DATA TUTORIALS

TABLEAU SCENARIO BASED INTERVIEW QUESTIONS

For more Tableau Tutorial videos and Dashboard Building in Tableau follow my YouTube channel- Data Tutorials -
https://www.youtube.com/@datatutorials1

Exercise 1.0

Data Source – Superstore Sales Data (Excel)

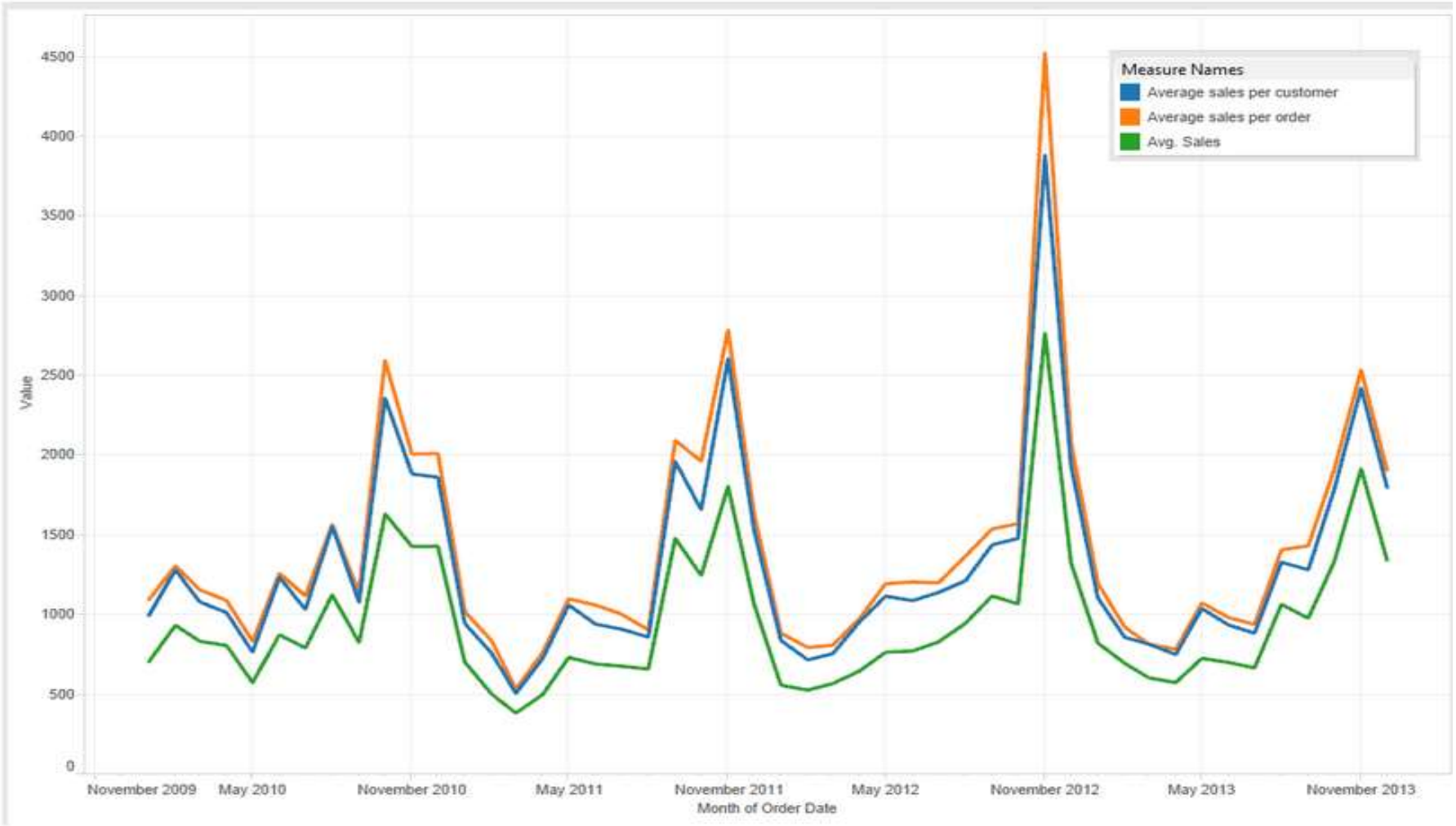
Create a visualization that will “quickly” show the relative sales performance of one Quarter against the others (across all Years)

(Ex: How is Quarter 1 performing (in terms of SALES) across all years as compared to other quarters, across all years)

Exercise 1.0a

Data Source – Superstore Sales Data (Excel)

Each row of data in the data source corresponds to one Item on one order. AVG(Sales) will give average sales of each individual item sold. Compare this against the Average Sales by Customers and Average Sales by Orders.



