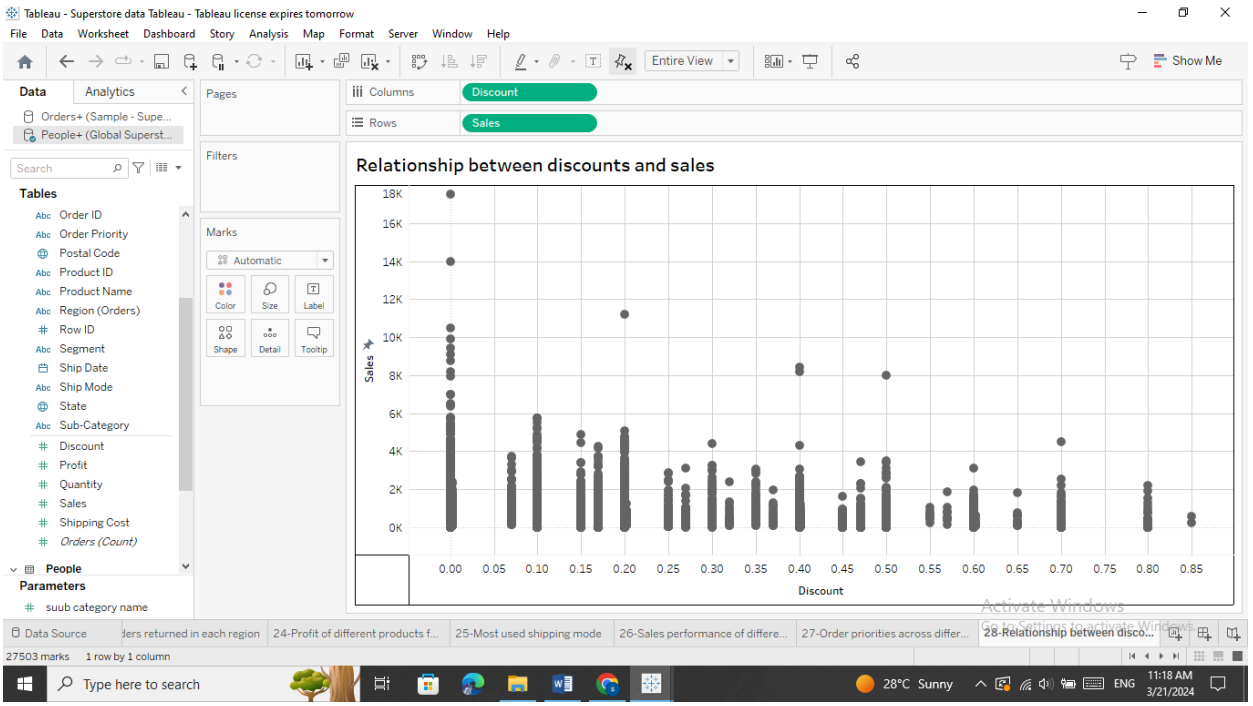
15. How do the profit distributions vary across different product categories?

>> We can use a pie chart to represent the data as it is best suited to present the distribution of the product as part of the whole.
In the pie chart we had distributed the profit contribution of different product categories which shows that the highest profit was made by technology with a total profitability of 50.79% which is shown by red colour followed by Office supplies with the contribution of 42.77% which is represented by orange colour and the lease profit was made by Furniture category with a profit percentage of 6.44% which is represented by blue colour..



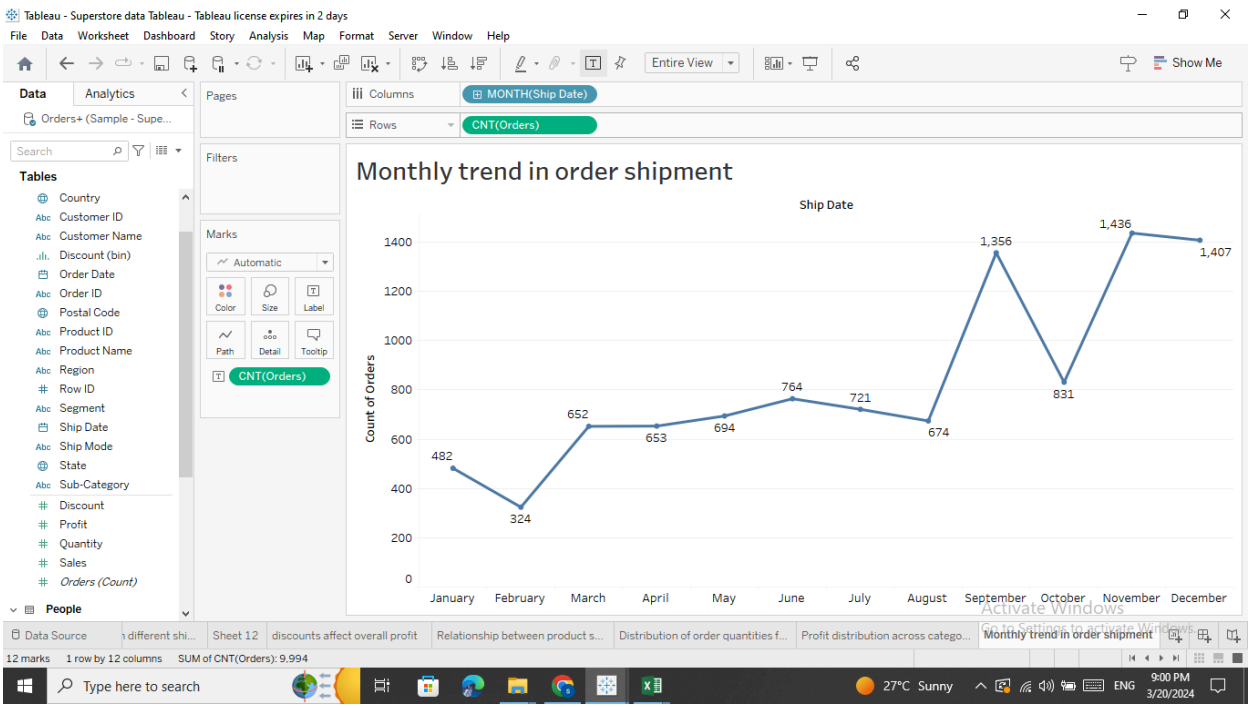
16. What is the relationship between discounts and sales?

