

Module 6: Level Of Detail (LOD) Expressions Tableau

Use Case- V

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Use Case V: Find The Second Order Date

Using “Global Superstore Order 2016 Dataset”, create a report which shows the percentage of customers placing an order for the second time within the duration of 6 months.

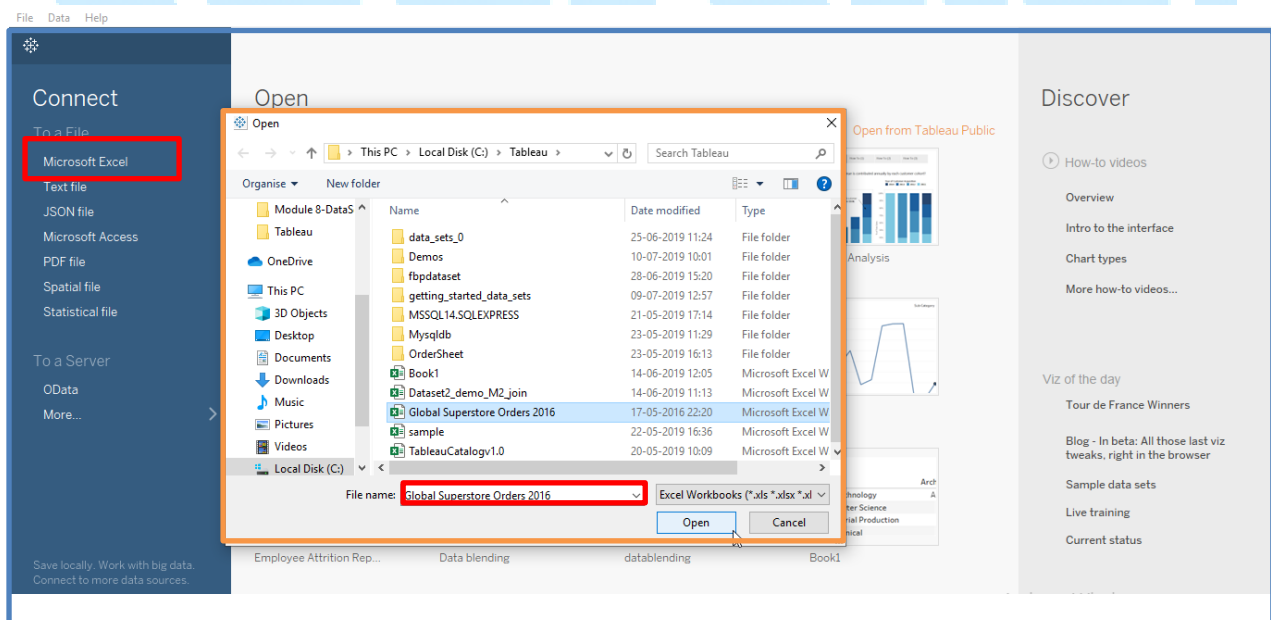
Refer the dataset: Global Superstore Order 2016.xlsx

Use Case V – Solution

Basic Components parts required to find the second order dates are:

- First Order Date
- Second Order Date
- Difference Between First and Second Order
- Repeat Purchasing
- Percentage of customers for which the above conditions are true

Step 1: Click on Connect → Microsoft Excel → Global Superstore Orders 2016 Dataset → Sheet1



