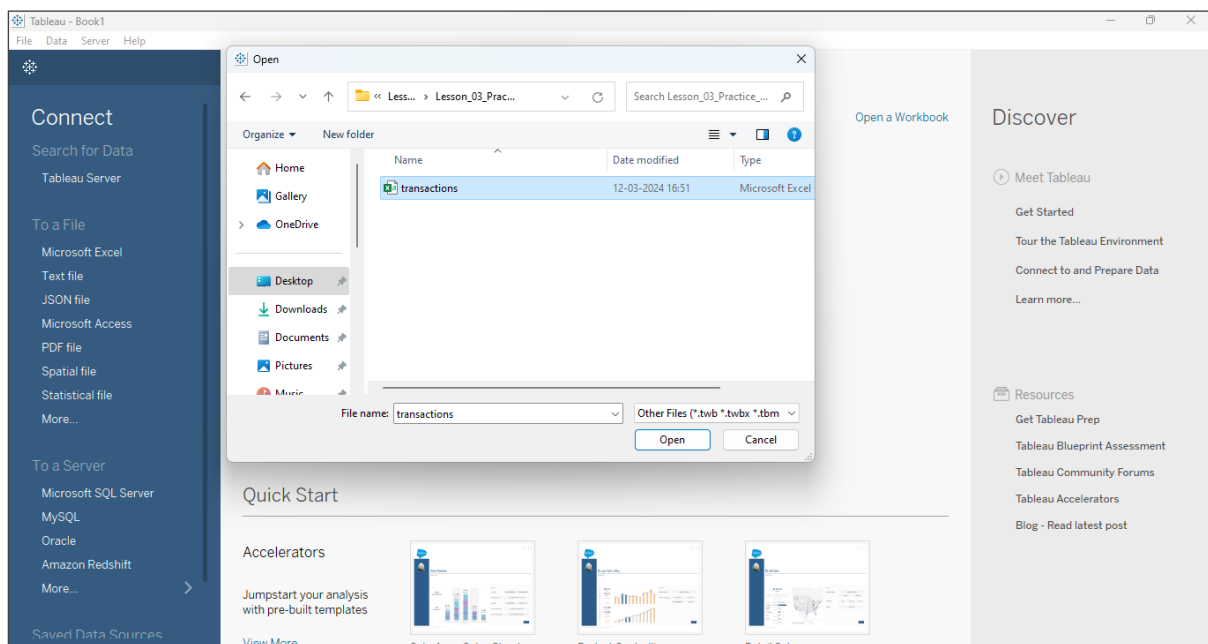


Lesson 03: Data Preparation and Analysis with Tableau

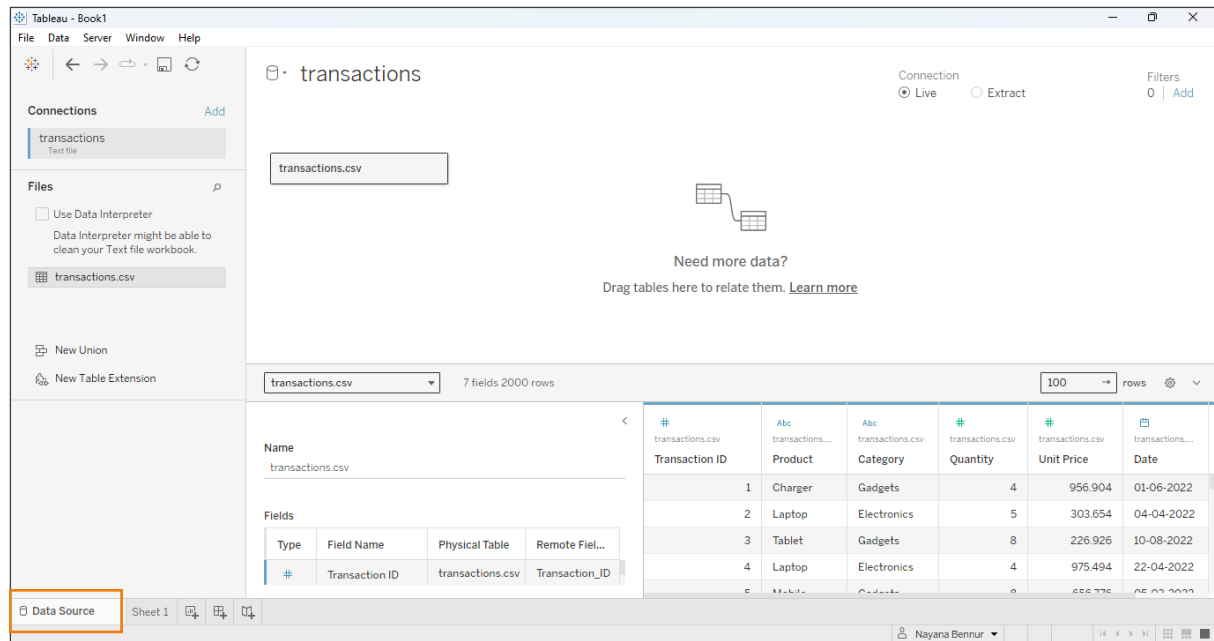
1. Data Preparation and Connection

- Import the **transaction.csv** dataset into Tableau
- Connect Tableau to the dataset and ensure proper data preparation

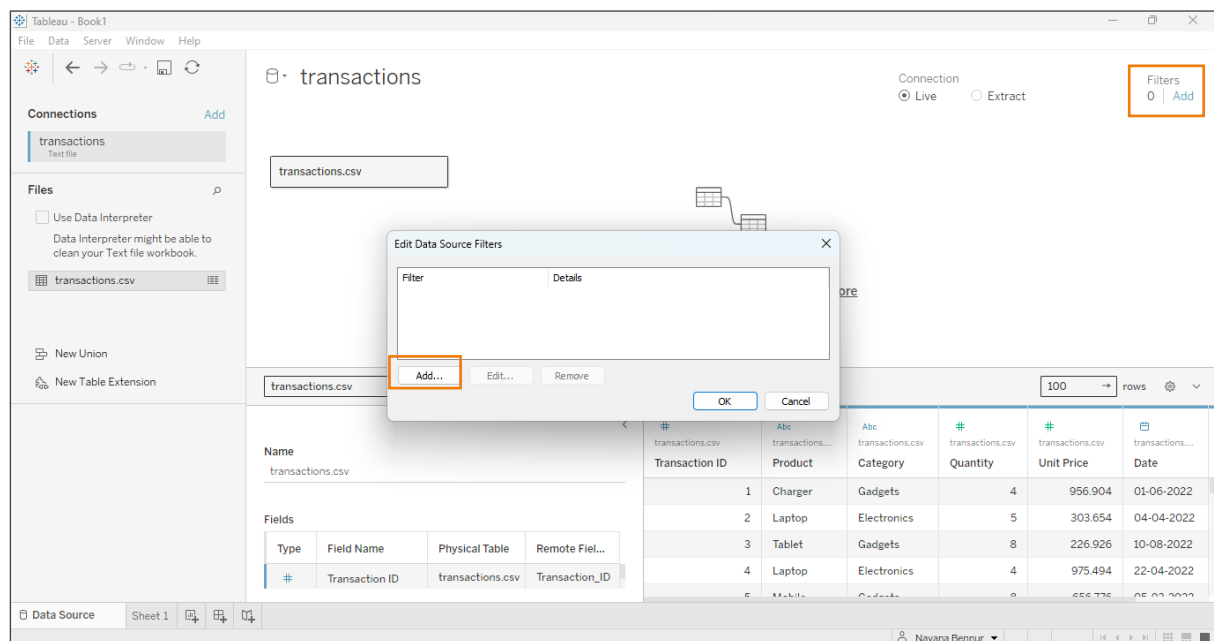


2. Data Cleaning and Preparation

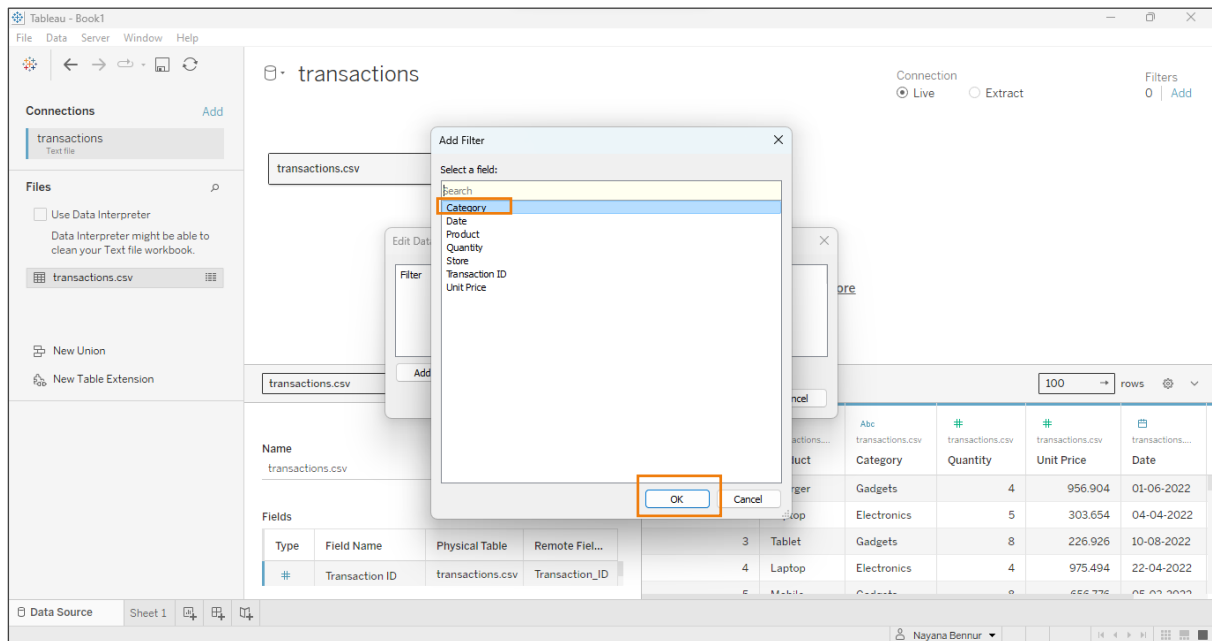
- Use Data Source filters
 - Open the dataset in Tableau and navigate to the **Data Source** tab