>>A scatter plot was used to represent the relationship between discount and sales. The vertical axis of the scatter plot represent the discount given to different products while the horizontal Axis represent the sales made across the discount after going through the scatter plot we can say that the more is the discount the less is the sales and the less is the discount the more is the salest that means sales and discount are inversely related to each other.



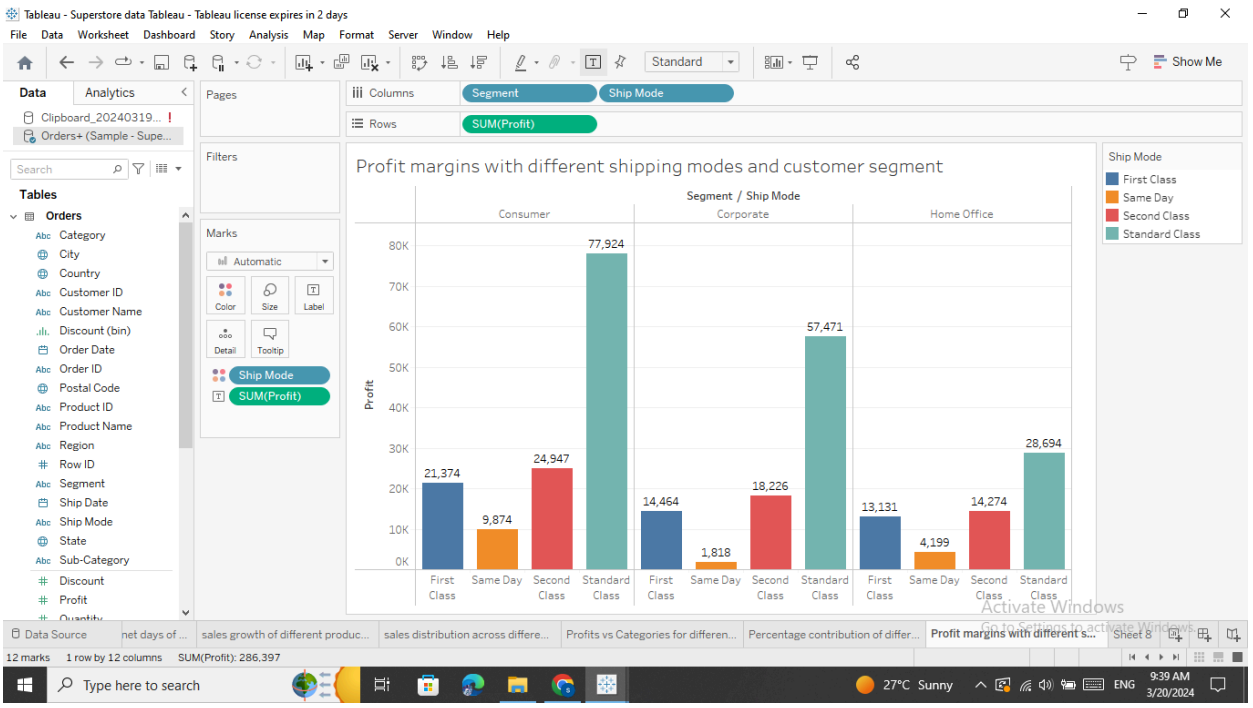
17. What is the monthly trend in the number of orders shipped?

>>The trend in the order shipment is represented by the line chart. Different points at the line represent the orders shipped in different months of the year.The highest number of orders were shipped in the month of November or we can say that the most orders were shipped in the 3rd quarter of the year and the least number of orders were shipped in the month of February or 1st quarter of the year.



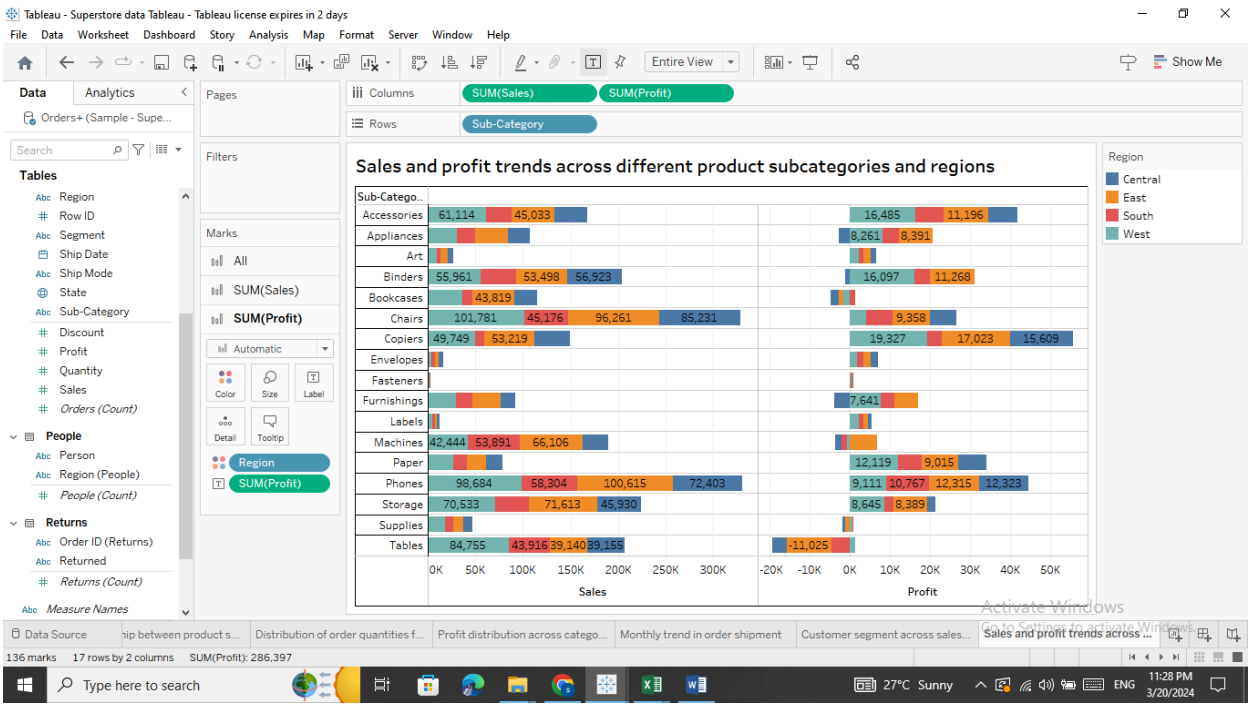
18. Can we visualise the profit margins associated with different shipping modes and customer segments?