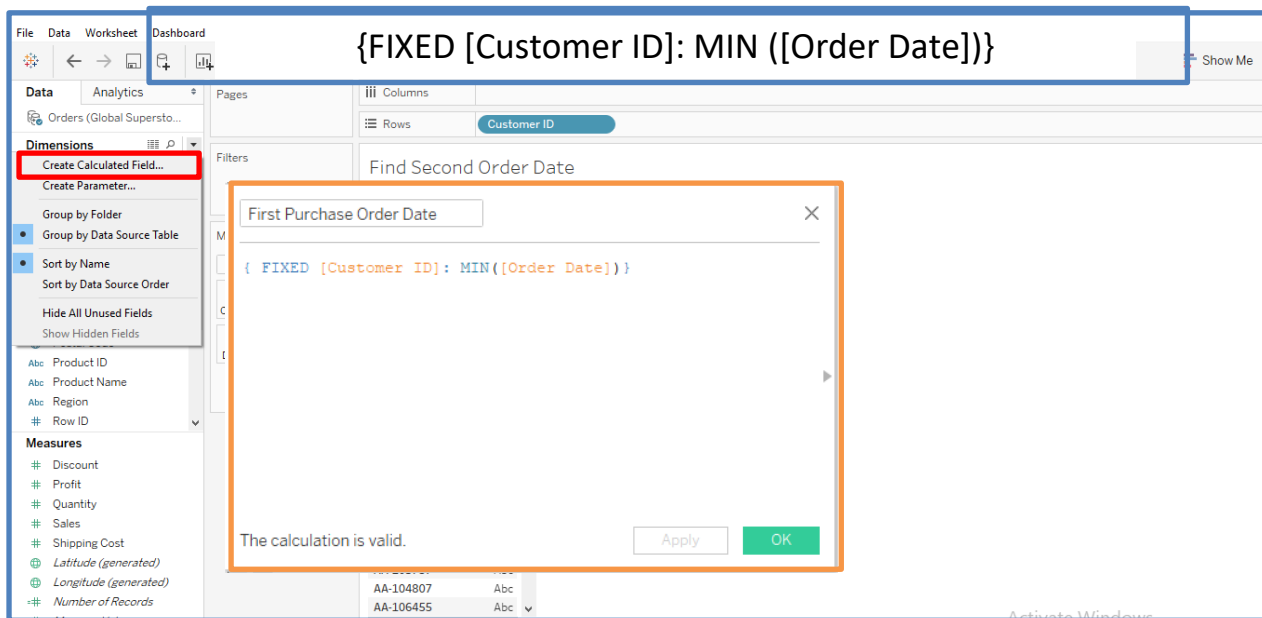
First Order Date

Step 2: Drag “Customer ID” to Row Shelf.

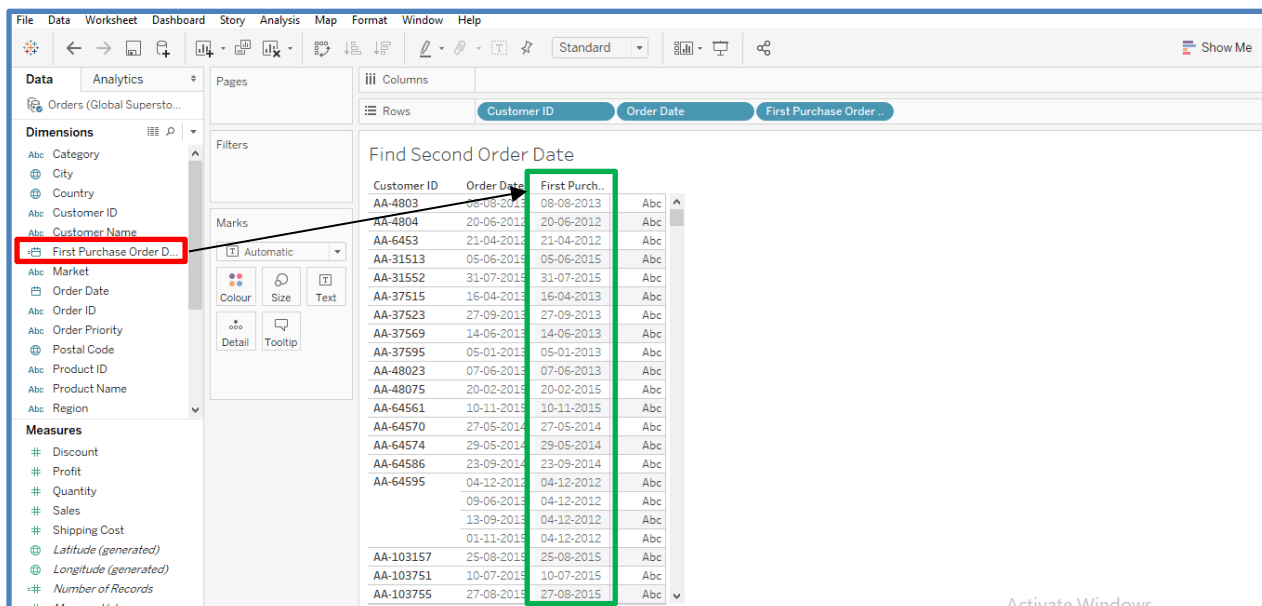
Step 3: Create a calculated field which give the first order date:

Data pane → Dimensions → Drop down → Create Calculated Field

Dialog box → Rename to “First Purchase Order Date” → Calculation



Step 4: Drag “Order date” and “First Purchase Order Date” to Row Shelf and make them “Exact” and “Discrete”.



In above visualization, we have **First Purchase Order Date** at **Customer ID** level for each customer.

