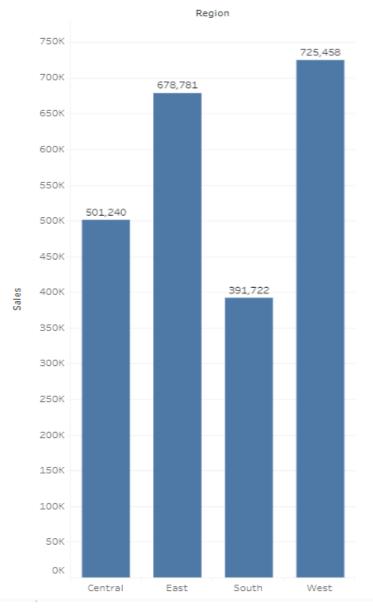
Basic Visualisation

Q1Show region-wise sales using appropriate graphs.

Anurag Practical file by Anurag Durga

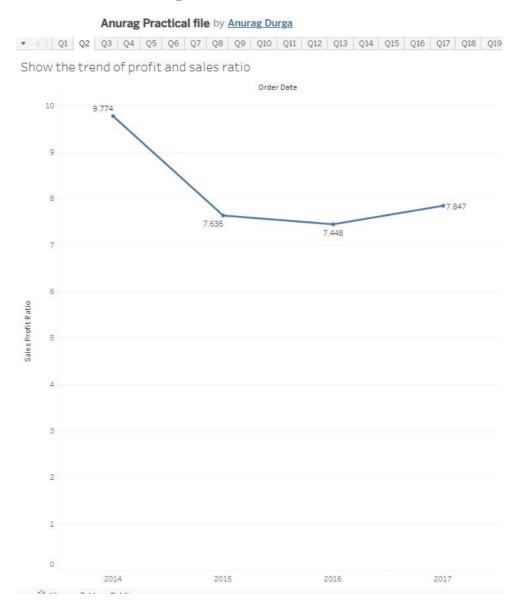




Interpretation

The above bar graph shows region-wise sales. West region has the most sales, and South region has the lowest sales. The customers in West region are ordering more items as compared to other regions

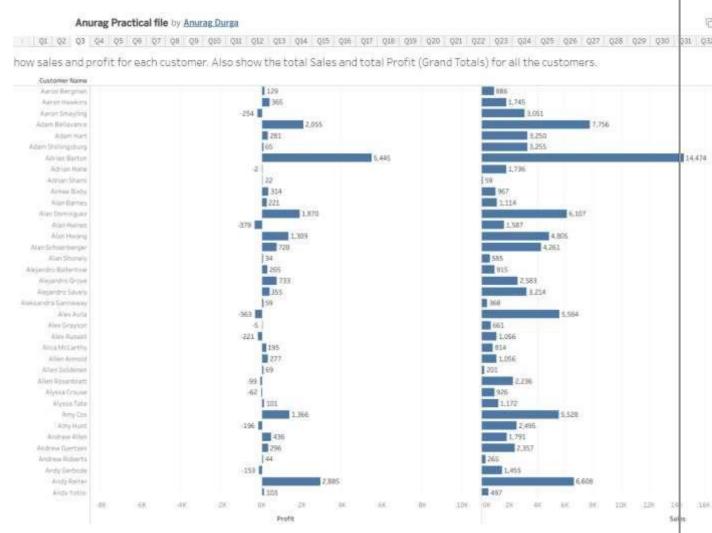
Q2Show the trend of profit and sales ratio



Interpretation

The above line chart shows the trend of profit and sales ratio. The ratio decreases in the year 2015 and 2016, however rises by a bit in the year 2017.

Q3Show sales and profit for each customer. Also show the total Sales and total Profit (Grand Totals) for all the customers.

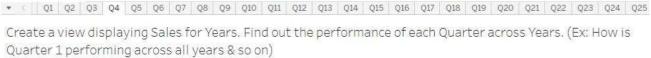


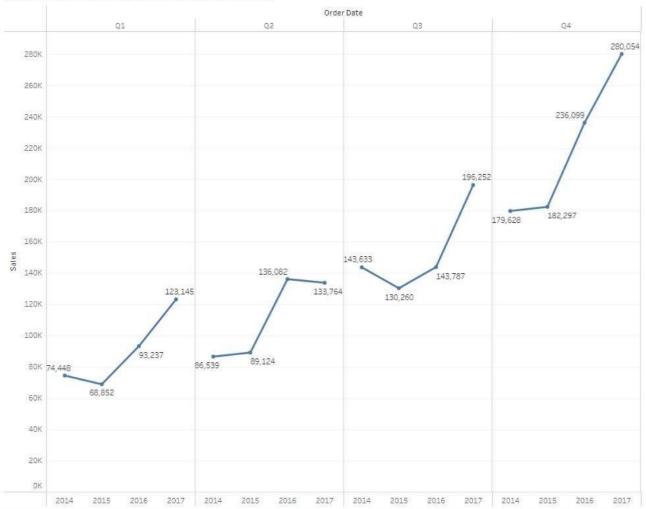
Interpretation

The above graph shows the sales and profit of each customer. We can see that "Adrian Barton" has the most profit as well as sales. Despite having good amount of sales, the amount of profit is not necessarily good for every customer

Q4Create a view displaying Sales for Years. Find out the performance of each Quarter across Years. (Ex: How is Quarter 1 performing across all years & so on)



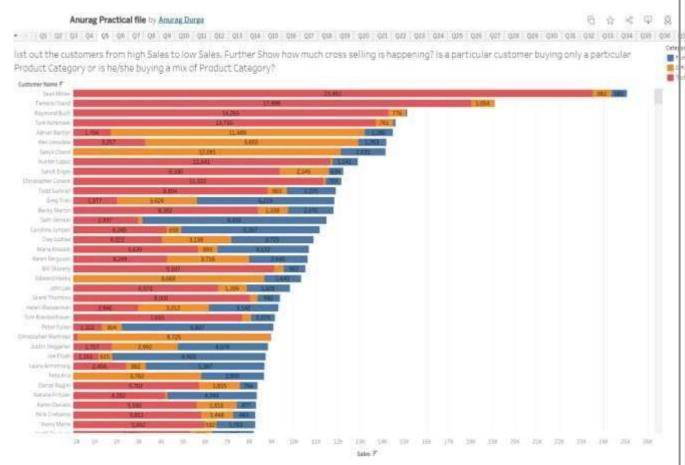




Interpretation

The above chart shows the trend of Sales in each quarter across years. We can see that Quarter 4 is best performing across years

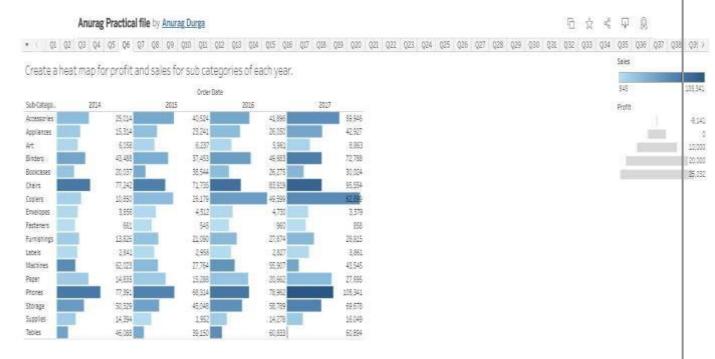
Q5List out the customers from high Sales to low Sales. Further Show how much cross selling is happening? Is a particular customer buying only a particular Product Category or is he/she buying a mix of Product Category?



Interpretation

In the above chart we can see that "Sean Miller" has the highest sales, he is mostly buying product in Technology category.

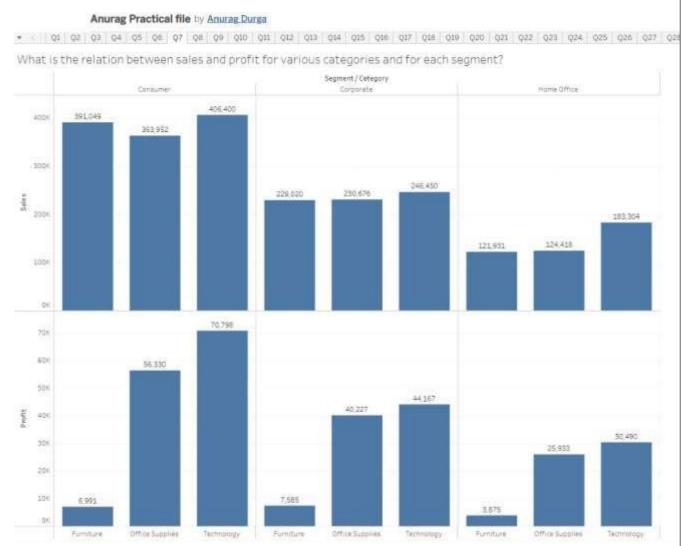
Q6Create a heat map for profit and sales for sub categories of each year.



Interpretation

In the above heat map, the shade of the bar shows the amount of sales, and length of the bar shows the amount of profit. Copier sub-category in the year 2017 has the highest profit, while the Phones sub-category in the year 2017 has the highest sales

Q7What is the relation between sales and profit for various categories and for each segment?