>>we have to present three different categories of data which are linked with each other so we are going to use a bar chart. The different bars of the chart show the different ship modes which are divided in colours which are further divided in customer segments . The first class is shown in blue the same day with orange colour, second class with red colour and standard with grey colour . the maximum profit was made by standard class in all the three customer segments and the least profit was made by same day .



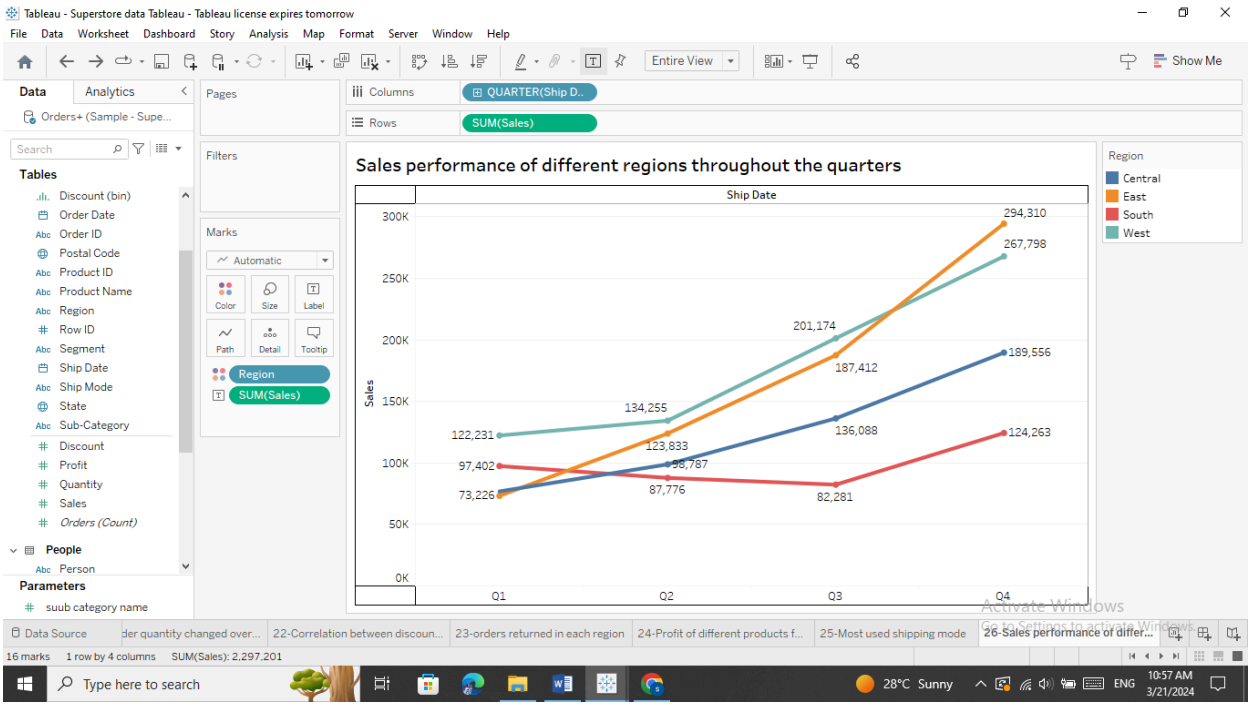
19. What are the sales and profit trends across different product subcategories and regions in the Superstore dataset?

>>We had used a dual stacked bar chart to represent this data where one bar represents the sales and the other represents the profit across Different regions.The different regons were represented by different colours where Blue represents central region, green represents east, red for west south and grey represents west region.