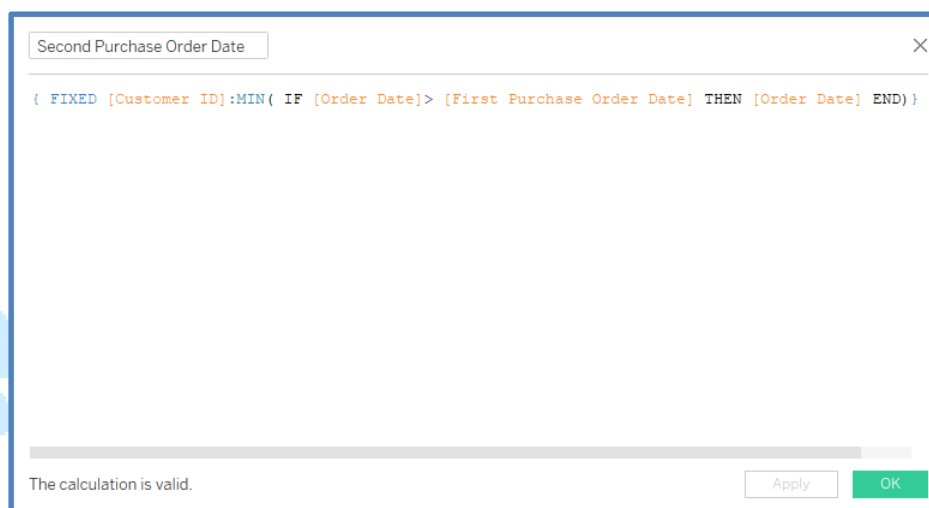
Second Order Date

To visualize the Second order date which is greater than first order date and minimum than the other order dates is our second order date.

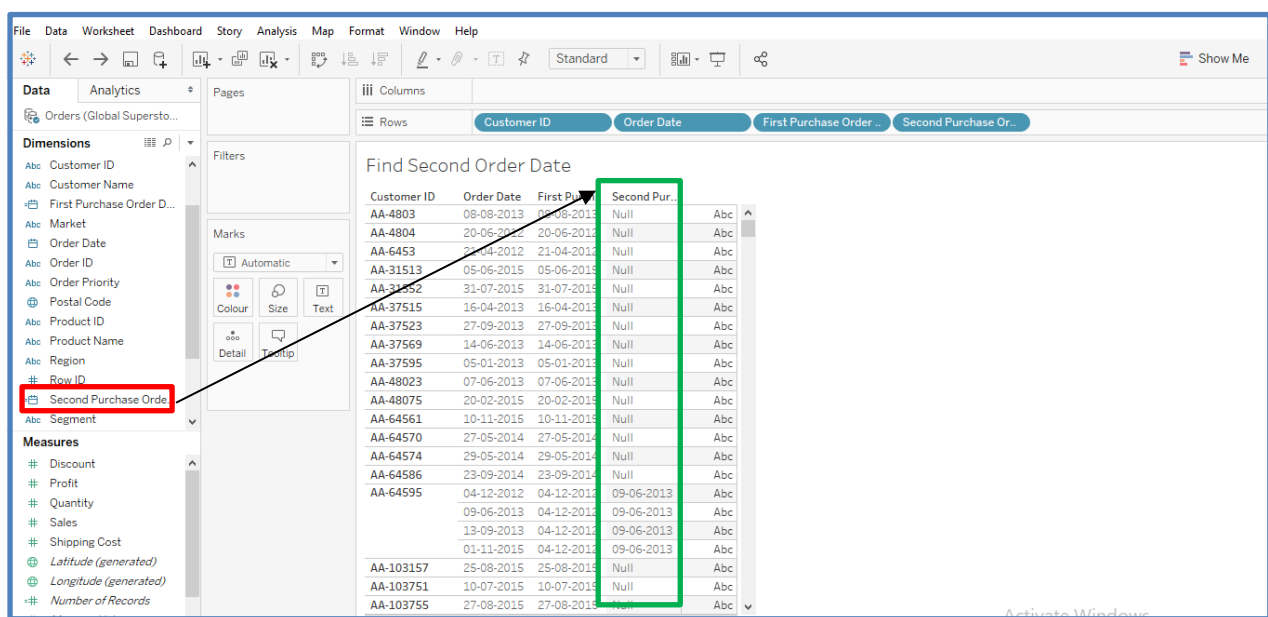
Step 5: Create a calculated field for “Second Purchase Order Date”.