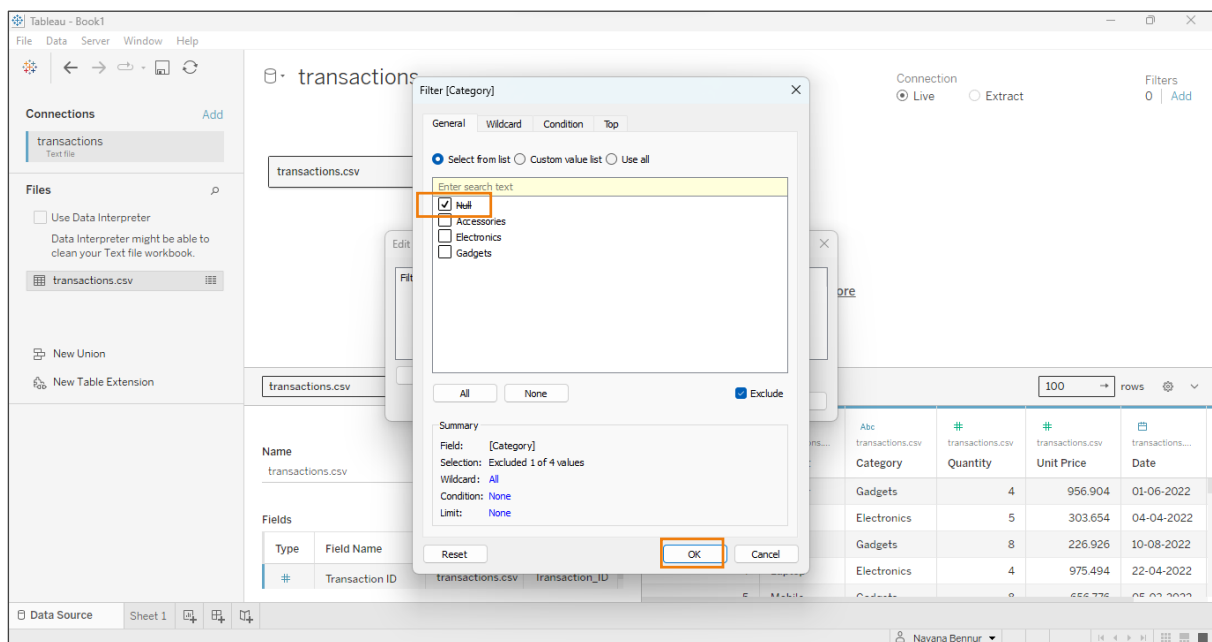
- Click on **Add** next to the **Filters** section, then again click on **Add** on the pop-up screen



- Set the filter to **exclude** rows with missing essential information, then select **field** and click on **OK**

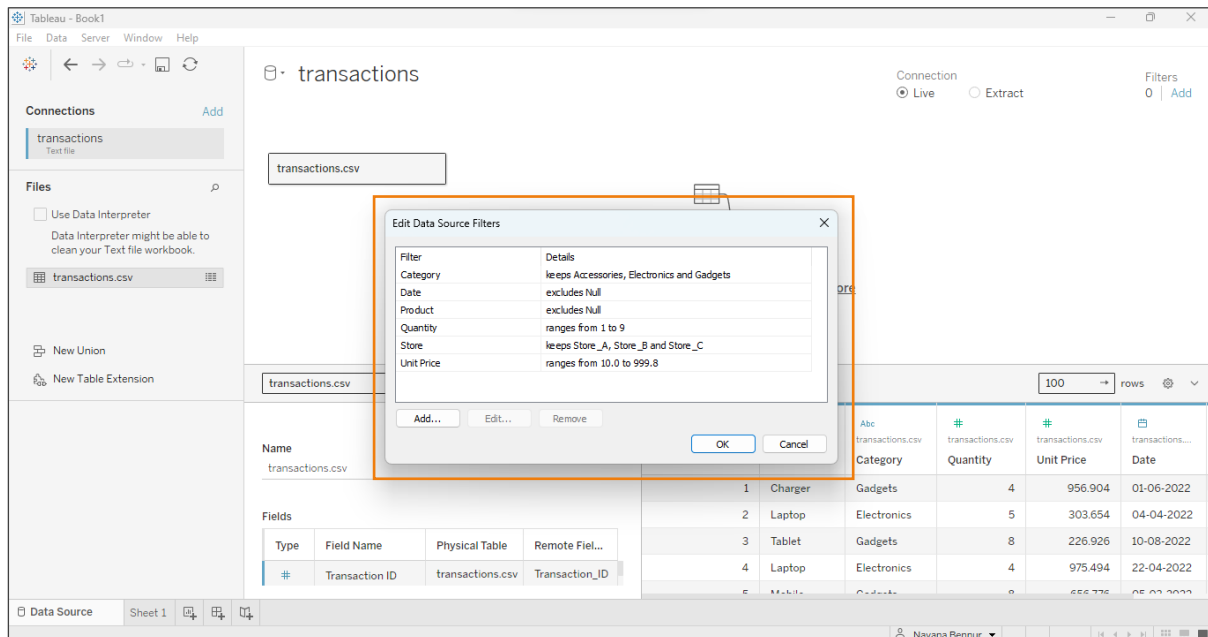


- Select **Null**, then select **Exclude** and click on **OK**

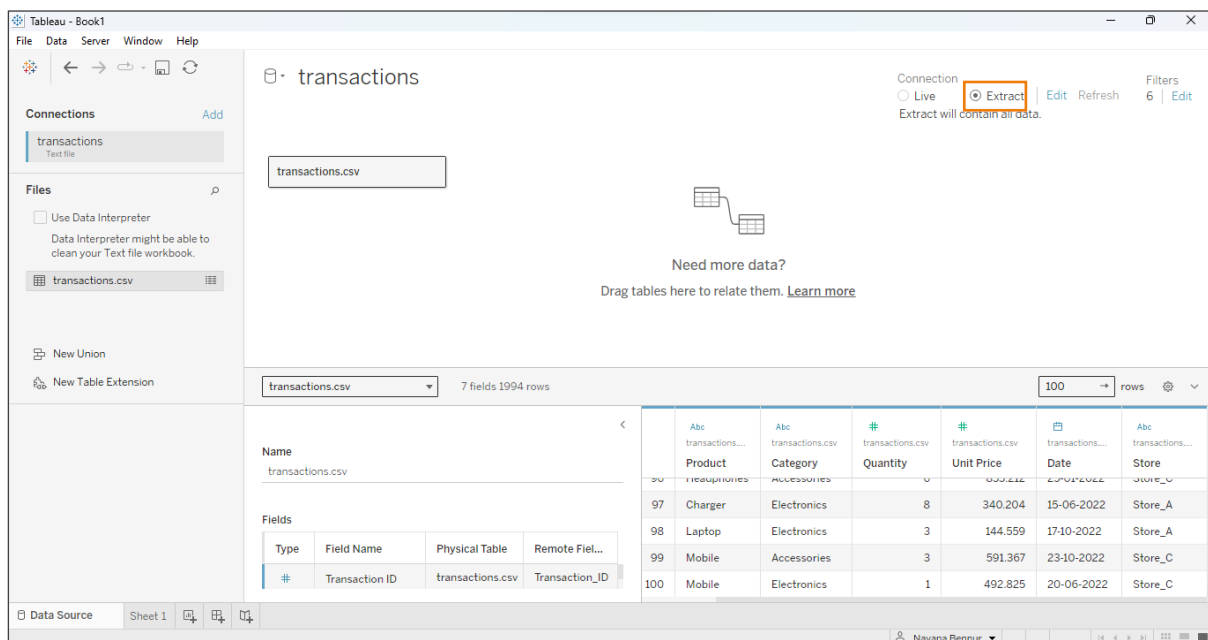


NOTE: Follow the same procedure for all the fields (**Category, Date, Product, Quantity, Store, Transaction ID, and Unit Price**)

Observation: The output after applying filter on all fields to **exclude** null data will appear as shown below (For **Date**, select **Days**, then click on **Next** and exclude null data)