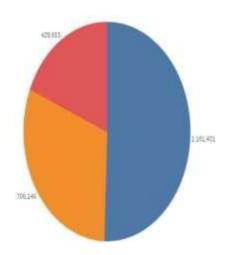


Interpretation

The above bar graph shows the relationship between sales and profit for the categories and segment. The Technology category and Consumer segment has the highest profit and sales

Q8Create a pie chart to show proportions of sales in each segment





Interpretation

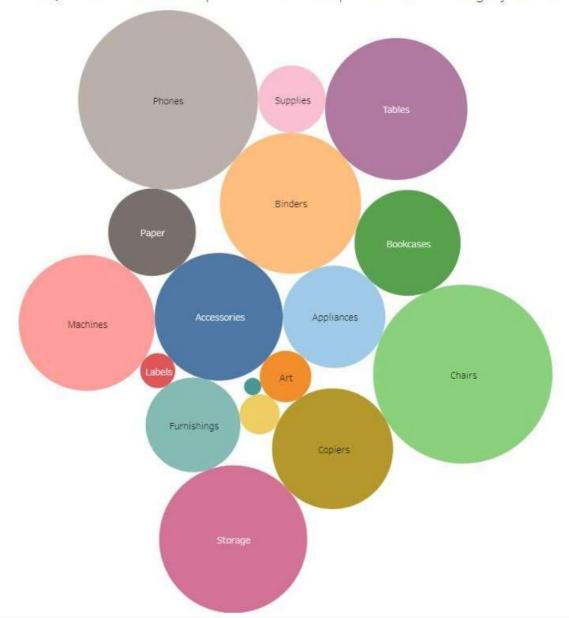
The Pie chart shows the proportions of sales in each segment. The Consumer segment has the highest sales compared to the other 2 segments

Q9Create a Qualitative chart to depict the relationship between subcategory and sales.

Anurag Practical file by Anurag Durga

▼ < | Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21

Create a Qualitative chart to depict the relationship between sub-category and sales.

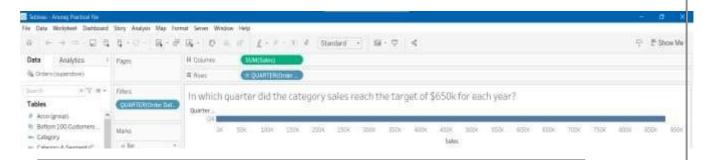


Interpretatio

The above bubble chart shows the relationship between sub-category and sales. The bigger the bubble the more sales it depicts

Table Calculations

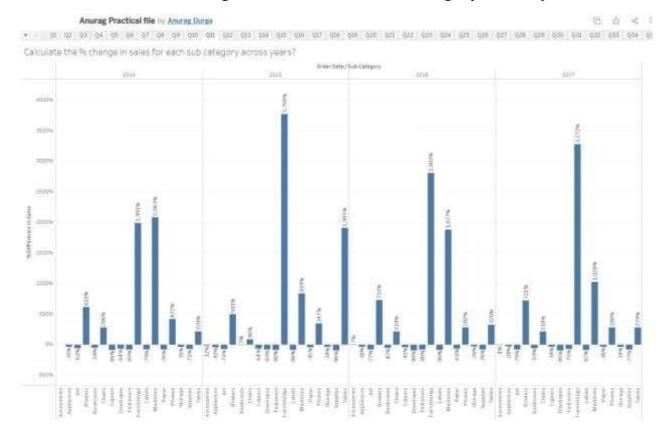
Q10 In which quarter did the category sales reach the target \$650k for each year?



Interpretation

In quarter 4 the category sales reached the target of \$650K for each year.

Q11Calculate the % change in sales for each sub category across years?



Interpretation

The above line chart shows the percentage change in sales for each category across years. Furnishings and Machines show the greatest percentage change in Sales across years

Q12Rank various categories based on sales for each year.

Anurag Practical file by Anurag Durga



Rank various categories based on sales for each year.

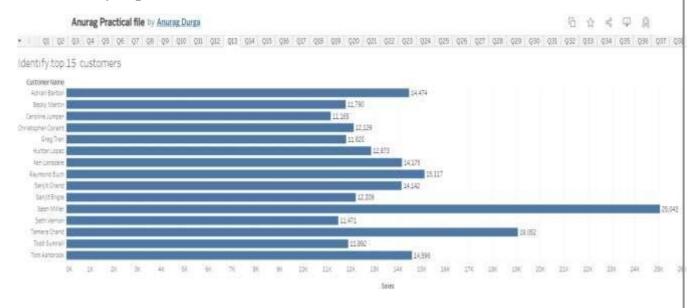
Category	Order Date					
	2014	2015	2016	2017		
Furniture	2	1	2	3		
Office Supplies	3	3	3	2		
Technology	1	2	1	1		

Interpretation

The above table shows the category ranking (Competition type) based on the sales for each year. Technology ranks 1st in 2014, Furniture ranks 1st in 2015, Technology ranks 1st in 2016 and ranks 1st again in 2017. Overall Technology performs better than other category in terms

Filters

Q13Identify top 15 customers

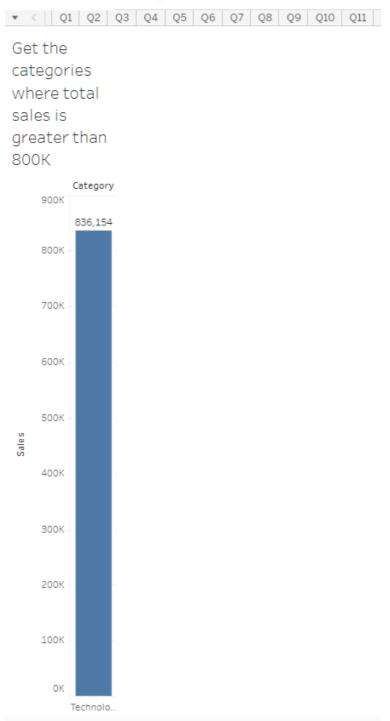


Interpretation

The above graph shows the top 15 customers in terms of sales. Filter is used to identify the top 15 customers.

Q14Get the categories where total sales is greater than 800K

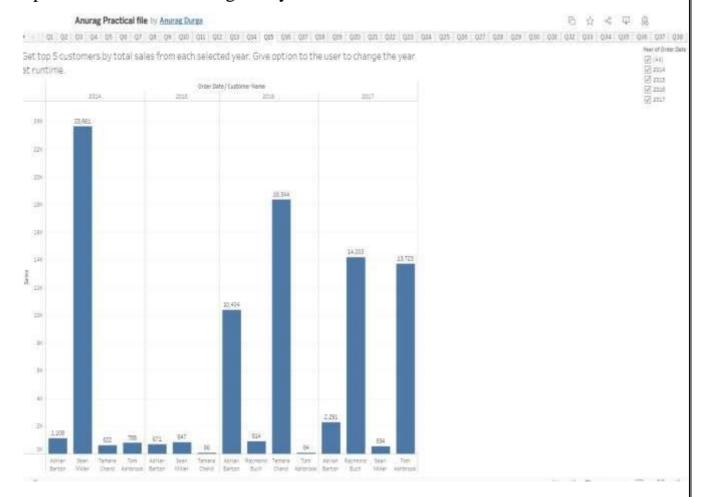
Anurag Practical file by Anurag Durga



Interpretation

The above graph shows the category where total sales is greater than 800K. The category which fulfils the criteria is Technology

Q15Get top 5 customers by total sales from each selected year. Give option to the user to change the year at runtime.

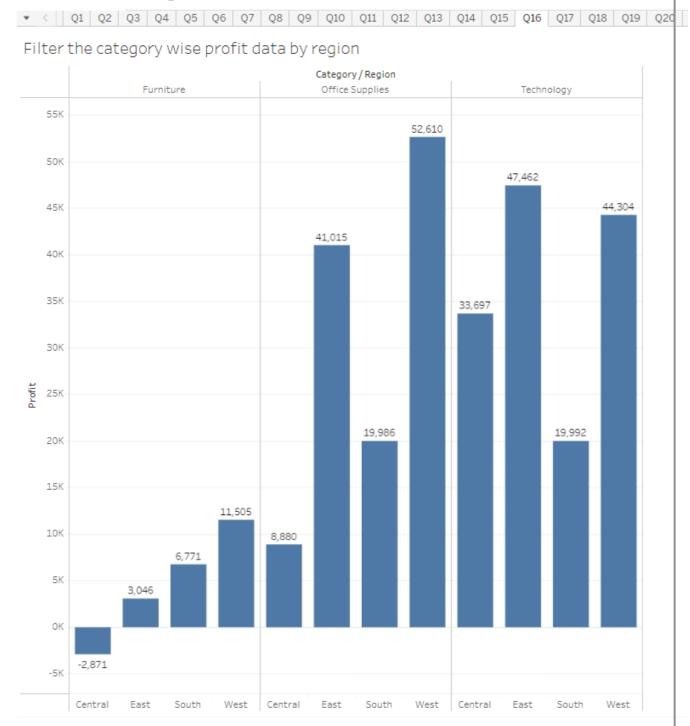


Interpretation

The above bar graph shows the top 5 customers by sales. There is also an option to filter out specific year.