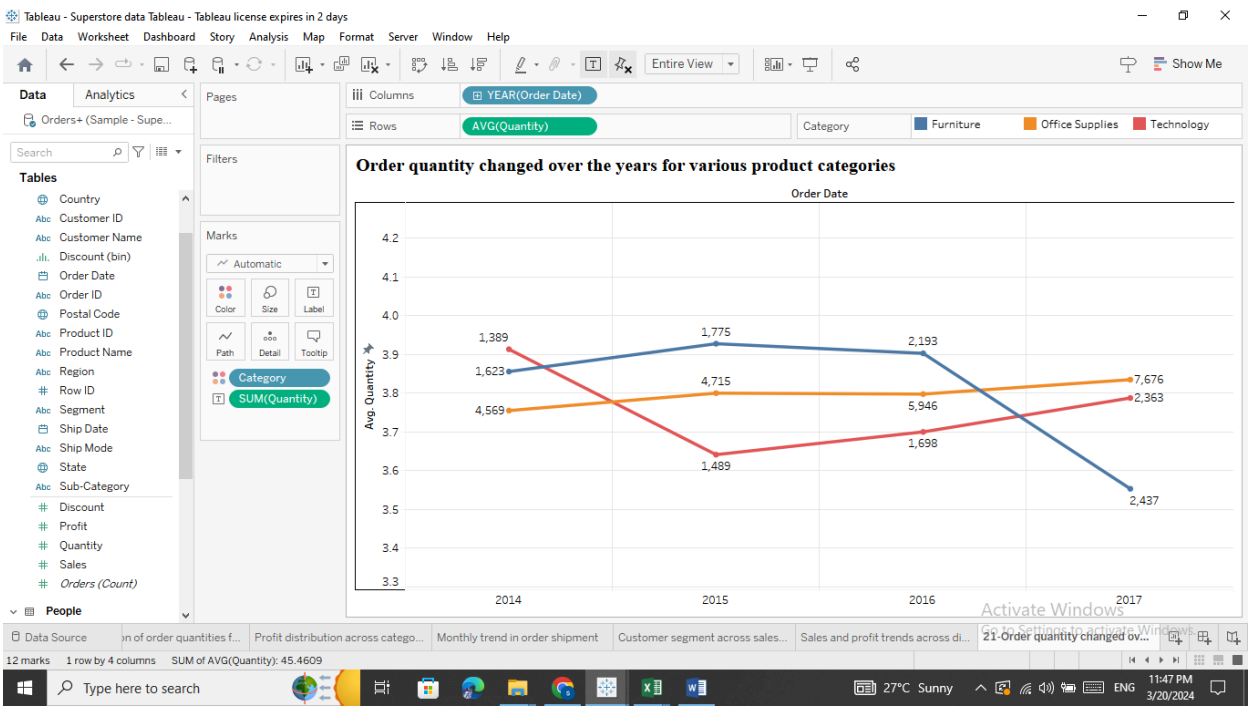
20. How does the sales performance of different regions evolve throughout the quarters of a year?

>>To represent the sales performance of different regions for the quarter we had used a line map because it will best show the trend of sales among different regions among the quarters. The graph represents four different lines which represent the four regions: the blue line represents the central region Orange represents the east region, red represents south and grey represents the West region. After reviewing the line chart we can say that the sales performance was lowest in the first quarter while the sales performance was highest in the fourth quarter.



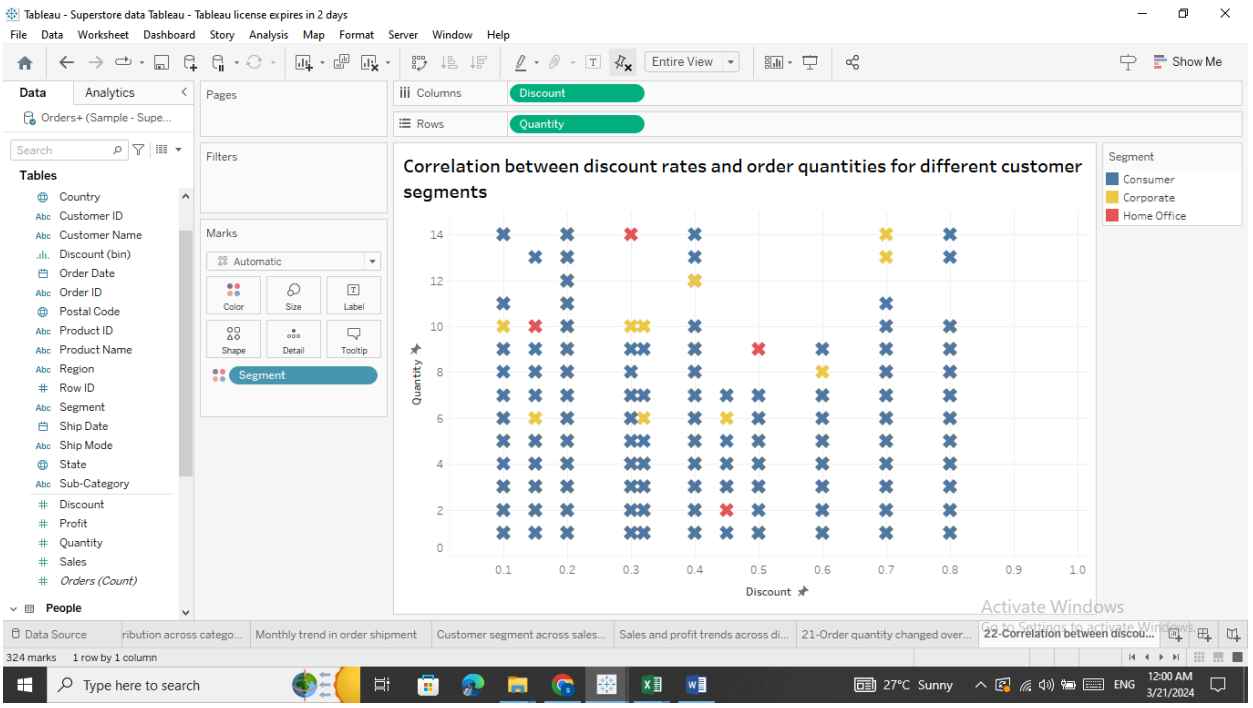
21. How has the average order quantity changed over the years for various product categories?

>>To review the change in order quantity over the year for various product categories we had plotted a line graph among which three different lines are drawn which represent the three categories of the products furniture, office supplies and Technology. The data is shown for 4 years 2014 to 2017. After plotting the graph we came to the conclusion that the order quantity for technology was highest in the year 2014 but as the year passed the order quantity was going down and down. For office supplies the average order quantity remains average as per the 4 years and for technology in 2014 the average quantity was highest but after the year passes the order quantity has decreased.



22. Can we visualise the correlation between discount rates and order quantities for different customer segments?

>>To define the correlation between categories scatter plot is used. In this casce we had used a statter plot to define the correlation between discount rates and order quantities for different customer segment.