Calculation:

```
{ FIXED [Customer ID]:MIN( IF [Order Date]> [First Purchase Order Date] THEN [Order Date] END ) }
```



Step 6: Drag “Second Order Purchase Date” to Row Shelf and make it discrete.



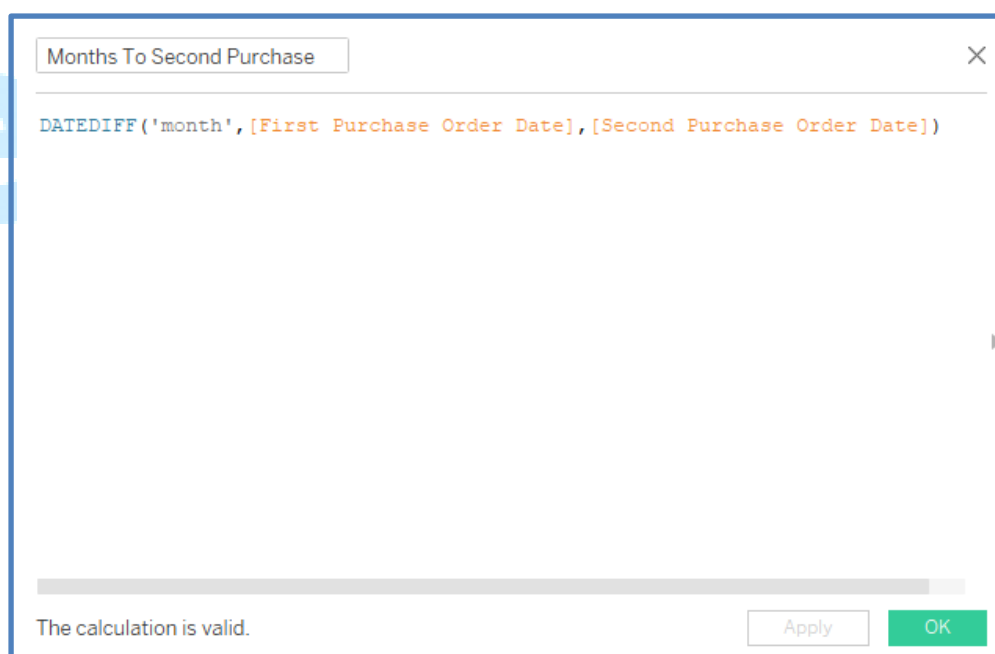
We can see “Second Order Purchase Date at Customer ID” level, and for customers who have not purchased second order, “null” will be reflected against those Customer ID in “Second Order Purchase Date” column.

Difference of months between first and second order

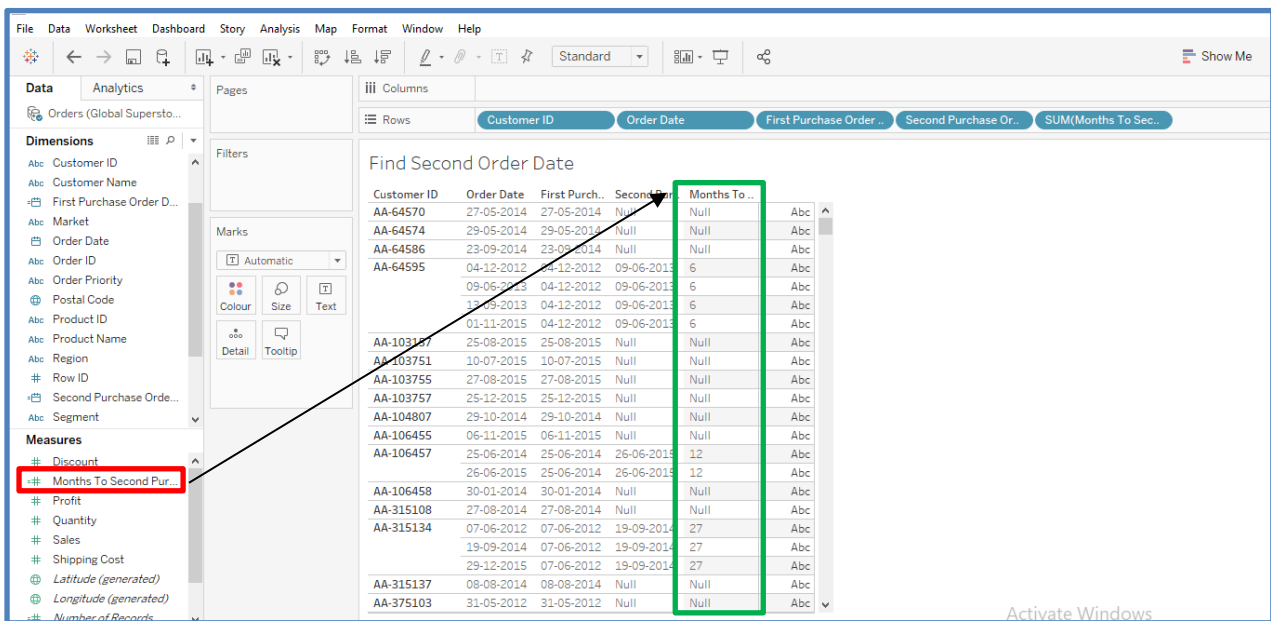
Now, we have both the first and second order date per customer. However, the original question involved how many customers made repeat purchases within 6 months. To solve that, we need to compare the dates.