Q16Filter the category wise profit data by region

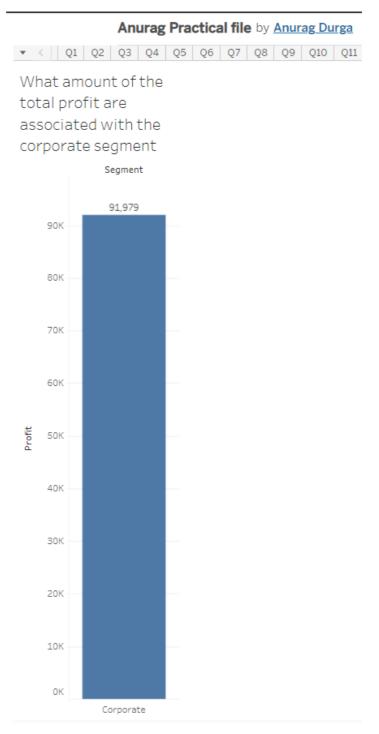
Anurag Practical file by Anurag Durga



Interpretation

In the above graph we show the profit of each region in various categories. Only in Central region of Furniture category the profit is in negative number

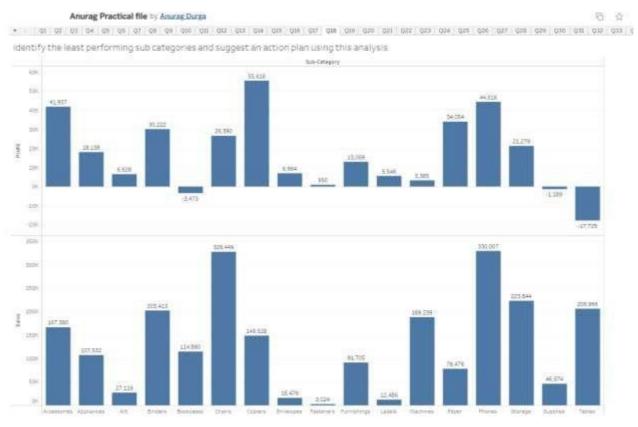
Q17What amount of the total profit are associated with the corporate segment



Interpretation

The above graph shows the total profit in corporate segment, we used filter to hide the other segments and show only the corporate segment

Q18Identify the least performing sub categories and suggest an action plan using this analysis



Interpretation

After seeing the graph above we can conclude that the least performing sub-categories are Tables, Binders, Supplies. We can increase the price of the products in these sub-categories, as there are good number of sales however the profit is in negative numbers

Q19Identify the office supply categories where top 3 customers have negative profits along the region.

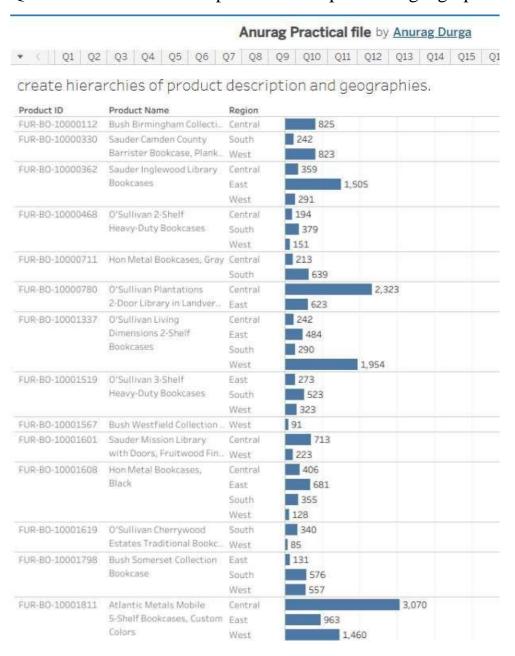


Interpretation

The above table shows the top 3 customers having negative profits in each region under the Office Supplies Category

Combined Fields

Q20Create hierarchies of product description and geographies.



Interpretation

The above graph shows the sales of each product along the region. A hierarchy is created to include Product ID, Product name and region

Q21Create a graph showing category and segment wise sales using the concept of combined field

Anurag Practical file by Anurag Durga Create a graph showing category and segment wise sales using the concept of combined field Category & Segment (Combined) 406.400 400K 391,049 363,952 350K 300K 246,450 250K 230,676 229,020 200K 183,304 150K 124,418 121,931 100K 50K Technology, Furniture, Home Office Supplies, Office Supplies, Office Supplies, Furniture. Furniture. Technology, Technology, Home Office Consumer Corporate Office Consumer Corporate Home Office Consumer Corporate

Interpretation

We Combined the 2 field, Category and Segment to show the sales in each category and segment. Technology Consumer Category have the highest number of sales

Grouping and Binning

Q22Create a supplier group to include accos, Xerox, Hewlett and others

Anurag Practical file by Anurag Durga



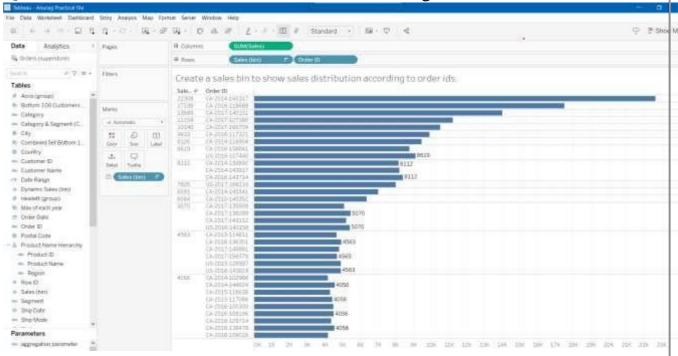
Create a supplier group to include accos, Xerox, Hewlett and others

Xerox (group)	Acco (group)	Hewlett (group)	Profit	Sales
1.7 Cubic Foot Compact "	1.7 Cubic Foot Compact "	1.7 Cubic Foot Compact "	579	2,706
1/4 Fold Party Design Invi	1/4 Fold Party Design Invi	1/4 Fold Party Design Invi	23	50
3-ring staple pack	3-ring staple pack	3-ring staple pack	17	42
3.6 Cubic Foot Counter He	3.6 Cubic Foot Counter He	3.6 Cubic Foot Counter He	-872	2,946
3D Systems Cube Printer,	3D Systems Cube Printer,	3D Systems Cube Printer,	3,718	14,300
3D Systems Cube Printer,	3D Systems Cube Printer,	3D Systems Cube Printer,	-468	2,340
3M Hangers With Comma	3M Hangers With Comma	3M Hangers With Comma	36	108
3M Office Air Cleaner	3M Office Air Cleaner	3M Office Air Cleaner	91	260
3M Organizer Strips	3M Organizer Strips	3M Organizer Strips	10	83
3M Polarizing Light Filter	3M Polarizing Light Filter	3M Polarizing Light Filter	75	216
3M Polarizing Task Lamp	3M Polarizing Task Lamp	3M Polarizing Task Lamp	570	2,192
3M Replacement Filter for	3M Replacement Filter for.	3M Replacement Filter for	-20	303
6" Cubicle Wall Clock, Bla	6" Cubicle Wall Clock, Bla	6" Cubicle Wall Clock, Bla	26	125
9-3/4 Diameter Round Wa	9-3/4 Diameter Round Wa	9-3/4 Diameter Round Wa	183	455
12 Colored Short Pencils	12 Colored Short Pencils	12 Colored Short Pencils	3	18
12-1/2 Diameter Round W	12-1/2 Diameter Round W	12-1/2 Diameter Round W	91	551
14-7/8 x 11 Blue Bar Comp	14-7/8 x 11 Blue Bar Comp.	14-7/8 x 11 Blue Bar Comp.,	173	423
24 Capacity Maxi Data Bin	24 Capacity Maxi Data Bin.	24 Capacity Maxi Data Bin	537	3,537
24-Hour Round Wall Clock	24-Hour Round Wall Clock	24-Hour Round Wall Clock	180	488
36X48 HARDFLOOR CHAI	36X48 HARDFLOOR CHAI	36X48 HARDFLOOR CHAL.	-40	369
50 Colored Long Pencils	50 Colored Long Pencils	50 Colored Long Pencils	33	138
2300 Heavy-Duty Transfe	2300 Heavy-Duty Transfe	2300 Heavy-Duty Transfe.	21	345
4009 Highlighters	4009 Highlighters	4009 Highlighters	3	8
4009 Highlighters by Sanf	4009 Highlighters by Sanf	4009 Highlighters by Sanf.	54	171
"While you Were Out" Me	"While you Were Out" Me.	"While you Were Out" Me	10	25
#6 3/4 Gummed Flap Whit	#6 3/4 Gummed Flap Whit	#63/4 Gummed Flap Whit	25	71
#10 Gummed Flap White	#10 Gummed Flap White	#10 Gummed Flap White	17	41
#10 Self-Seal White Envel	#10 Self-Seal White Envel	#10 Self-Seal White Envel	52	109
#10 White Business Envel	#10 White Business Envel	#10 White Business Envel	223	489
#10- 4 1/8" x 9 1/2" Recyc	#10-41/8" x 91/2" Recyc.	#10-41/8" x 91/2" Recyc	115	287
#10- 4 1/8" x 9 1/2" Secur	#10-41/8" x 91/2" Secur	#10-41/8" x 91/2" Secur	65	147
#10-4 1/8" x 9 1/2" Premi	#10-4 1/8" x 9 1/2" Premi	#10-4 1/8" x 9 1/2" Premi	64	176
Aastra 57i VoIP phone	Aastra 57i VoIP phone	Aastra 57i VoIP phone	575	3,685

Interpretation

In above table we have created groups for various product on the basis of name, "Acco", "Xerox" and "Hewlett" and show sales and profit for them

Q23 Create a sales bin to show distribution according to order ids.