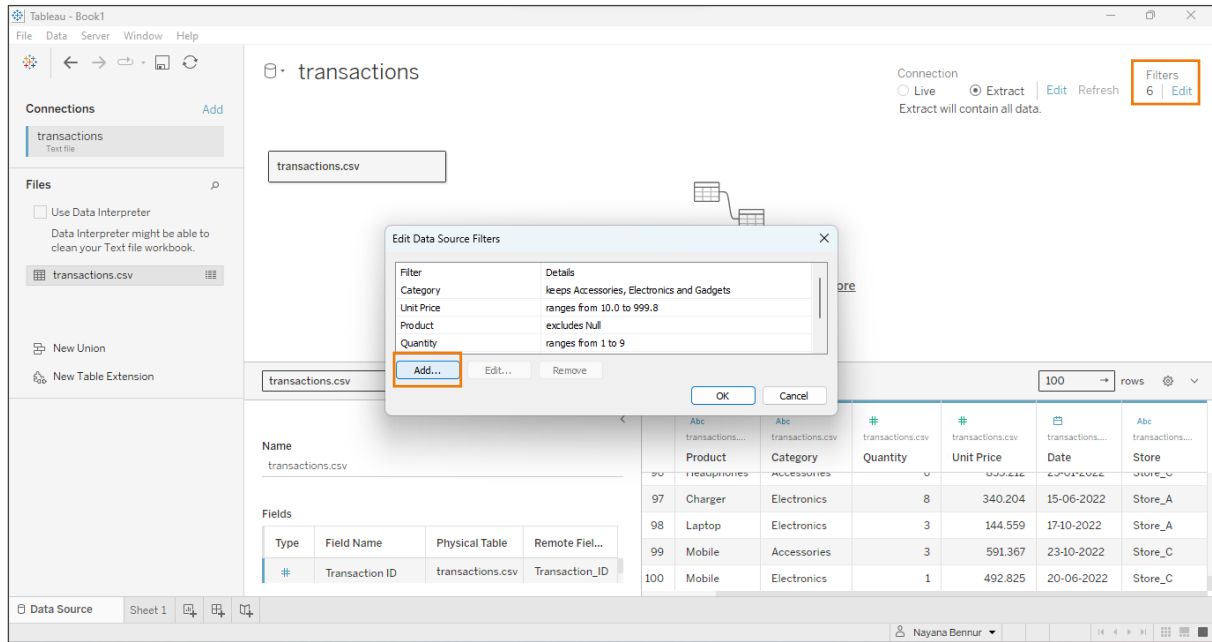


- Apply Extract filters
 - In the **Data Source** tab, after applying source filters, click on **Extract Data** instead of using live data

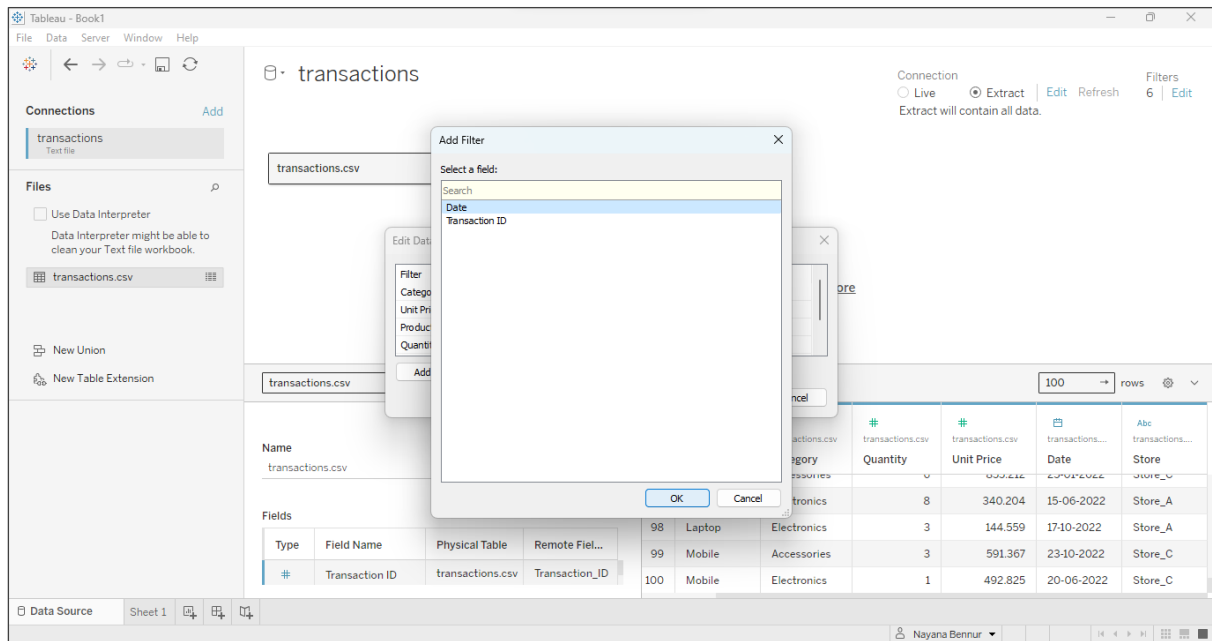


- Add a filter for the **Date** column to include only February, March, June, September, and November data, focusing analysis on the relevant timeframe

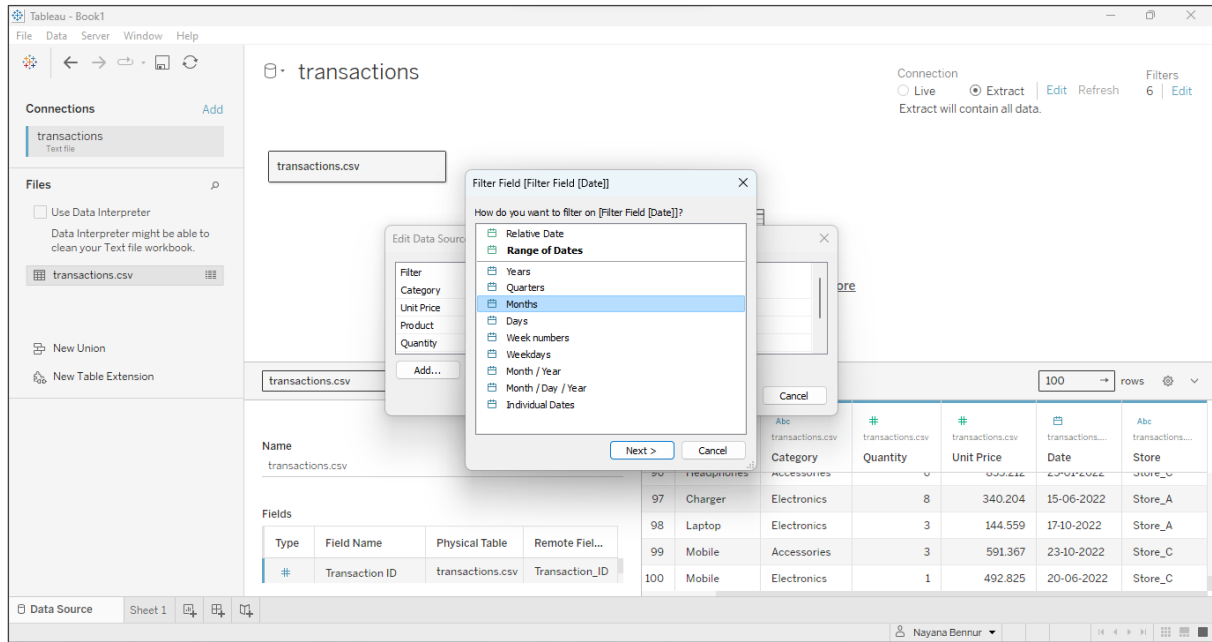
- Click on **Edit** under Filters sections and click on **Add**