23. What is the proportion of orders returned in each region within the Superstore dataset?

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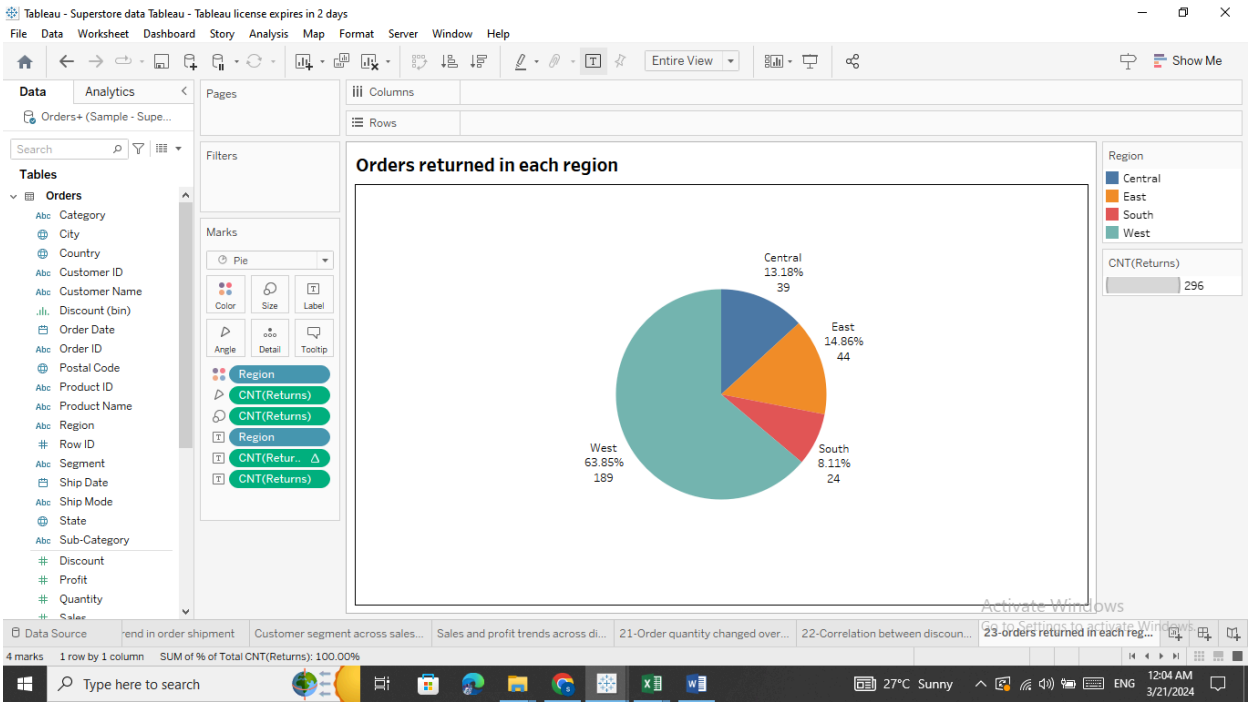
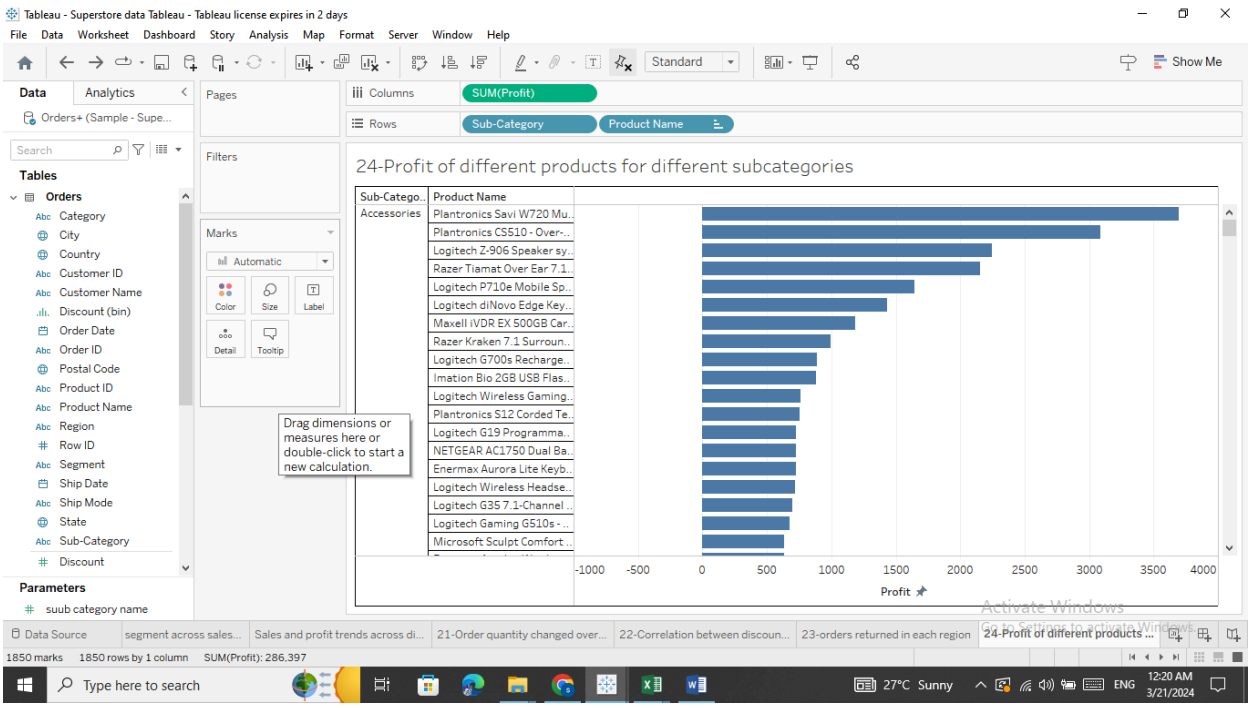
In this case grey colour is used to represent the west region with order return count of 189 and return percentage of 69.85% which is the highest return followed by the green colour part which is represented by the East region with a return count of 44 and contribution of 14.86% Of total return, the blue part was represented by central region with 13.18% return and the least return where recorded from South Region which is denoted by red colour which has the return percentage of 8.11%.