Interpretation

In above table, the sales distribution according to order ids is shown with the sales bin (the size of bins is 507).

Sets

Q24Create a set for Top 5 customers by sales. Analyse the profits for them

Anurag Practical file by Anurag Durga



Interpretation

In above case, we have created a set for the top 5 customers by sales to check the profit for them. "Tamara Chand" has the highest profit, while "Sean Miller" has the lowest profit.

Q25Explore using combined set bottom 100 customers by profit and top 100 customers by sales

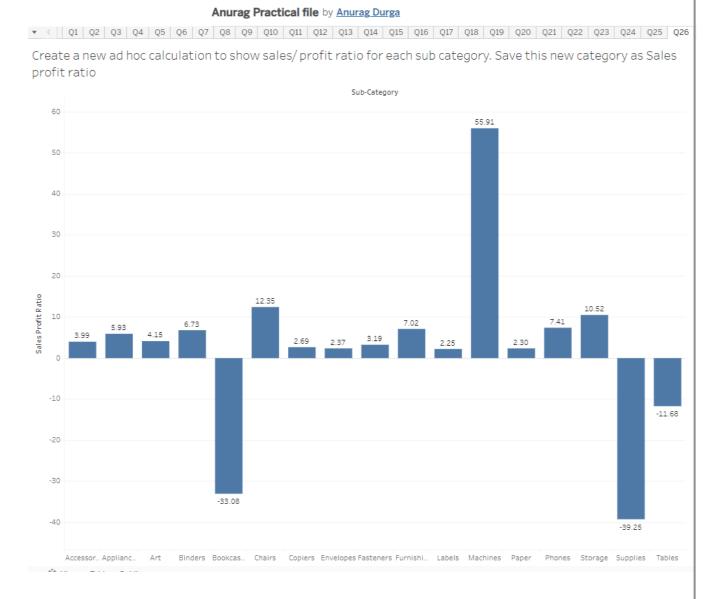


Interpretation

In above case, we have combined 2 sets, one is for the bottom 100 customers by profit and the other is for top 100 customers by sales. It shows the sales and profit for the customers which are common in the combined set

Calculated Fields

Q26Create a new ad hoc calculation to show sales/ profit ratio for each sub category. Save this new category as Sales profit ratio

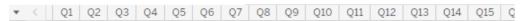


Interpretation

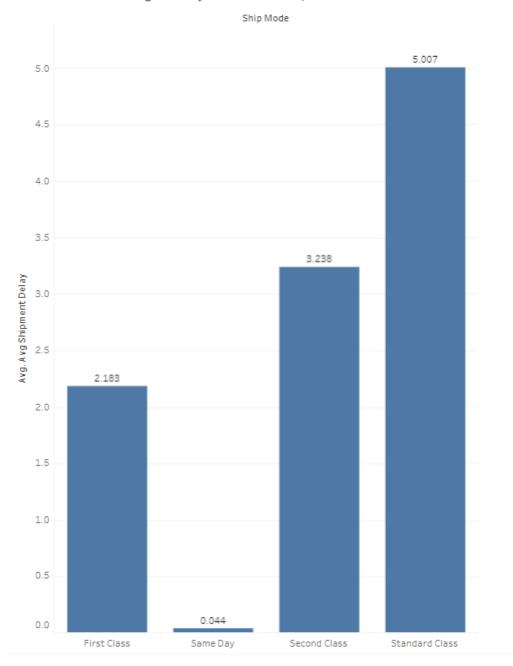
In above case, we have used calculated field for sales profit ratio by dividing them. Supplies sub-category have the lowest sales profit ratio, while the Machines sub-category have the highest sales profit ratio

Q27What is the average delay based on ship mode

Anurag Practical file by Anurag Durga



What is the average delay based on ship mode?



Interpretation

In above graph we can see the average delay (by subtracting order date from ship date) in each shipping mode. "Same Day" mode has the least delay, while "Standard Class" mode has the most delay.

Q28Create a "Sales Header" based on total sales. Categorize sales as:
Between 1 and 100000
Between 100000 and 300000
Above 300000

Anurag Practical file by Anurag Durga

•	<	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
---	---	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----

Create a "Sales Header"

based on total sales.

Categorize sales as:

Between 1 and 100000

Between 100000 and

300000

Above 300000

Sales Header

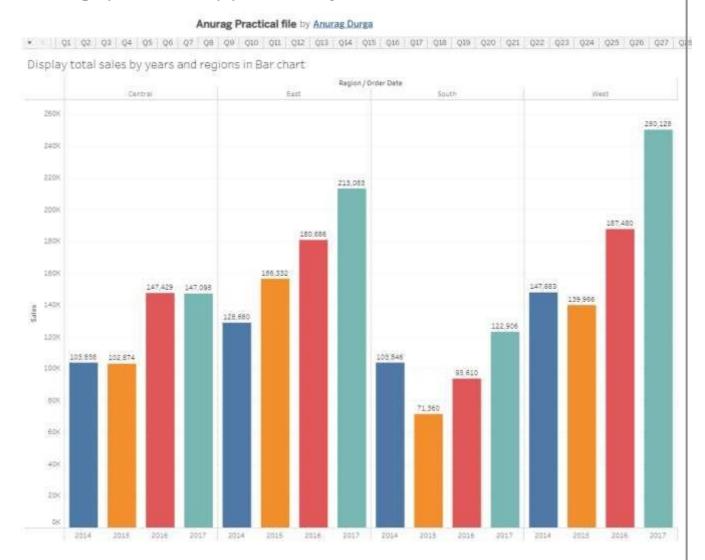
Sub-Catego	В	C	Α
Accessories	167,380		
Appliances	107,532		
Art			27,119
Binders	203,413		
Bookcases	114,880		
Chairs		328,449	
Copiers	149,528		
Envelopes			16,476
Fasteners			3,024
Furnishings			91,705
Labels			12,486
Machines	189,239		
Paper			78,479
Phones		330,007	
Storage	223,844		
Supplies			46,674
Tables	206,966		

Interpretation

In above case we have used calculated field to categorise the sub-category by using If statements. "A" denotes sales between 1 to 100000, "B" denotes sales between 100001 to 300000, "C" denotes sales above 300000

Basic Visualisation

Q29Display total sales by years and regions in Bar chart

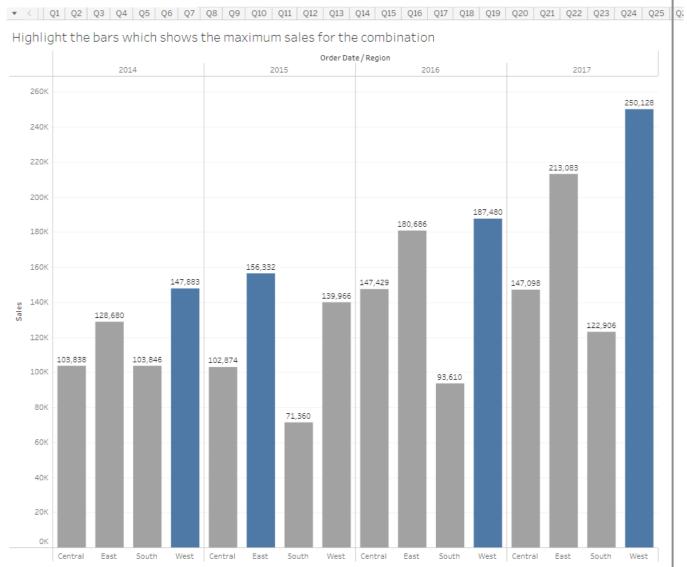


Interpretation

In above chart, total sales by years and region are shown. 2017 has the greatest number of sales in each region except for "Central" region.

Q30Highlight the bars which shows the maximum sales for the combination

Anurag Practical file by Anurag Durga



Interpretation

In above graph, the highlighted bars depict the maximum sales for the combination of region and year

Filters

Q31Identify the office supply categories where top 3 customers have negative profits along the region.

Anurag Practical file by Anurag Durga



Identify the office supply categories where top 3 customers have negative profits along the region.