Step 7: Create another calculated field “Months To Second Purchase”. Calculation:

DATEDIFF ('month', [First Purchase Order Date], [Second Purchase Order Date])



Step 8: Drag “Month To Second Purchase” to Row Shelf, and make it discrete.



In the above shown visualization, we can see the difference of months between first and second purchase against each Customer ID.

Repeat Purchase

Step 9: Build a calculation “Repeat Purchase” that will bucket customers according to the following criterias:

- if they didn’t make a second purchase at all,
- if they made a second purchase within 6 months,
- or if it was more than 6 months

Calculation:

```
IF [Months To Second Purchase]>= 6 THEN "More than 6 months"
ELSEIF [Months To Second Purchase]<6 THEN "Less than 6 months"
ELSE "No Second Purchase"
END
```

Repeat Purchase

```

IF [Months To Second Purchase]>= 6 THEN "More than 6 months"
ELSEIF [Months To Second Purchase]<6 THEN "Less than 6 months"
ELSE "No Second Purchase"
END

```

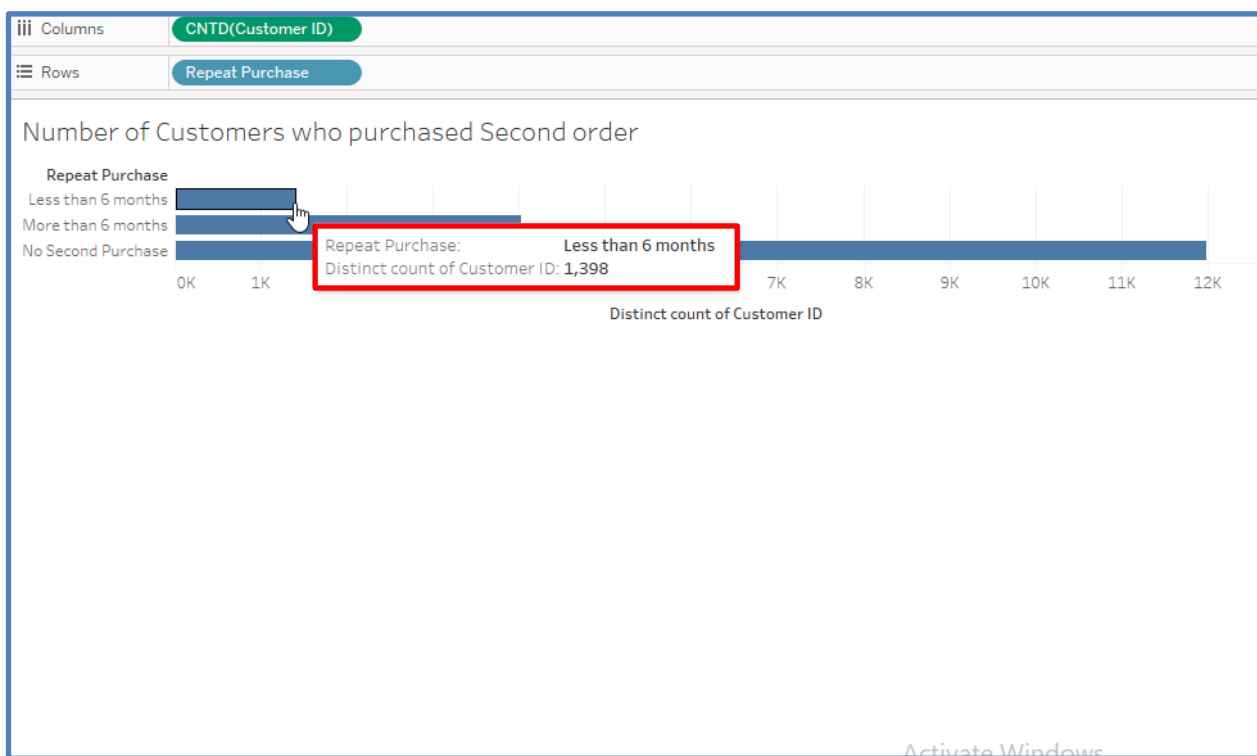
The calculation is valid.
Apply
OK

Step 10: Click on sheet 2 and rename it to Number of customers who purchased second order.