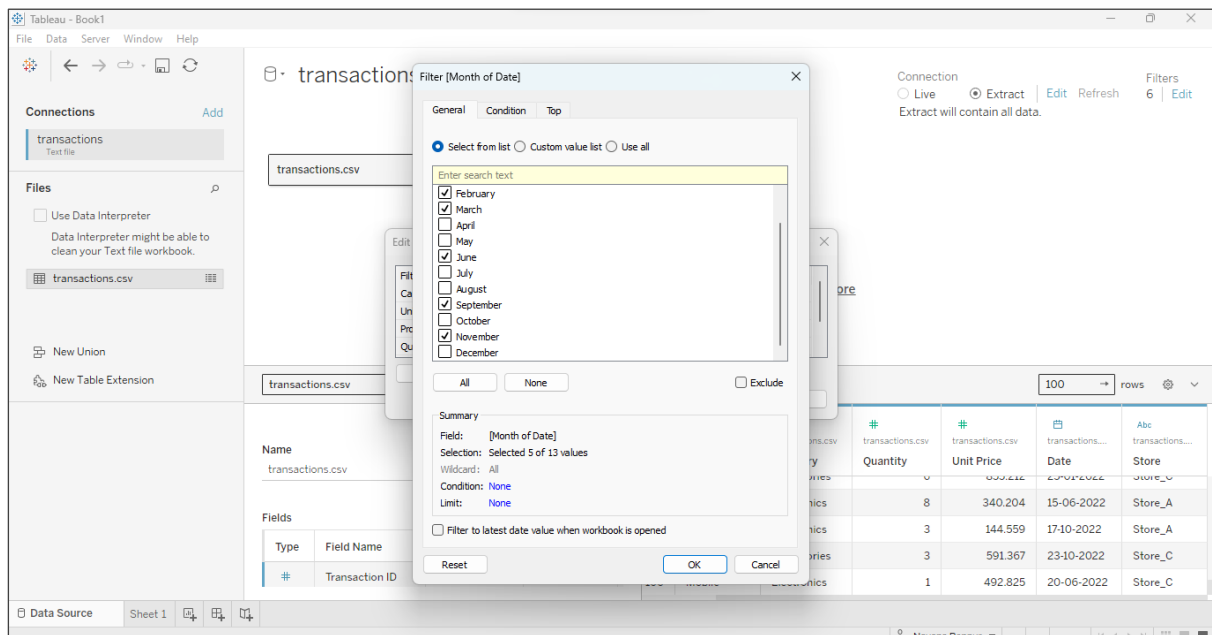
- Select **Date** and click on **OK**



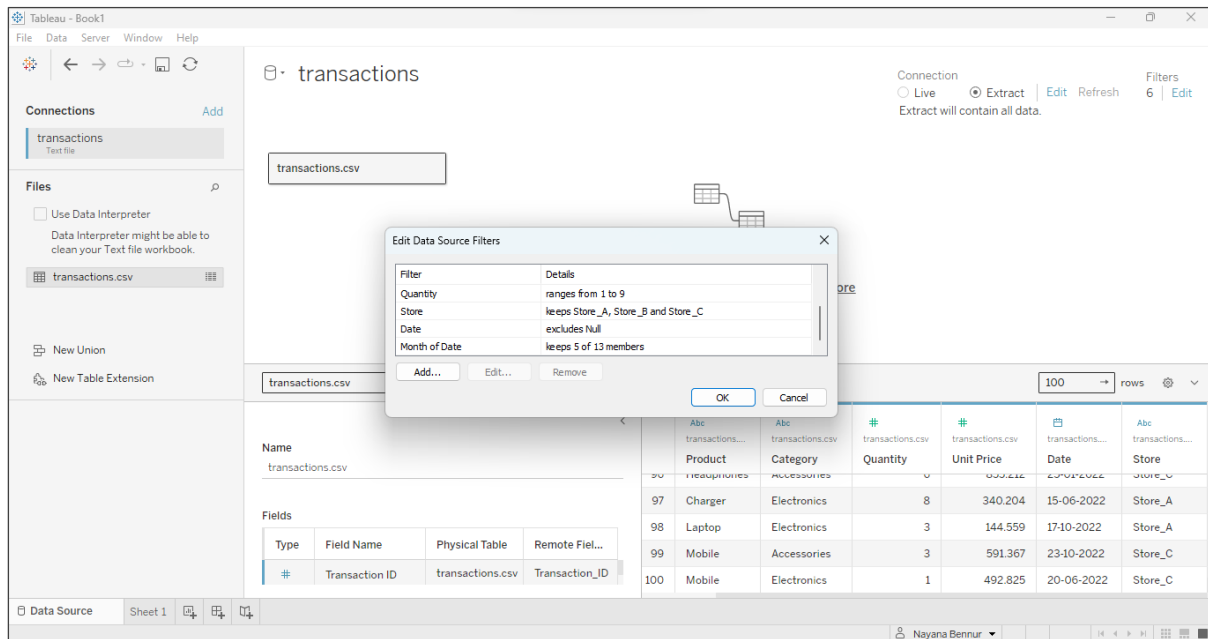
- Select **Months** and click on **Next**



- Select February, March, June, September, November and click on **OK**

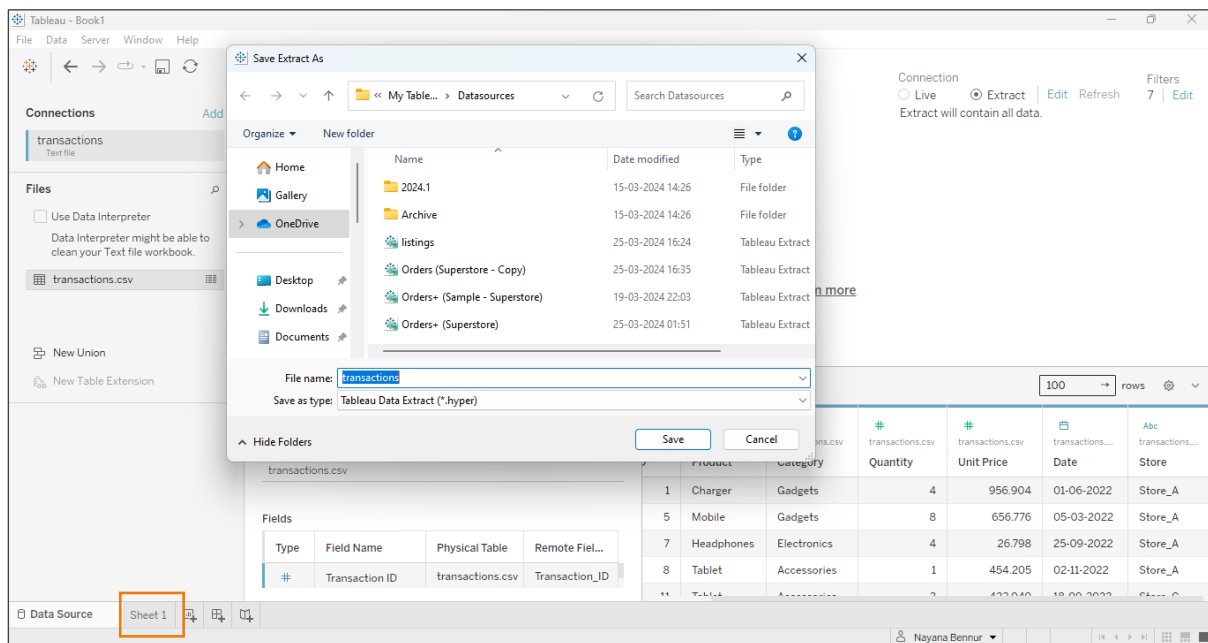


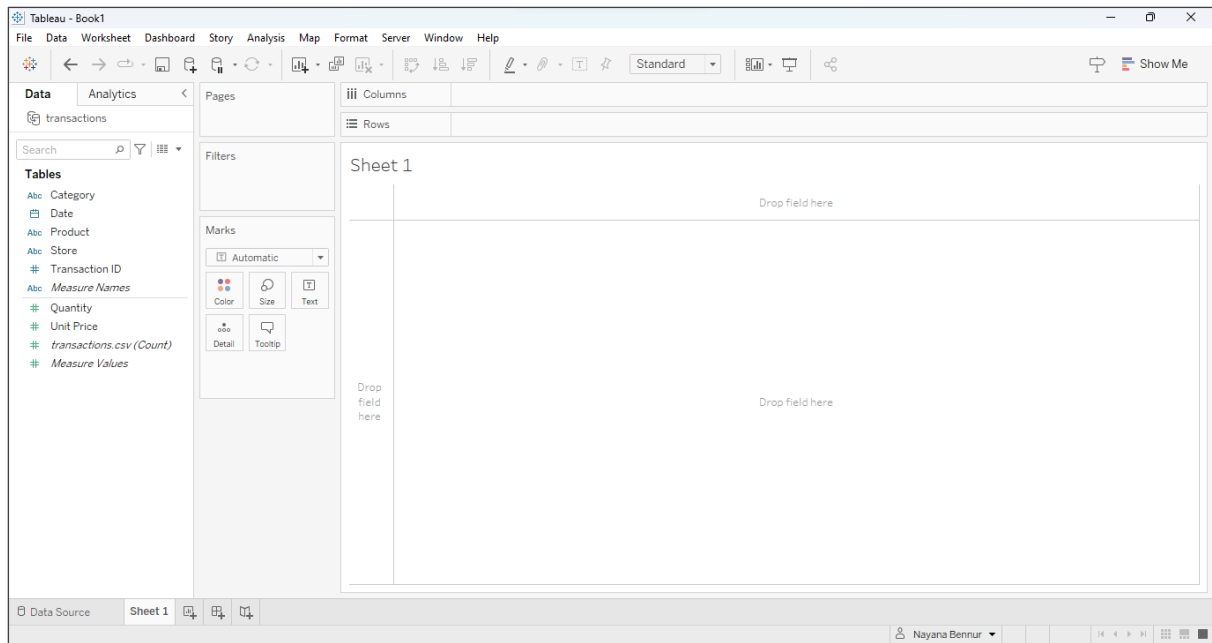
Observation: The output after applying filter will appear as shown below:



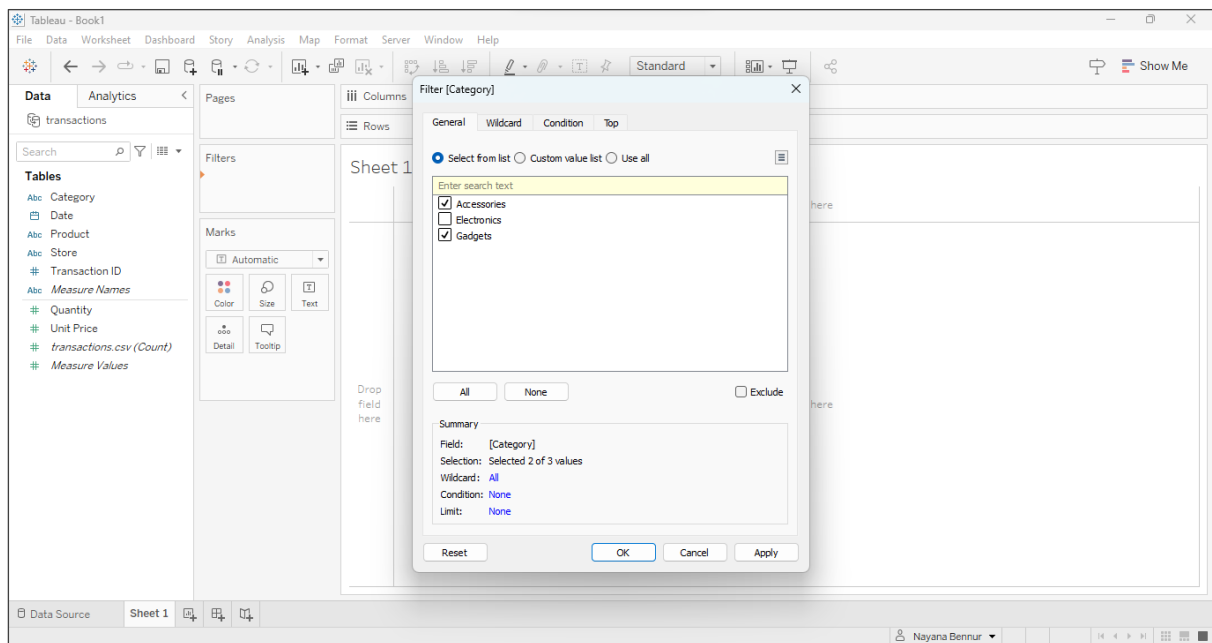
3. Data Analysis

- Use Dimension filters
 - Click on **Sheet 1** and save a local extract copy of the data

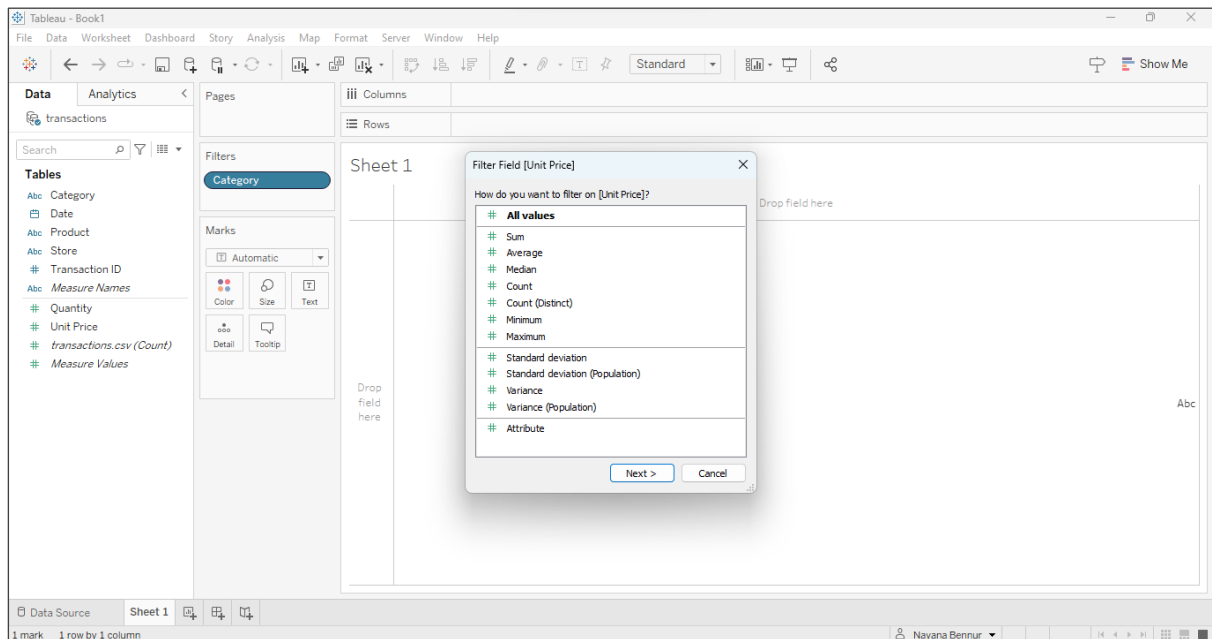




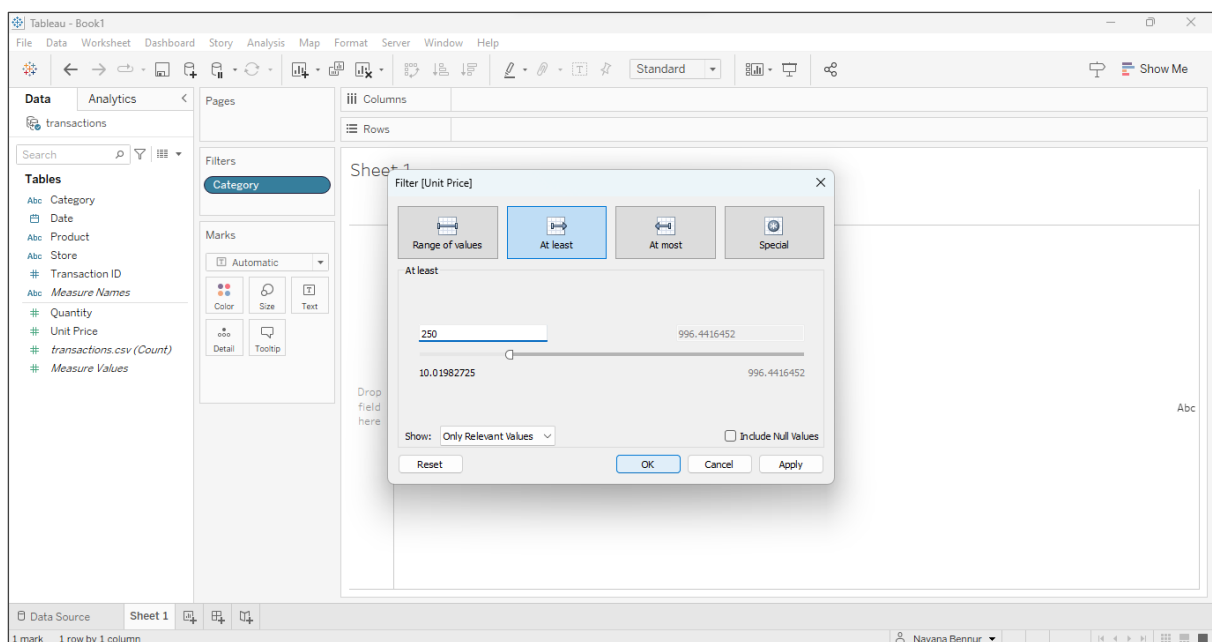
- Drag the **Category** fields into the Filters shelf
- Customize the filter to display only **Accessories** and **Gadgets** Category for further analysis



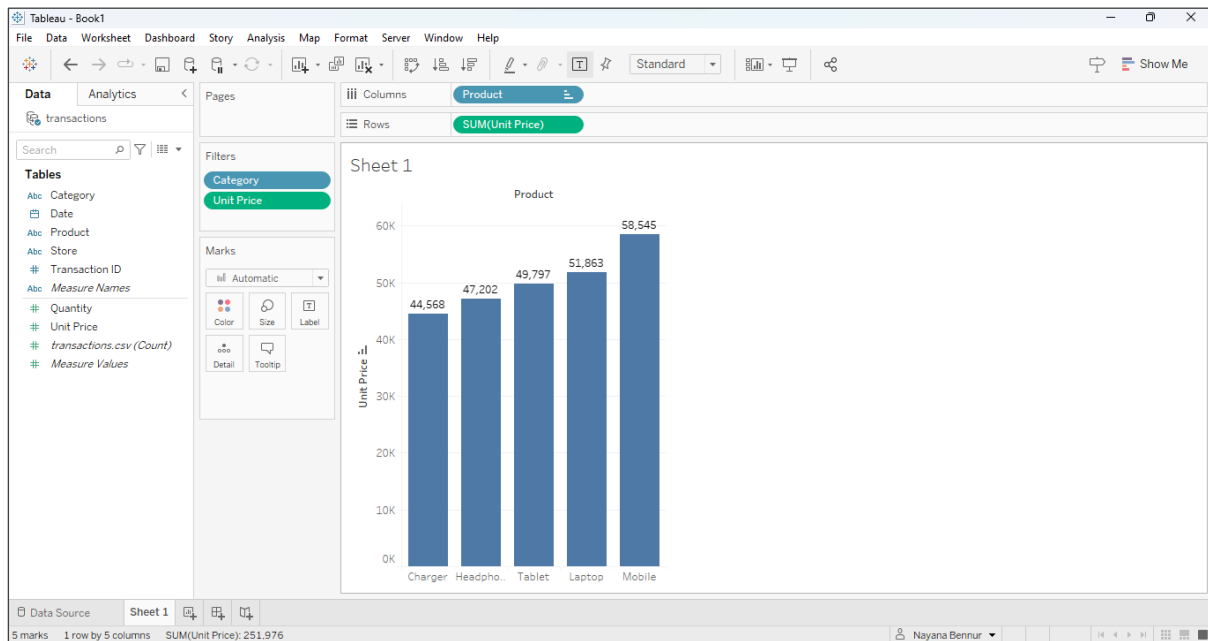
- Apply Measure filters
 - Add the **Unit Price** field to the Filters shelf and click on **Next**