			Regio	no	
Category	Customer Name	Central	East	South	West
Office Supplies	Jasper Cacioppo		-6.00		3.25
	Mitch Gastineau			-3.09	
	Paul Lucas	2.07	-30.79		31.83

Interpretation

In above table shows the top 3 customers having negative profits in each region under the Office Supplies Category

Basic Visualisation

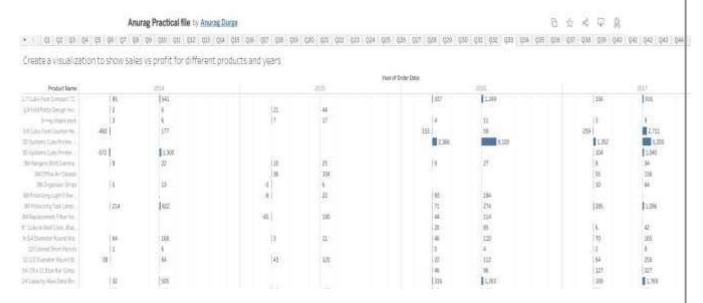
Q32Create a visualization showing monthly sales in 2014

Anurag Practical file by Anurag Durga Create a visualization showing monthly sales in 2014 Order Date 2014 85K 81,777 80K 78,629 75K 70K 69,546 65K 50K 55,691 55K 50K 45K 40K 33,946 35K 30K 28.295 27,909 25K 23,648 20K 15K 14,237 10K 4,520 August Septemb.. October November December January February March April May June July

Interpretation

In above line chart shows the trend of monthly sales in the year 2014. There is a significant increase in the month of September, and decrease in the month of October.

Q33Create a visualization to show sales vs profit for different products and years



Interpretation

In above graph we can see the sales and profit for the different products in each year

Parameters

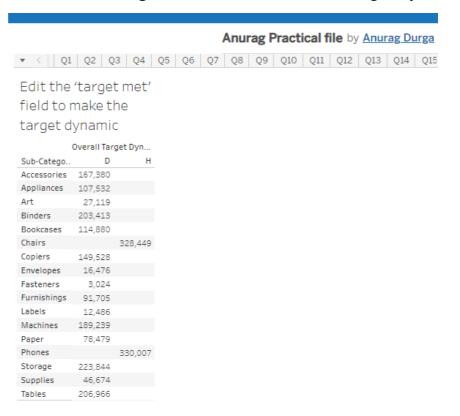
Q34Top X customers by sales



Interpretation

In above we can select top x number of customers using a parameter. The parameter gives the end user an option to increase or decrease the number of top customers he/she wants to see.

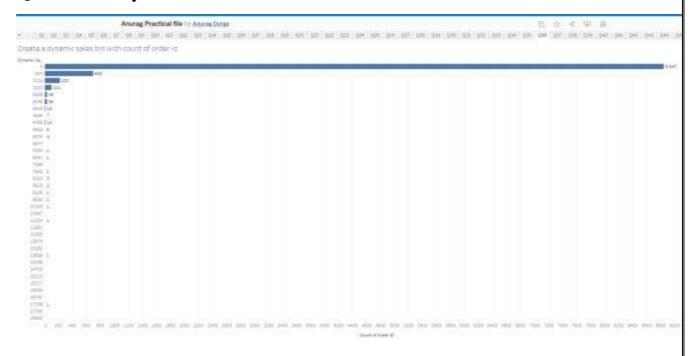
Q35Edit the 'target met' field to make the target dynamic



Interpretation

For the above table we have used Calculated field to apply If statements to assign "D" to those sub-categories which does not meet the target, and "H" for those who have met the target. The target set is 3,00,000.

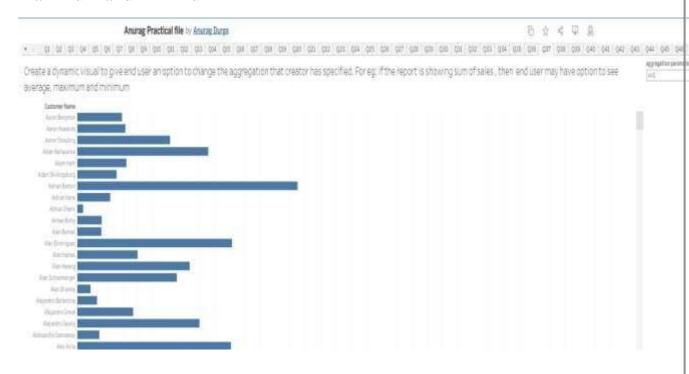
Q36Create a dynamic sales bin with count of order id



Interpretation

In above graph shows the count of orders in the sales bin (size of the sales bin is 507). Most of the orders lie in sales bin 0-507

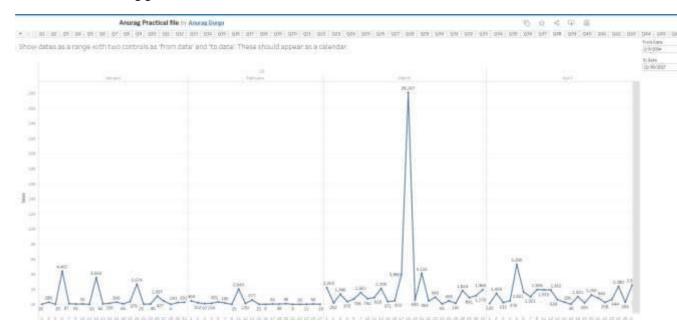
Q37Create a dynamic visual to give end user an option to change the aggregation that creator has specified. For eg: if the report is showing sum of sales, then end user may have option to see average, maximum and minimum



Interpretation

In above chart we have created a parameter to change between the average, sum, max, min of sales for the customers. The end user has the option to select whatever he/she wants

Q38Show dates as a range with two controls as 'from date' and 'to date'. These should appear as a calendar.



Interpretation

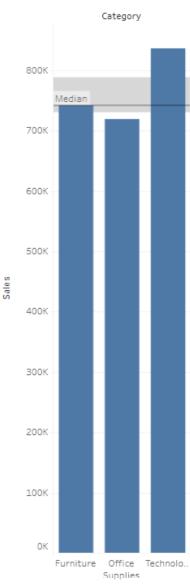
In above graph the end user has the option to select date range to see the sales between the selected dates. Parameter features is used to create the date range in this graph.

Analytics

Q39Create a median reference line to analyse category wise sales

Anurag Practical file by Anurag Durga

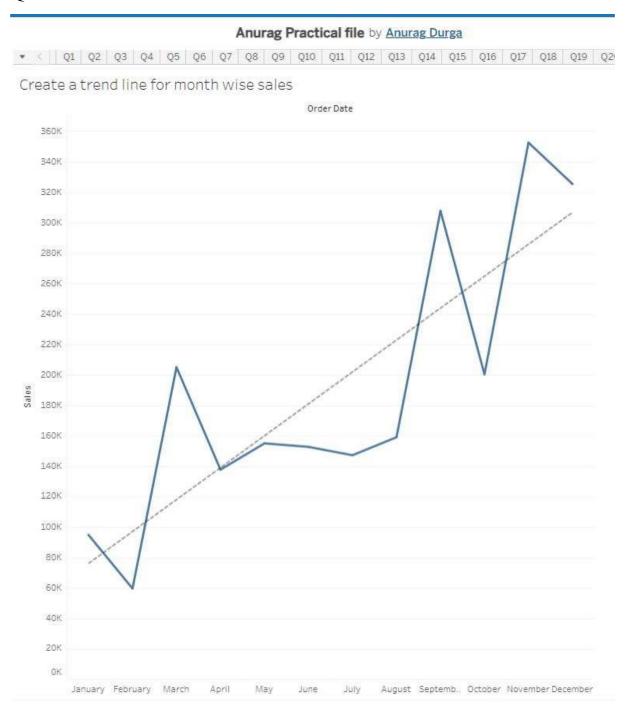




Interpretation

In above graph we can see the median reference line, it shows median of the data as well as Quartile 1 and 3 for the same

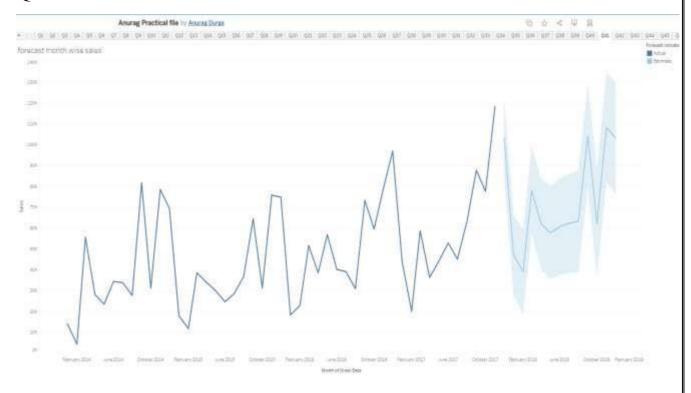
Q40Create a trend line for month wise sales



Interpretation

In above line chart shows the trend line for the sales according to the month. The Trend is increasing as the months goes by. Sales is the highest in the month of November

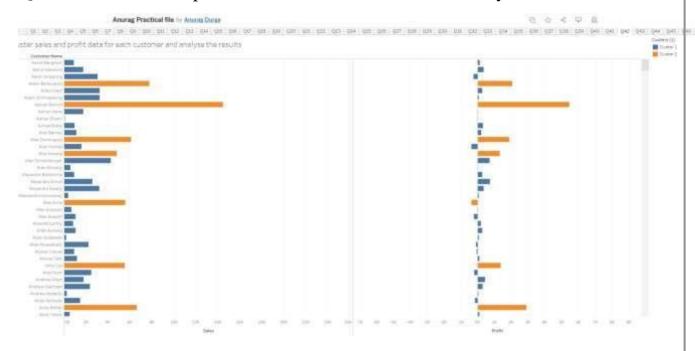
Q41forecast month wise sales



Interpretation

In above chart forecasts the sales for the upcoming months. It forecasts that the sales will go down between October 2017 and April 2018.