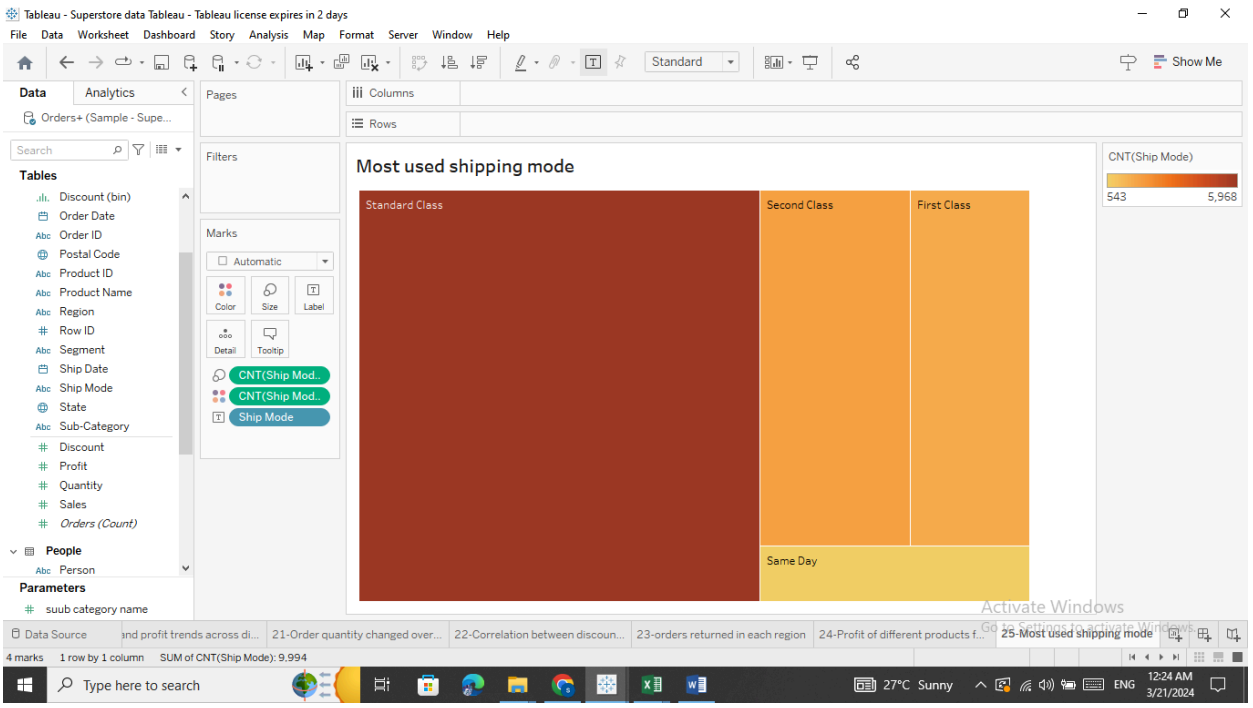
24. Can you compare the profit of different products for different subcategories?

>>To present the visualisation of profit of different products for different subs categories we had used a bar chart which is the horizontal bar chart. The horizontal axis of the chart represent the profit made by different sub categories while the vertical axis of the bar chart represents the various subcategories of products. The profits made by different sub categories were shown using blue coloured horizontal bars. The maximum profit was made by Plantronic SEBI w720 which came under the sub category of accessories.



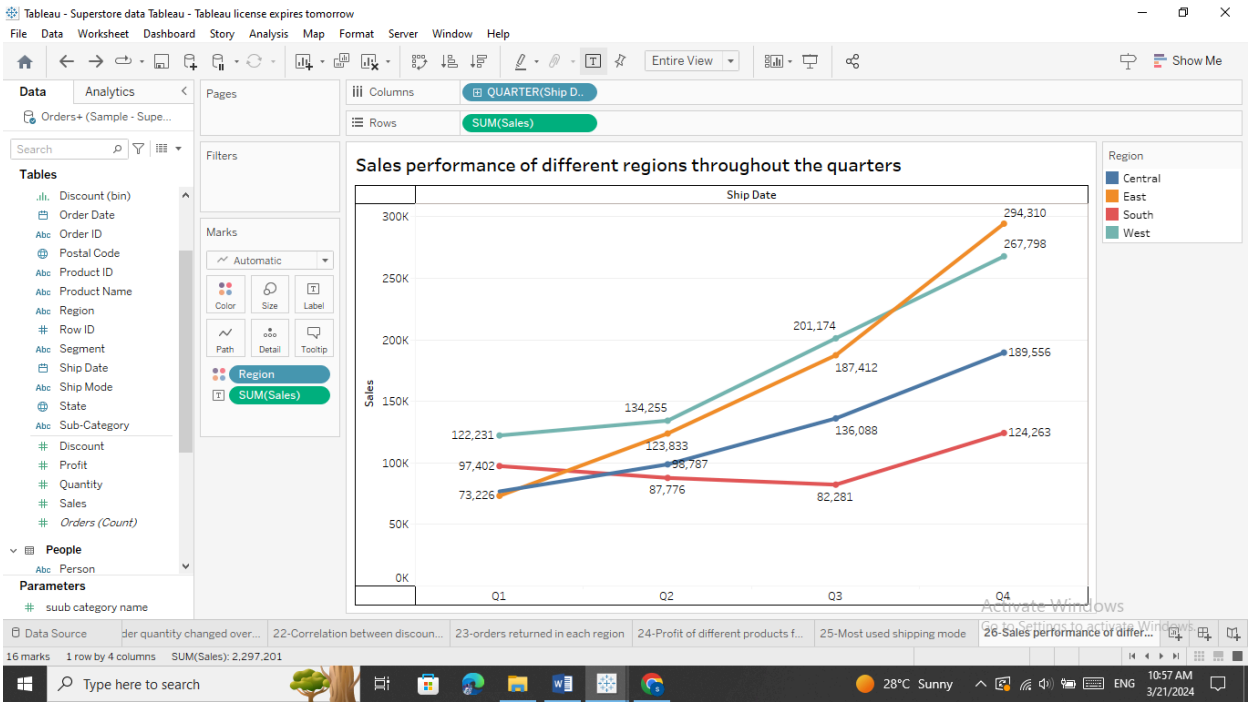
25. Which shipping mode is the most commonly used in the Sample Superstore dataset?