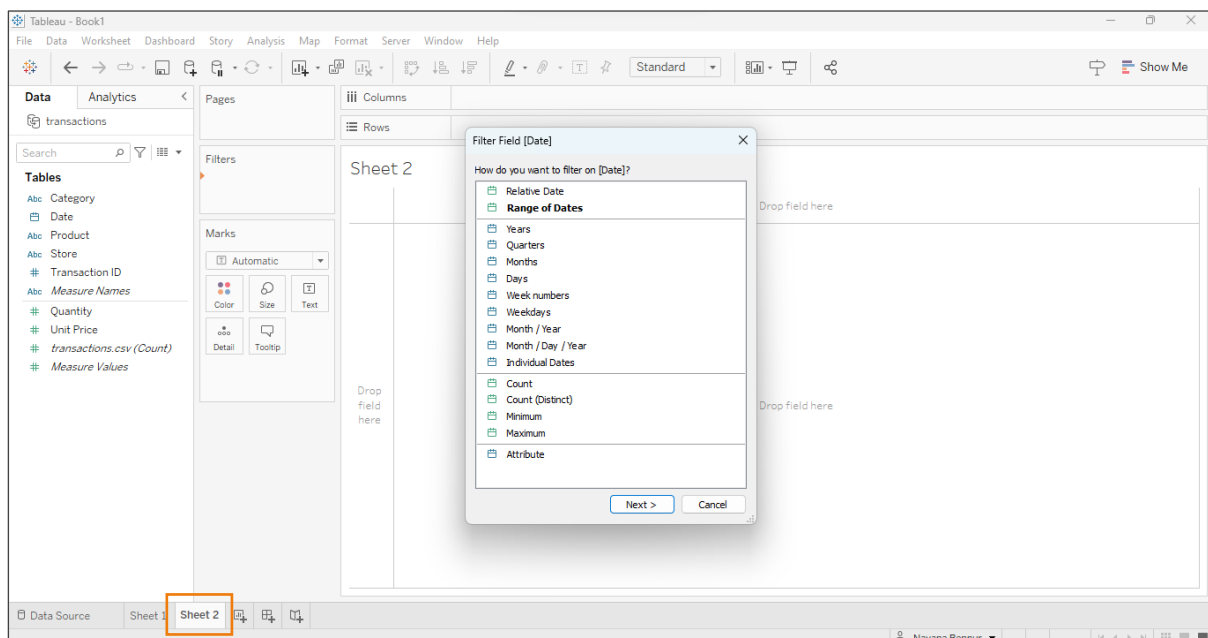
- Set a minimum value to focus on products with significant sales figures, choose **At least** to exclude lower performing products, enter minimum value as **250**, and click on **OK**



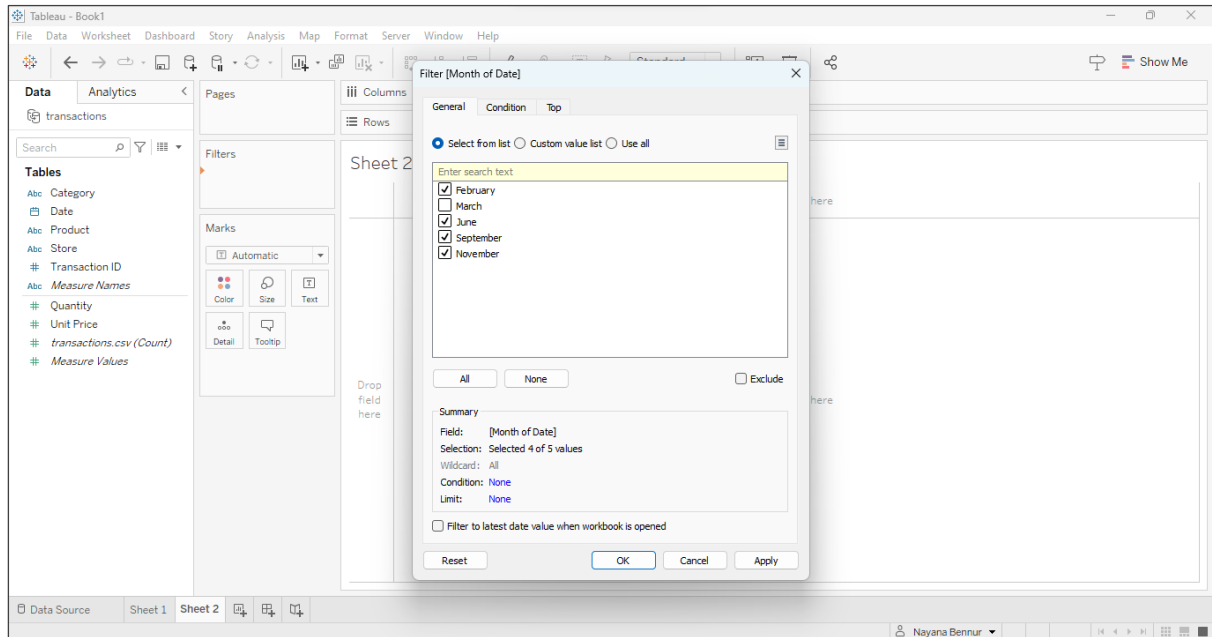
- Drag **Product** to Columns, and **Unit Price** to Rows and click on **T** icon above the Columns



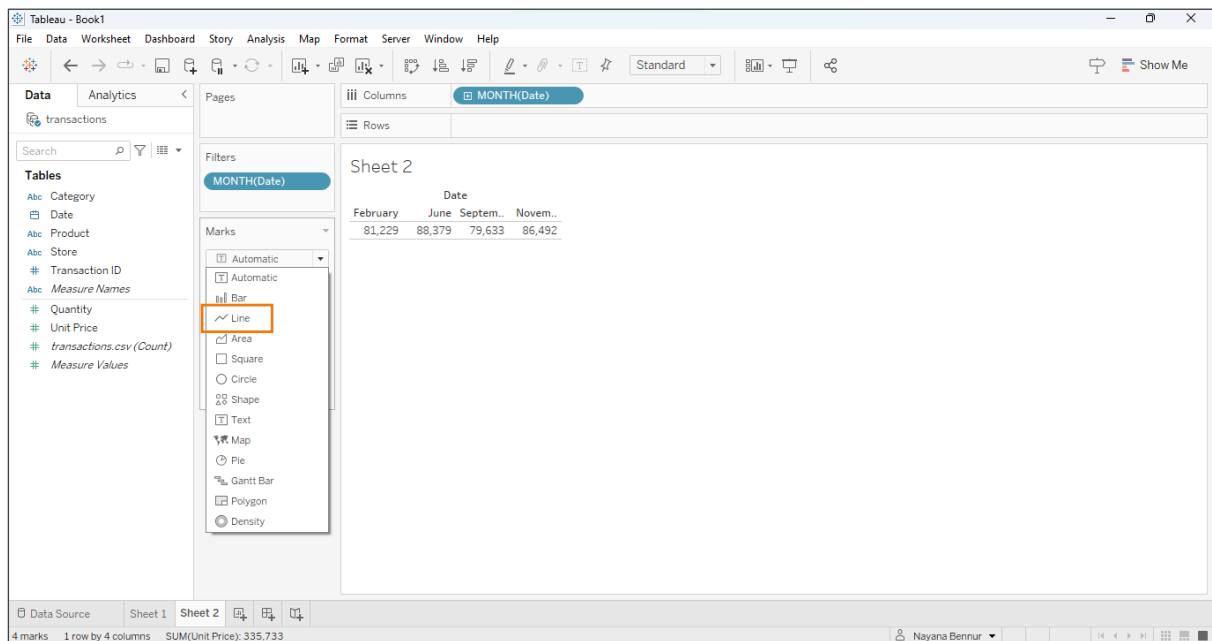
- Utilize Date filters
 - Create new **Worksheet Sheet2**, drag the **Date** field into the Filters shelf, and **choose Months to view** monthly data and analyze monthly sales trends