Q42Cluster sales and profit data for each customer and analyse the results



Interpretation

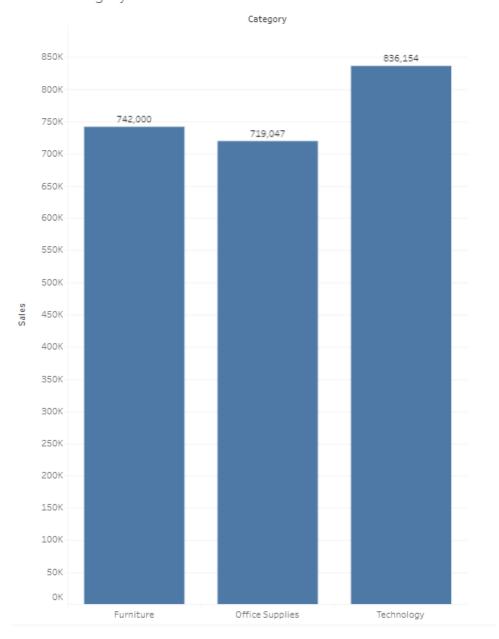
In above chart 2 Clusters are made on sales and profit data for each customer. Clusters are made on the basis sales and profit amount.

Dashboard

Q43Create category wise sales chart

Anurag Practical file by Anurag Durga ▼ ⟨ | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | Q1

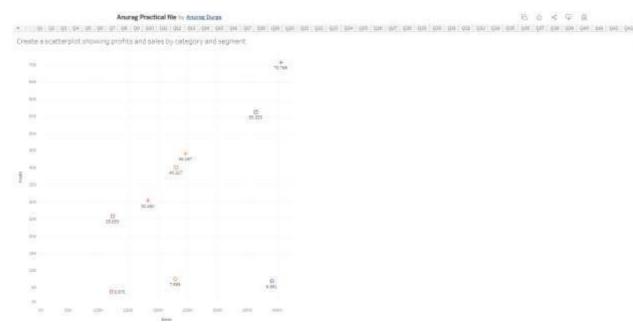
Create category wise sales chart



Interpretation

In above chart shows category wise sales. Technology category has the most sales

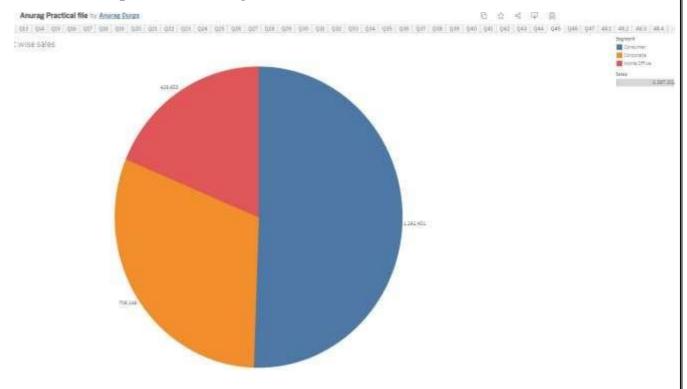
Q44Create a scatterplot showing profits and sales by category and segment



Interpretation

In above scatterplot, it shows the profit and sales by category and segment. Technology Consumer has the most sales and profit.

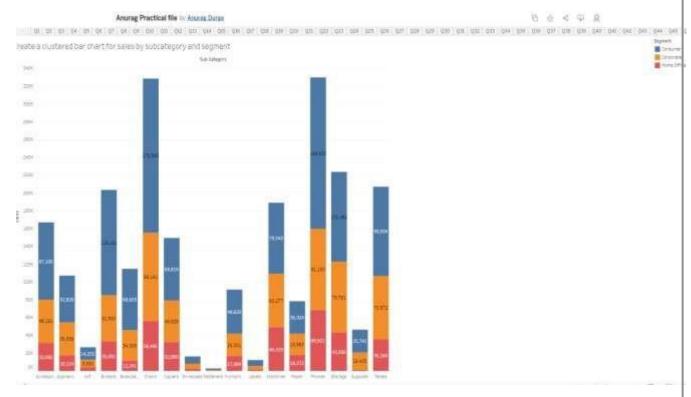
Q45Create a pie chart for segment wise sales



Interpretation

In Pie chart shows the proportions of sales in each segment. The Consumer segment has the highest sales compared to the other 2 segments

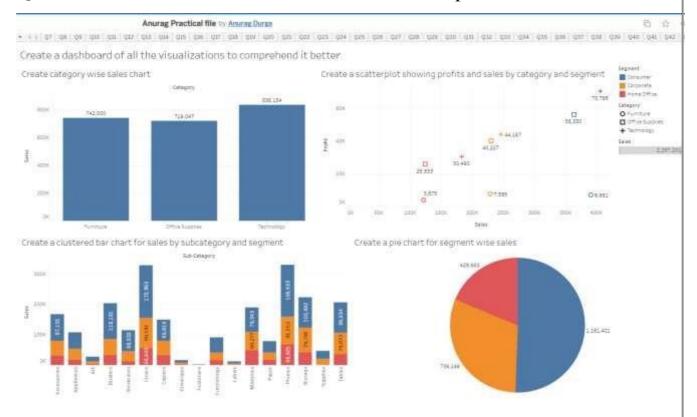
Q46Create a clustered bar chart for sales by subcategory and segment



Interpretation

In above bar charts, it shows that consumer segment, and chairs sub-category has the most sales.

Q47Create a dashboard of all the visualizations to comprehend it better



Interpretation

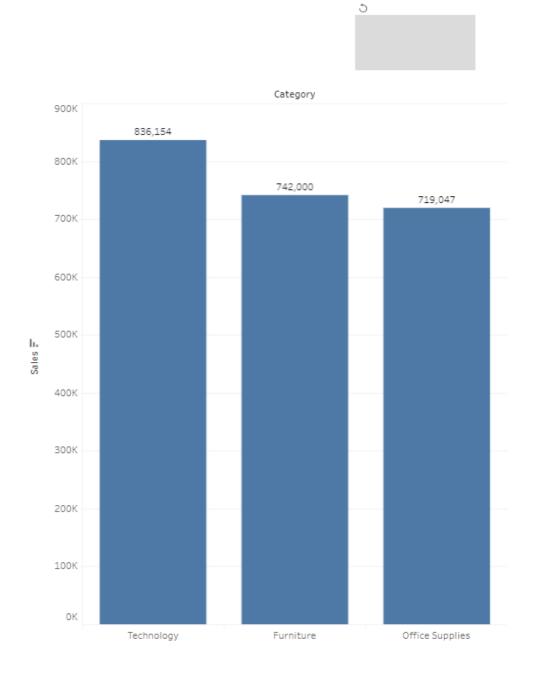
In above Dashboard summarize the visualization into one interactive pane. One the top left corner, the bar graph shows category wise sales, and on the top right corner, the scatter plot shows the profit and sales by category and segment. Bottom left bar charts show the sales by sub-category and segments, bottom right pie chart shows the segment wise sales

Q48.

Anurag Practical file by Anurag Durga



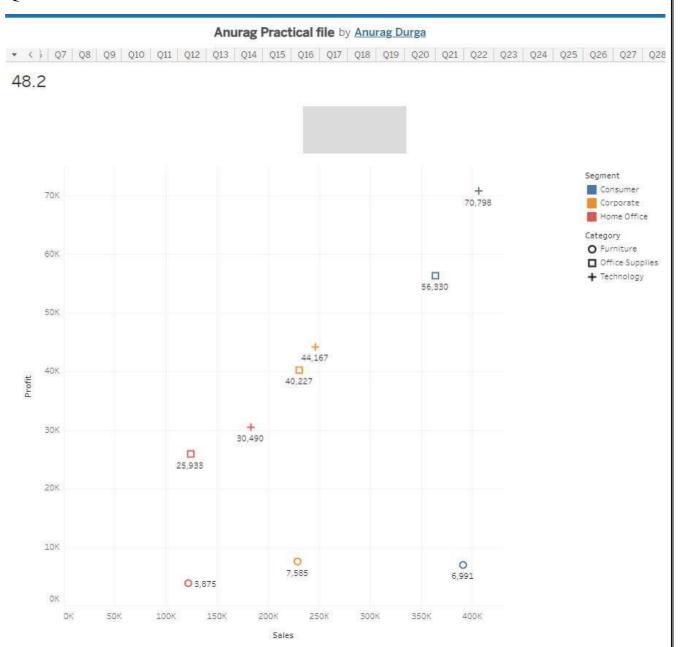
48.1



Interpretation

The Story board shows category wise sales. Technology category has the most sales. A Tableau story is a sequence of visualizations that work together to convey information, providing context and narrative about the data being presented

Q48.