>>We had used a tree map to represent the shipping most widely used while placing orders in the superstore data set. There were four different types of shipping modes available: standard class, first class, second class and same day. The mostly used shipping mole was standard class and is denoted by red colour in the tree map which we had used to visualise the data the second mostly used shipping mode was second class then followed by third class and the least used shipping mode was same day.



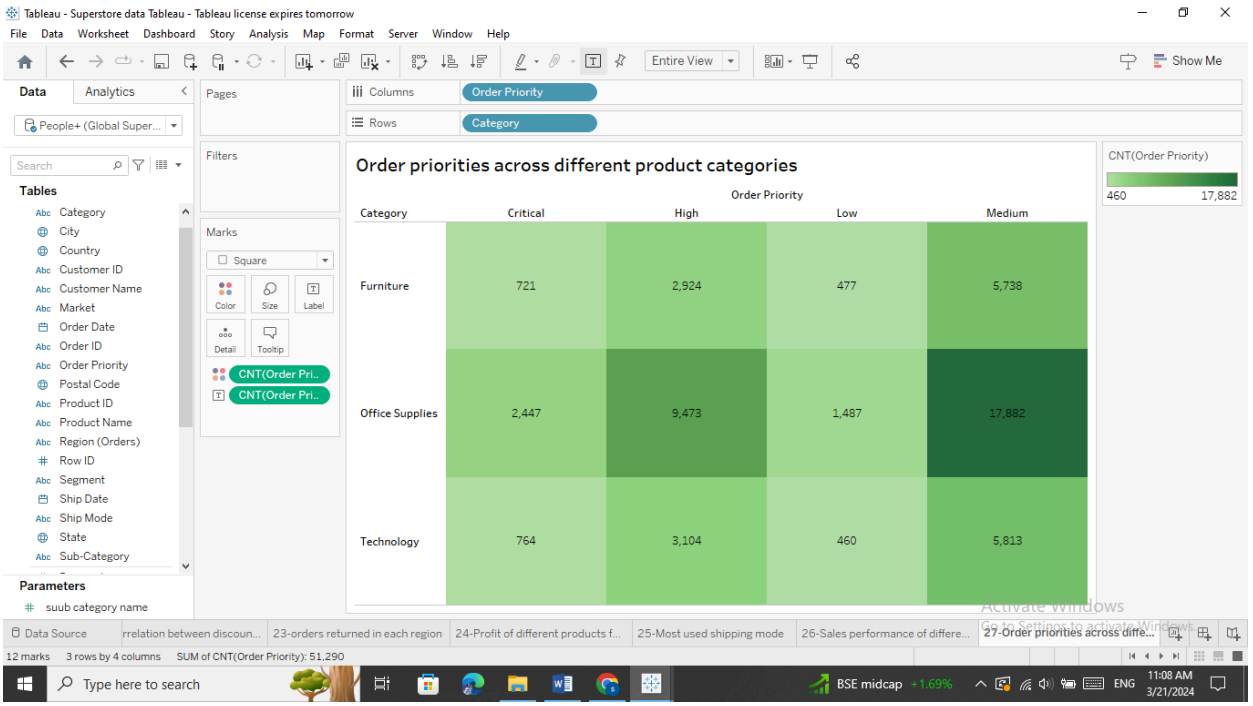
26. How does the sales performance of different regions evolve throughout the quarters of a year?

>>To represent the sales performance of different regions for the quarter we had used a line map because it will best show the trend of sales among different regions among the quarters. The graph represents four different lines which represent the four regions: the blue line represents the central region Orange represents the east region, red represents south and grey represents the West region. After reviewing the line chart we can say that the sales performance was lowest in the first quarter while the sales performance was highest in the fourth quarter.



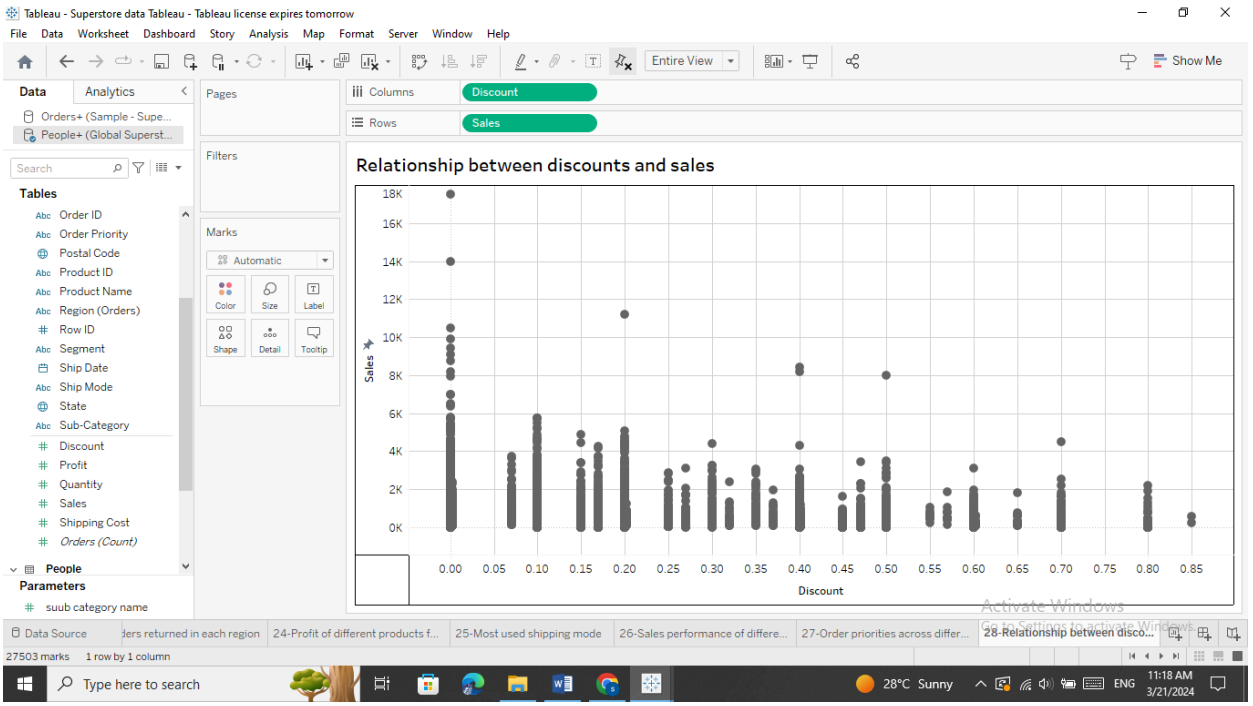
27. What is the distribution of order priorities across different product categories?