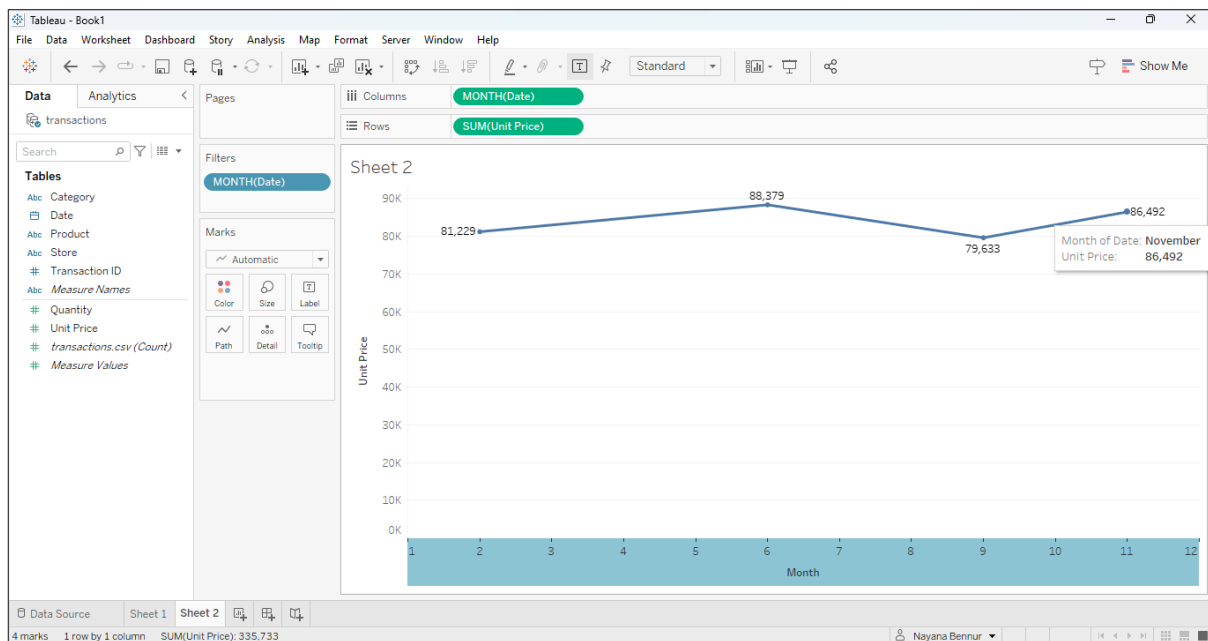
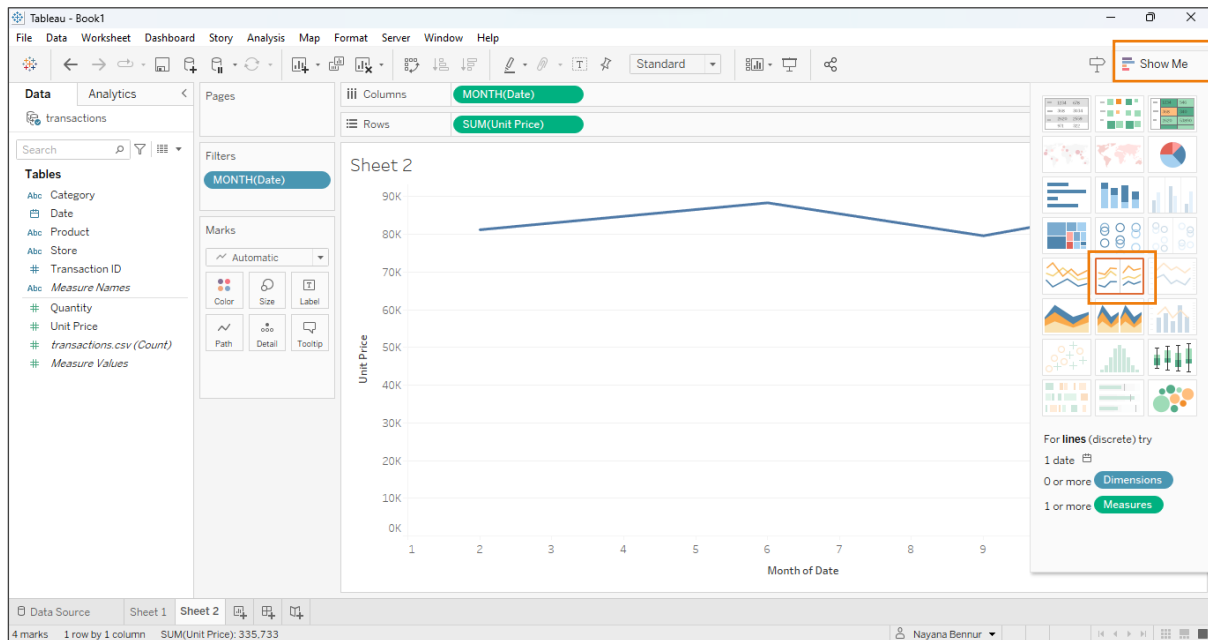
- Exclude **March** month data and click on **OK**



- Drag **Date** to columns and select **Line** option under Marks section

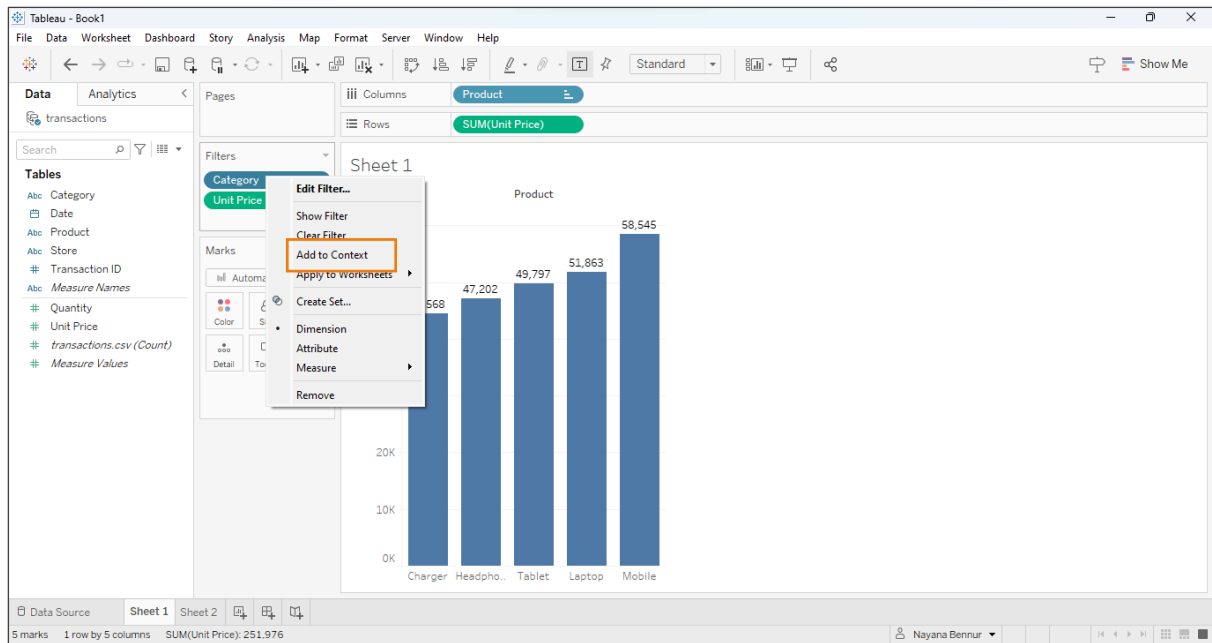


- Drag **Unit Price** to Rows
- In the top-right corner, click on **Show Me** and select line chart