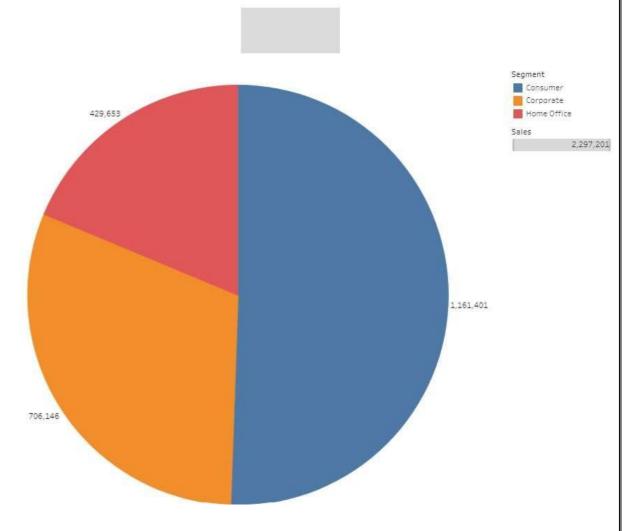
Interpretation

The above story board shows the profit and sales by category and segment. We can see the combination of segments and category to check both profit and sales for both of them. Combination Technology and Consumer has the highest sales and profit.

Q48.





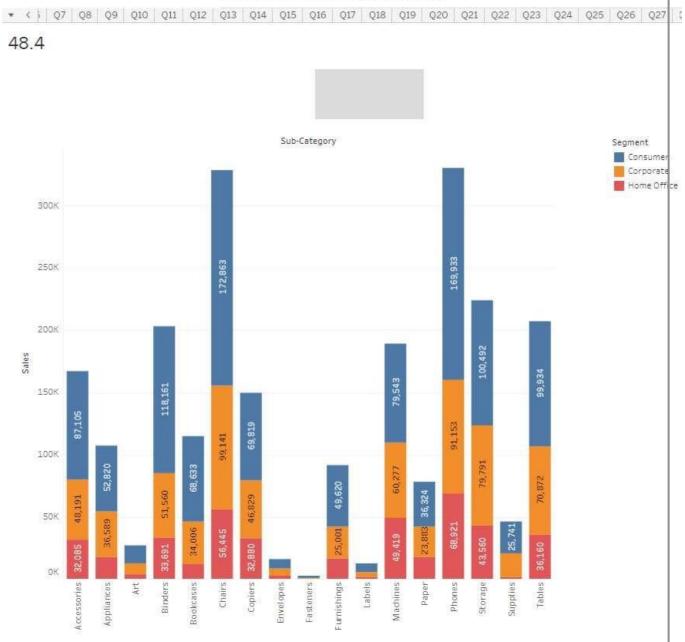


Interpretation

The above story board shows the distribution of total sales in various segments. Consumer segment has more sales than the other 2 segments (Corporate and Home Office). Pie Chart makes it easier to quickly understand the distribution

Q48.



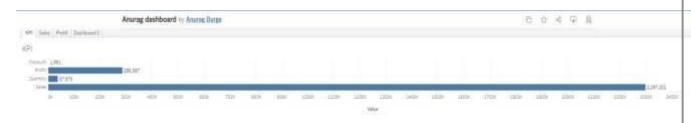


Interpretation

The Story board, we can see bar charts. It shows that consumer segment, and Chairs subcategory has the most sales.

Dashboard Assignment

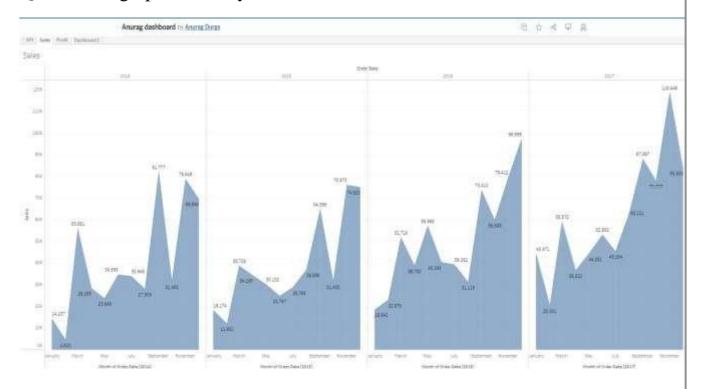
Q1 Create a graph to show Key Performance Indicators.



Interpretation

The above horizontal charts show the Key Performance Indicators – Discount (1,561), Profit (286,397), Quantity (37,873) and Sales (2,297,201).

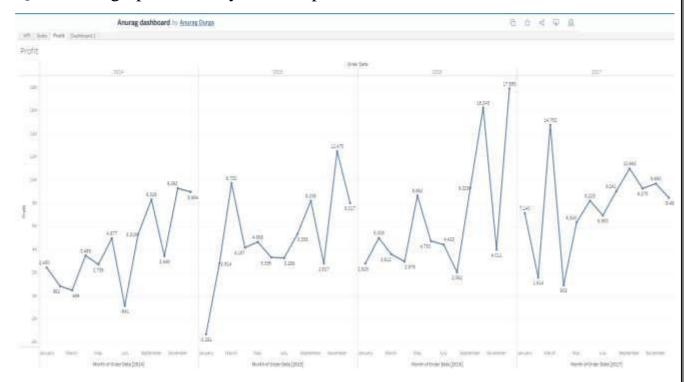
Q2 Create a graph to show year-wise sale



Interpretation

The above Area Chart shows the Sales per year. The performance in the year 2017 is better as compared to previous years.

Q3Create a graph to show year-wise profit



Interpretation

The above line chart shows the year wise profit. In most of the cases, the profit rises during the spring season, however it drops down in early summer. The profit fluctuates mostly in the winter season

Q4 Create a dashboard of all the visualization to comprehend it better



Interpretation

The above Dashboard summarises the graphs mentioned previously. On the top, it shows the key performance indicators (Discount, Sales, Quantity and Profit). In the middle, it shows the year wise sales. And on the bottom, it shows the year-wise profit

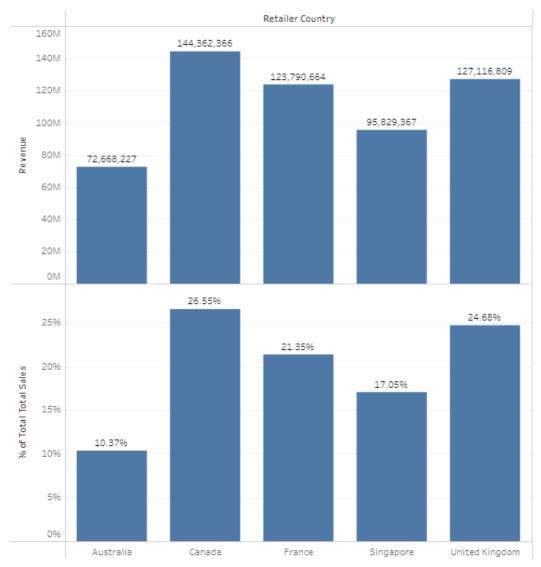
SPORTS EQUIPMENT

Q1What is the market share of revenue generated across different retailer countries. Hint: Market share is calculated as percentage of total sales.

Anurag -Sport-Equipment by Anurag Durga



What is the market share of revenue generated across different retailer countries. Hint: Market share is calculated as percentage of total sales.

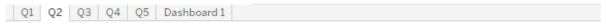


Interpretation

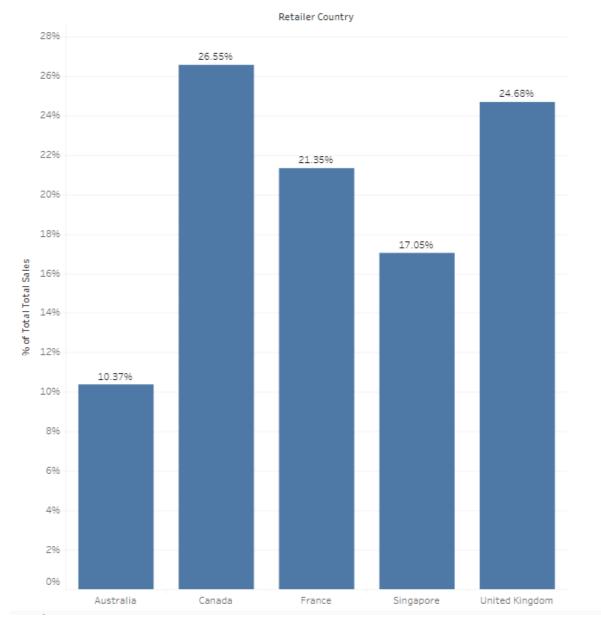
The Above Bar Graph depict the market share and revenue of various countries. Canada has the most market share (26.55%) generating the revenue of \$144,362,366 and Australia has the lowest market share (10.37%) generating the revenue of \$72,668,227

Q2Display retailer country names and market share for each country as labels on displayed chart.

Anurag -Sport-Equipment by Anurag Durga



Display retailer country names and market share for each country as labels on displayed chart.