>>We had to use the heat map to represent the order priorities across different product categories. The different colours of the heat map represent the priorities made by customers while placing orders where the colour with more density was chosen by the most number of customers while the colour with less density or light colour was chosen by less number of customers after going to the data one can say that the product which was highly placed was office supplies and the Order priority which was highly opted by customers where medium and furniture was the product category which was least selected or ordered by the customers and law order priority was opted by most of the customers.



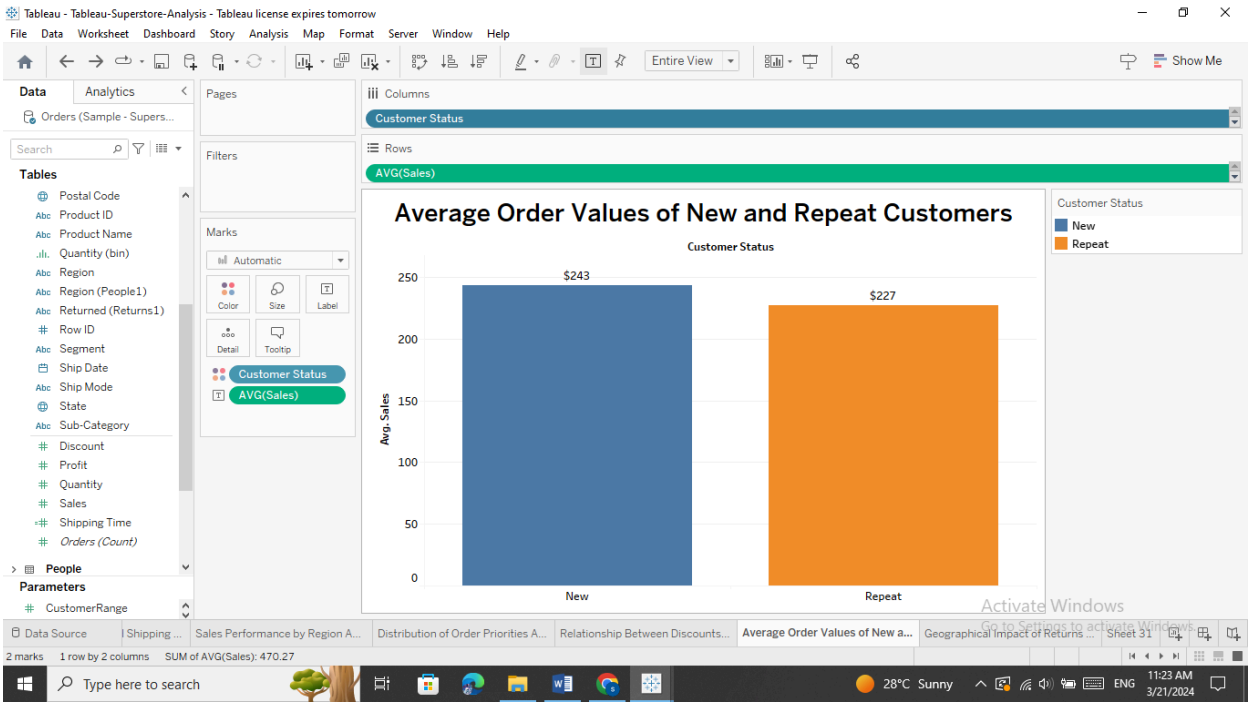
28. What is the relationship between discounts and sales?

>>A scatter plot was used to represent the relationship between discount and sales. The vertical axis of the scatter plot represent the discount given to different products while the horizontal Axis represent the sales made across the discount after going through the scatter plot we can say that the more is the discount the less is the sales and the less is the discount the more is the salest that means sales and discount are inversely related to each other.



29. How does the average order value differ between repeat customers and new customers?

>>We have to represent categorical data of average sales versus customer status so we had to use a bar graph to represent the average order value of new and repeat customers. In the bar graph which is being plotted, two different bars wear used where one bar shows the new customers which were placing the order for the first time whereas the Orange bar represents the customers which were placing order repeatedly and the graph which was plotted shows that the new customers made a higher number of sales compared to the repeat customers.



30. What is the geographical distribution of returns and its impact on overall profitability?

>>To represent the geographical distribution of return and impact on over profitability a map plot will be best suited.
We had used a map plot to plot the distribution of returns and its impact on overall profitability for US region the different colours of states represent different profits made the more dense is the colour the less profitability is gained and more return has occured from the state whereas as the density of the colour is decreasing the profitability is increasing and return is decreasing.