Exercise 2.0

Data Source – Coffee Chain Database (Access)- *Neglect this Question*

Business Question:

Find out if the “Marketing Money” is spent appropriately across different “Products”, “Types” & across different “Regions or Markets”.

Ideally with increase in Marketing expenses, business would expect Increase in Profit. So find out if this relationship/correlation exists between “Marketing Expenses” and “Profit” and check if there are any outliers

Exercise 3.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Compare the Average Shipping Cost and Average Quantity Ordered across Time.

Assumption: Shipping Cost - Qty Ordered

Ideally Business expects if #Quantities are not increasing then Shipping cost should not increase drastically. There might be other factors for increase on cost, but majority depends on Qty ordered.

So find out if there are any such occurrences by Regions, Products across Time

Exercise 4.0

Data Source – Coffee Chain Database (Access) *Neglect this Question*

Business Question:

Are we achieving the Targets for Sales? Find out in which Regions / States, the Targets were not met and where the Targets were achieved.

Compare the Actual Sales Vs the Target Sales, by Regions/States, Products and see the results by Years (Select one Year at a time and see the result)

Exercise 5.0

Data Source – Superstore Sales Data (Excel)

Business Question:

In a particular Location, for a particular Product, find out the Pattern of buying in terms of #Quantity Purchased

Select a Region and a Product Category

Now create buckets of “#Order Qty” like “0-5”, “5-10” and so on. Then find out the number of Orders under each Bucket.

Exercise 6.0

Data Source – Superstore Sales Data (Excel)

Display the list of all the Customers (Use Row Shelf)

> The First Name and the Last Name of the Customer is separated by a “Space”.

Assumption - Some customers have a middle name as well. Let us assume that the middle name + last name is the “Last Name”

Create a calculated field which will only display the Last Name of all the Customers.

> If Customers have Middle names then display the Middle name + Last name together.

Exercise 7.0

Data Source – Superstore Sales Data (Excel)

Business Question:

How much of my sales has come from transactions where I have made a loss? Find out the results by Regions and Time.

Find out the profitability for each transaction (Order) , i.e. whether it was loss or profit.

Now calculate the Total sales (Sum of Sales) for the transactions (orders) which are flagged as “loss”

Exercise 8.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Analyze the performance of Shipping in terms of Delays, i.e. find out how many orders were delayed by 2 days, how many by 4 days and so on

Delay = Difference between Shipped Date and Order Date (in terms of ‘days’) – for each Transaction/Order

Create Buckets of “0-2”, “2-4” for days of delays

Find out #Orders under each Bucket

Exercise 9.0

Date Functions Usage

Display all the Order Dates in the rows

Now create two calculated fields, for :
Start date of the month for the order date and
End date of the month for the order date.

Example:

[Order Date]	[Start Date]	[End Date]
17-May-2012	01-May-2012	31-May-2012
31-Jan-2011	01-Jan-2011	31-Jan-2011
02-Sept-2010	01-Sep-2010	30-Sep-2010

Exercise 10.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Highlight the Regions/States, where the total Qty sold (for a particular Product) is not meeting the Threshold Value.

Threshold Value - Must be specified by the User

Calculated Field = Compare the threshold value against the Total Qty ordered (sum of qty)

Put this field in the “Color” shelf

Exercise 11.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Create a view to show Correlation between different Measures (to be selected dynamically). The user will be selecting the Measures to include in the view

Display two similar “Parameters” for end users – from where they will select the required Measures. The parameters will contain the List of Measures (Sales, Profit, Discount etc)

Create a Scatter Plot which will show the correlation between the Measures selected by the users. The view will include the Measures dynamically based on the selections

Exercise 12.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Find out Top 5 Products in each Region for different Years. We want to find out the Highest selling products, in a particular location, during different times.

- Bring the “Product Name” and Sum of Sales in the View – bar chart
- Show the Regions and Years as the Filters – Single Selection
- Calculated Field – RANK_DENSE(Sum(Sales))
- Compute By – select “Product Name” – this will rank the product names and partition it by Regions and Years. (*For Each Region and Year we will have ranking of Products by sales)*
- Create a filter to select Ranks 1 to 5

Exercise 13.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Find out Bottom 5 Products in each Region for different Years. We want to find out the Lowest selling products, in a particular location, during different times.