Interpretation

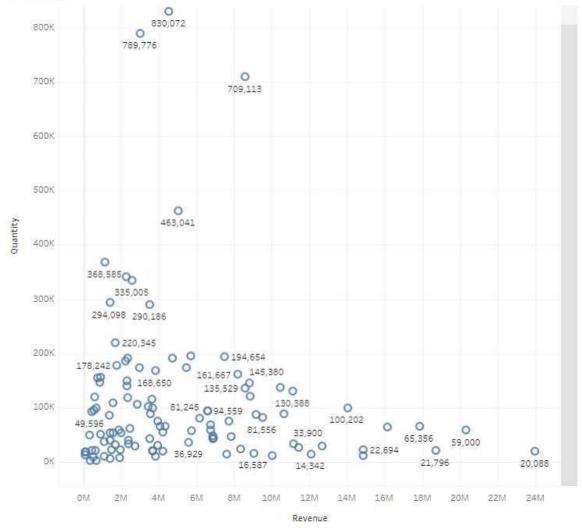
The Above Bar Graph depict the market share and revenue of various countries. Canada has the most market share (26.55%) and Australia has the lowest market share (10.37%

Q3Create a chart to analyze the relationship between revenue and quantity for each product. Is there any correlation between the two. Write your inference in captions

Anurag -Sport-Equipment by Anurag Durga

Q1 Q2 Q3 Q4 Q5 Dashboard 1 Create a chart to analyze the relationship between revenue and quantity for each

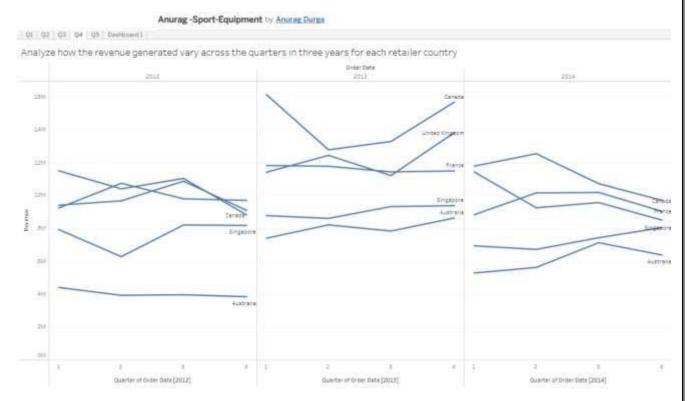
product. Is there any correlation between the two. Write your inference in captions



Interpretation

The Scatterplot shows the relationship between revenue and quantity for each product. The correlation between revenue and quantity is 0.1262, it indicates a relatively weak positive linear relationship between these two variables. In practical terms, a correlation of 0.1262 suggests that there is some tendency for revenue and quantity to move together, but other factors likely influence both variables significantly. It's not a strong enough relationship to rely solely on quantity to predict revenue or vice versa

Q4Analyze how the revenue generated vary across the quarters in three years for each retailer country



Interpretation

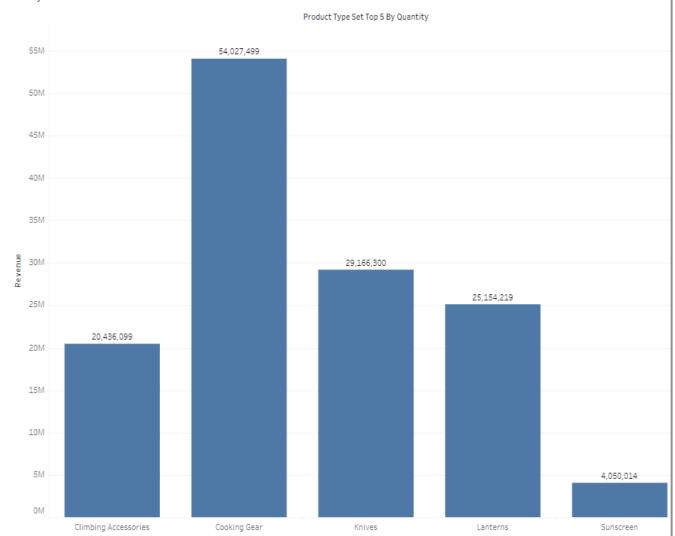
The above line chart shows the revenue generated across the quarters in three years for each country. Canada has the highest generated revenue in all of the quarters except for Quarter 4 of the year 2012. Australia has the lowest generated revenue for all the years

Q5Create a set for Top 5 product types by quantity sold. Analyze what happens on the revenue for them . Show the analysis in form of chart

Anurag -Sport-Equipment by Anurag Durga

| Q1 | Q2 | Q3 | Q4 | Q5 | Dashboard 1 |

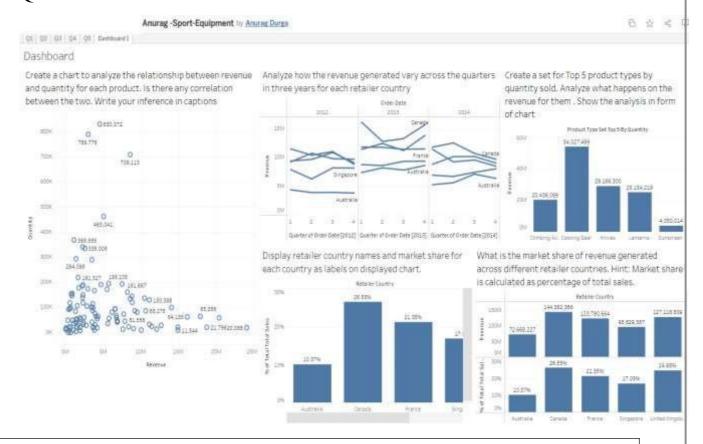
Create a set for Top 5 product types by quantity sold. Analyze what happens on the revenue for them . Show the analysis in form of chart



Interpretation

The above bar chart shows the top 5 product types by quantity sold. Among them, Cooking Gear has generated the most revenue (\$4,027,499).

Q5 Dashboard

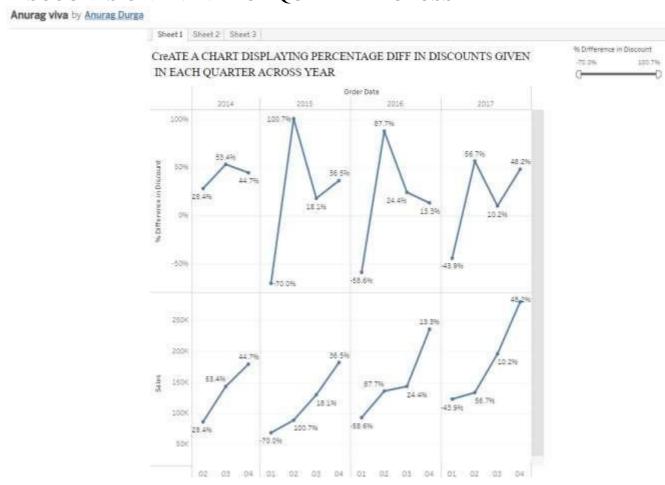


Interpretation

The Dashboard above summarises the previously shown graphs. It contains Scatterplot showing the relationship between quantity and revenue, a line chart showing revenue generated across quarters of 3 years for each retail country, a bar graph showing market share and revenue generated across different countries, another bar graph showing top 5 product types by quantity sold and revenue generated by them, and at the end another bar graph to show market share of different retail countries

Internal Practical Questions

Q1CREATE A CHART DISPLAYING PERCENTAGE DIFF IN DISCOUNTS GIVEN IN EACH QUARTER ACROSS YEAR



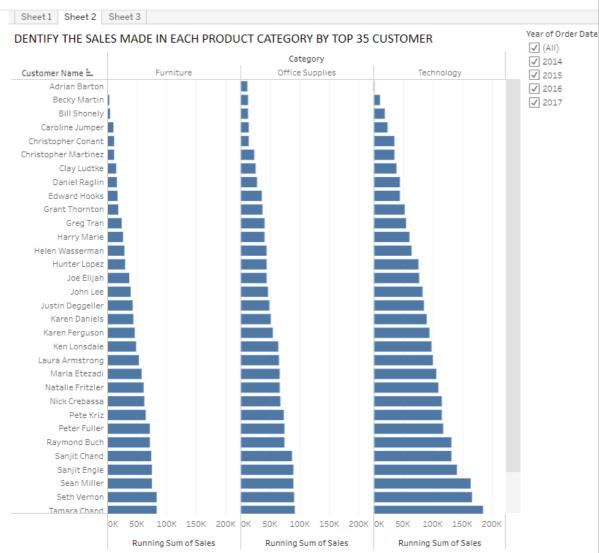
Interpretation

The discount percentage seems to be higher in Q1 (quarter 1) for each year compared to the other quarters. Overall, there appears to be a downward trend in discount percentages across the years. In 2014, the discount reached over 70% in Q1, but by 2017, the discount in Q1 was only around 40%.

Q2 A. IDENTIFY THE SALES MADE IN EACH PRODUCT CATEGORY BY TOP 35 CUSTOMER

B. GIVE OPTION TO USER AT A RUNTIME

Anurag Durga



Interpretation

OUT OF 793 CUSTOMERS THESE ARE THE TOP 35 CUSTOMERS WHERE TOM BOECKENHAUER HAS MORE SALES IN TECHNOLOGY SERVICE . ALSO ONE MORE THING,