Drag “Repeat Purchase” and “Customer ID” field from Dimension to Row and Column Shelf respectively.

For distinct number of customers:

Go to Customer ID → Measure → Count Distinct

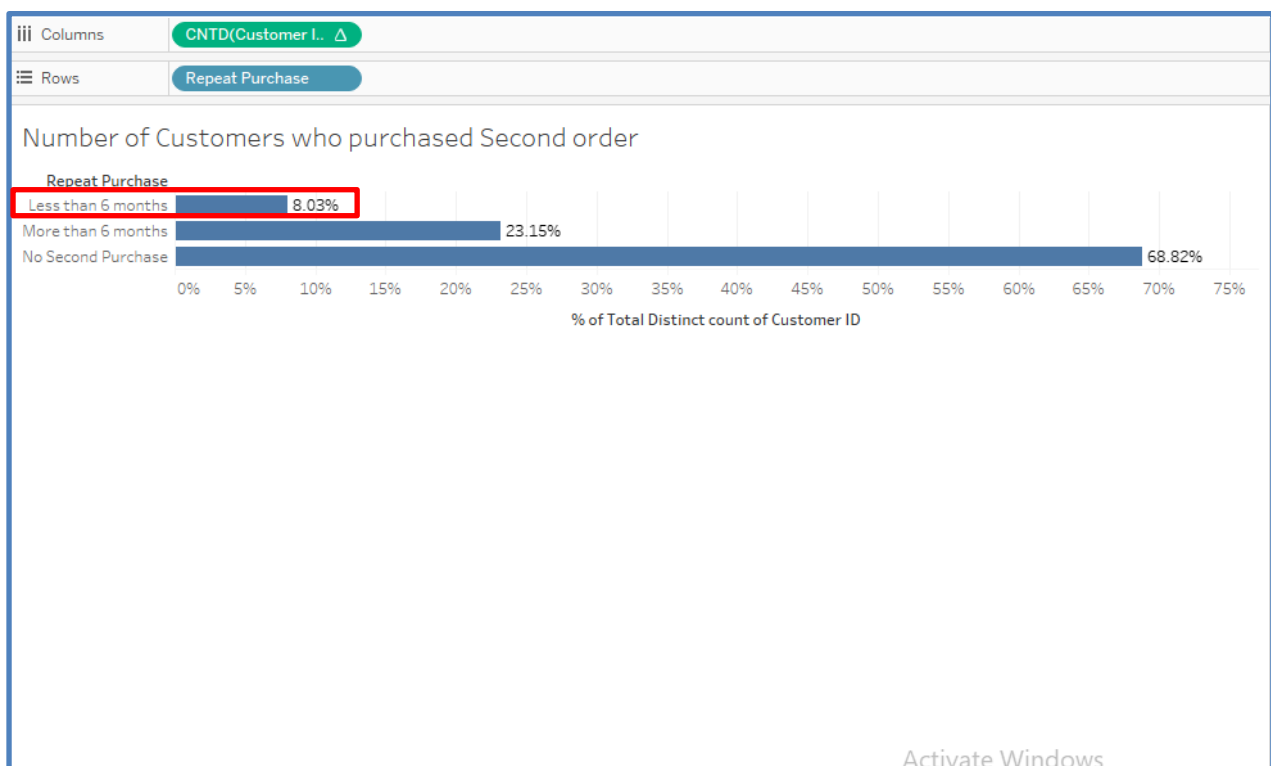


Form the above visualization, we can visualize 1,398 customers have purchased second order in less than 6 months period from their first purchase.

Step 11: We need to find the percentage of customers who are have made second purchase.

CNTD (Customer ID) → Drop Down → Edit In Shelf → Quick Table Calculation → Percent of Total

Marks Cars → Label → Show mark labels



The visualization above shows the percentage of customers who have repeated purchase:

- Less than 6 months: 8.03%
- More than 6 months: 23.15%
- No Second Purchase: 68.82%