- Bring the “Product Name” and Sum of Sales in the View – bar chart
- Show the Regions and Years as the Filters – Single Selection
- Calculated Field – **RANK_DENSE(Sum(Sales * -1))**
- Compute By – select “Product Name” – this will rank the product names and partition it by Regions and Years. (*For Each Region and Year we will have ranking of Products by sales)*
- Create a filter to select Ranks 1 to 5

Exercise 14.0

Data Source – Superstore Sales Data (Excel)

Business Question:

In a Text Table report which shows Sales (Sum of Sales) by Product Category, Regions, Time Period, highlight the maximum value within the Pane.

Create a Text table and bring Region, Product Category and Order Date (Years). Show the Sum(Sales) in text

Use the “Window_Max” table calculation function to find out the maximum sales value. Use the “Compute by” properly so that the maximum is calculated within each of the panes

Write a Logic/calculated field which will be used to Highlight the Text which matches the maximum value

Is there any other way to achieve the above query?

Exercise 15.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Show the performance of a particular Quarter Vs Average of Other Quarters. The user must be able to select the Quarter whose performance has to be measured. The chart must show two information – a) Selected Qtr Sales and b) Other Qtrs Sales. Show this by Years

1. Show a parameter to select the desired “Quarter”
2. Create a Line chart with Years in the Columns.
3. Calculated field A – for the selected Quarter “Sales”
4. Calculated field B – for the Other Quarter “Sales”
   - Add Window_Avg function to calculate the Average
5. Dual Axis – bring both calculated fields in the view
6. Bring the “Quarters” in “Details” for the Calculated field B
7. Select “Advanced Compute By” for Calculated field B – select Quarter as Addressing Field

Exercise 16.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Part to whole chart:

For a particular Year-Month, show the total Sales by Product Categories. Also show the contribution of sales of each Region in each Product Category. The contribution of Sales must be displayed as % (percentages)

- Bar chart - Product Category in Columns and Sales in Rows
- Bring the Regions in the Color Shelf
- Right click on Sales, Select “Quick Table Calculation” and select “% of Total”
- Use the “Compute by” properly to calculate the % of total within one Product Category

Exercise 17.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Show the Customer Profitability using a Pareto Chart. How many customers (%) are contributing to the 80% of the overall profits?

- Calculated Field **"% Customers"** = **Index() / Size()**
- Calculated Field **"% Total of Profits"** =
  - **Running_Sum(Sum(Profit)) / Window_Sum(Sum(Profit))**
- Bring the **"% Customers"** in Columns and **"% Total of Profits"** in Rows
- Bring the "Customer" field in "Details" and **Sort in Descending order by Sum(Profit)**
- For the above Calculated fields select the **"Compute By" = "Customers"**
- Change the Mark Type to "Line"
- Can you now find out how many customers are responsible for 80% of the total profit?

Exercise 18.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Find out how much the actual sales (for individual products) is deviating from the average of the total sales (all products)?

- Display a chart with all the Product Sub Categories in the X – Axis
- Bring the Sales measure in the Y – Axis and show a bar chart
- Calculated field = Average(Total Sales) – SUM(Sales)
- Bring this calculated field also in the view as a dual axis

Exercise 19.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Display sales information by States on a map. Display another map with sales information by Cities. Bring both the sheets on a dashboard. Initially the dashboard should only show States Map. When you select a particular State, the sheet with City map should appear with cities of selected State. Clearing the State filter should hide the City map sheet.

Now when user selects a City, a web page must open with Wikipedia website with details of selected City.

- On the dashboard, bring a Vertical Container.
- Put the State sheet inside the container and place the City sheet underneath the State sheet inside the container.
- Action – Source = State Sheet and Target = City Sheet.
- URL Action on City Sheet= http://en.wikipedia.org/wiki/<City>

Exercise 20.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Create a chart showing a different shape for each product and size of the shapes should vary according to the sales

Exercise 21.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Find out the list of Customers who have not bought a particular Product in the last 6 months.

Exercise 22.0

Data Source – Superstore Sales Data (Excel)

Business Question:

Crete a Relative Date Filter, such that when user selects this time period, the chart shows data from all previous years for that same period.

The Filter should show the following values to be selected:

a) **Last 2 Weeks**

b) **Last 2 Months**

c) **Last 2 Quarters**

Ex: If user selects "last 2 months", and suppose the current month is August 2014, then the chart should display data for July and August for 2014, 2013, 2012 and so on.