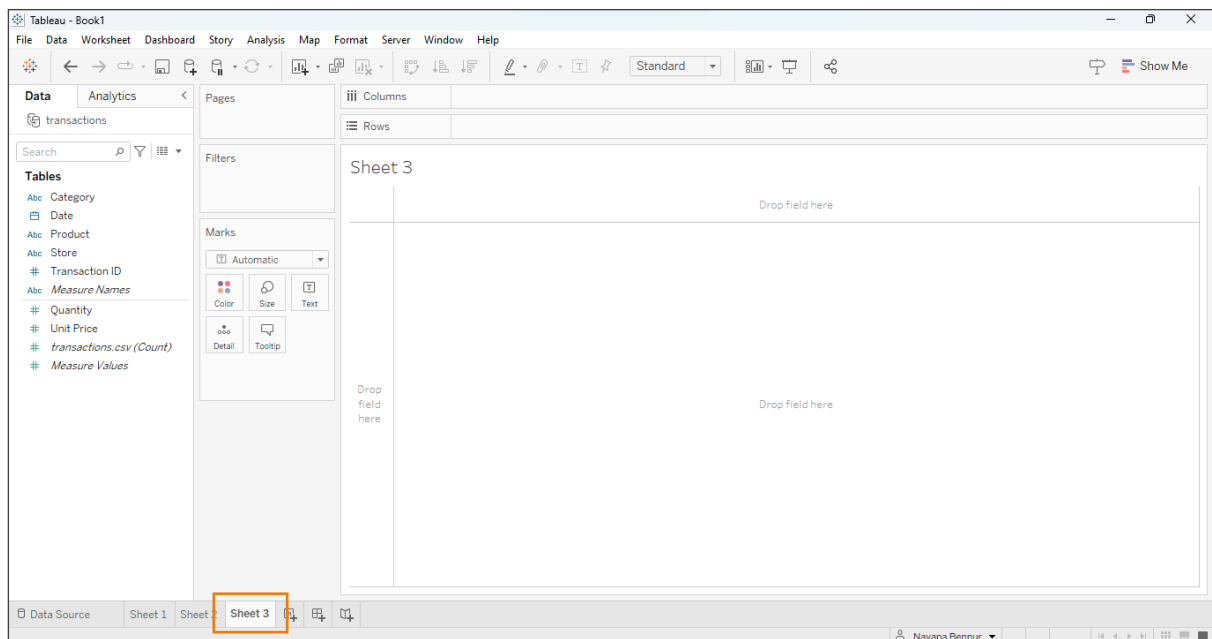


4. Advanced Analysis

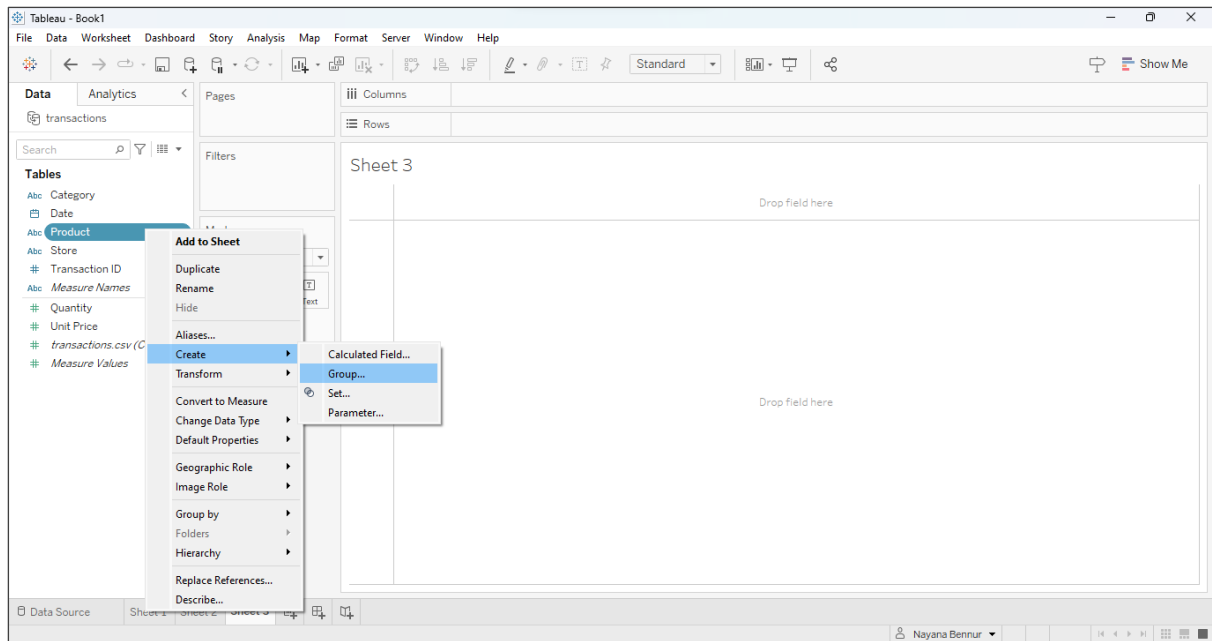
- Implement Context filters
 - Navigate to **Sheet 1**, right-click on **Category**, and select **Add to Context** to make it a context filter, providing a baseline for subsequent analysis



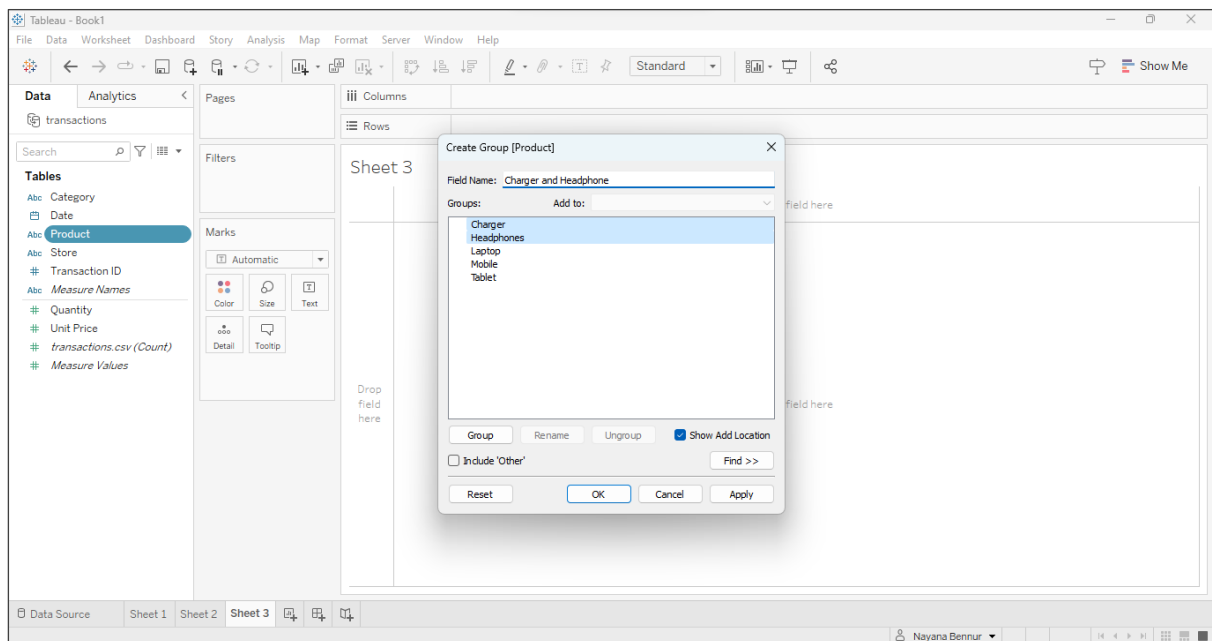
- Create Groups:
 - Create a new **Worksheet Sheet3** and identify similar products for grouping

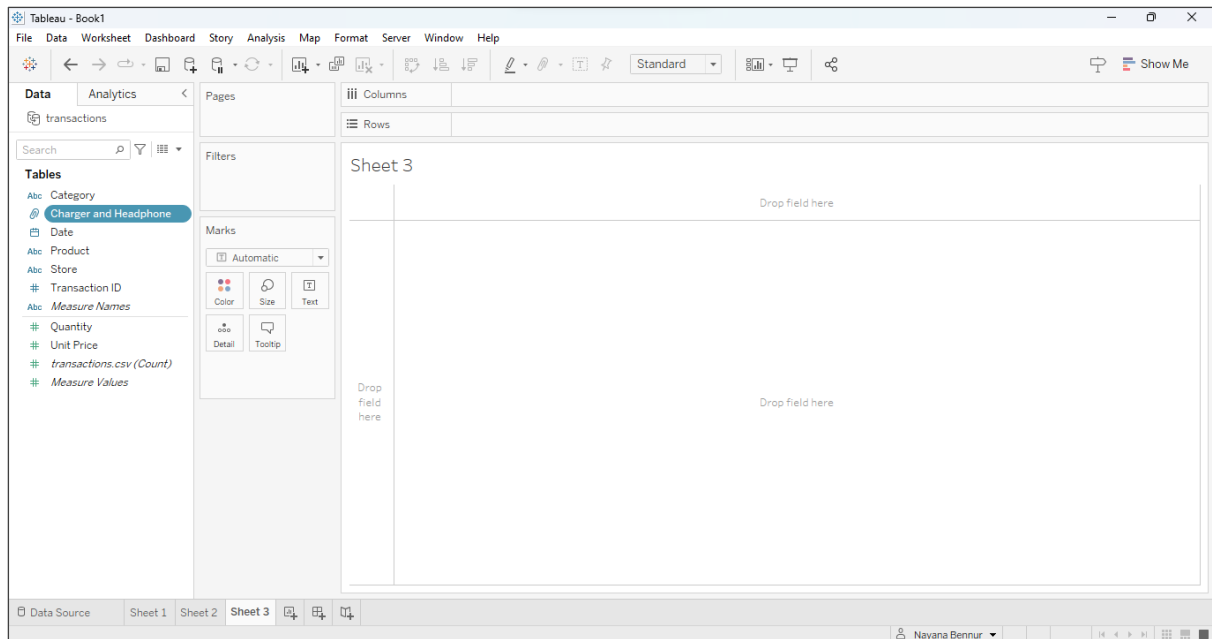


- Right-click on the **Product** field, select **Create**, and then select **Group**

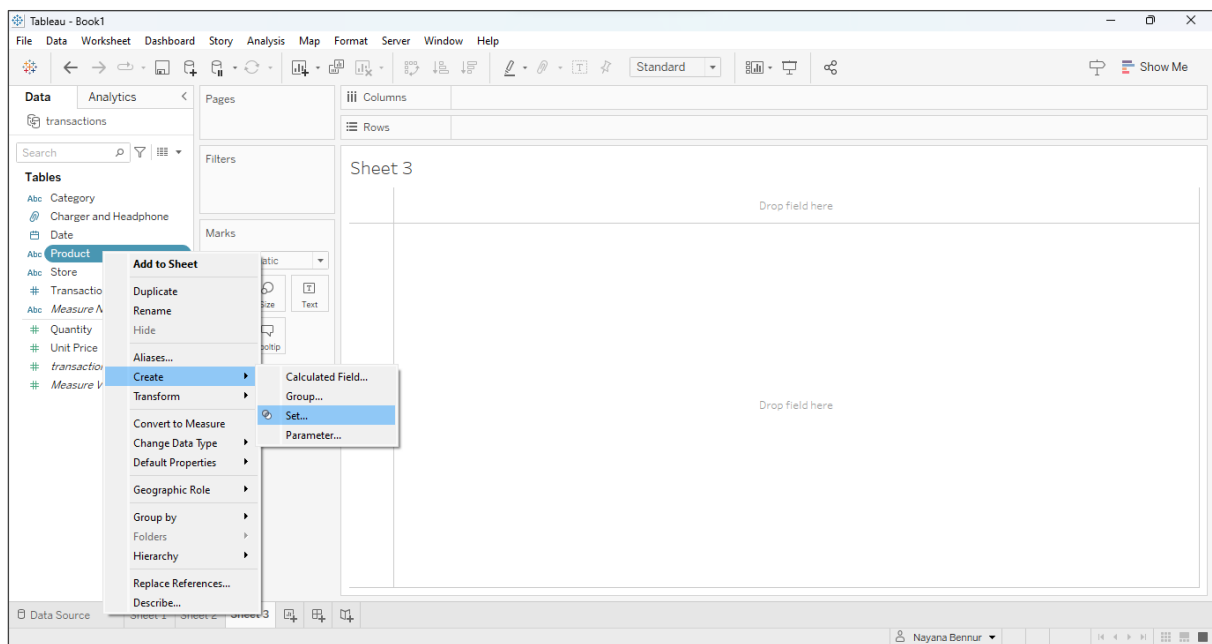


- Now, select **two products**, provide **group name** under Field Name, and click on **OK**

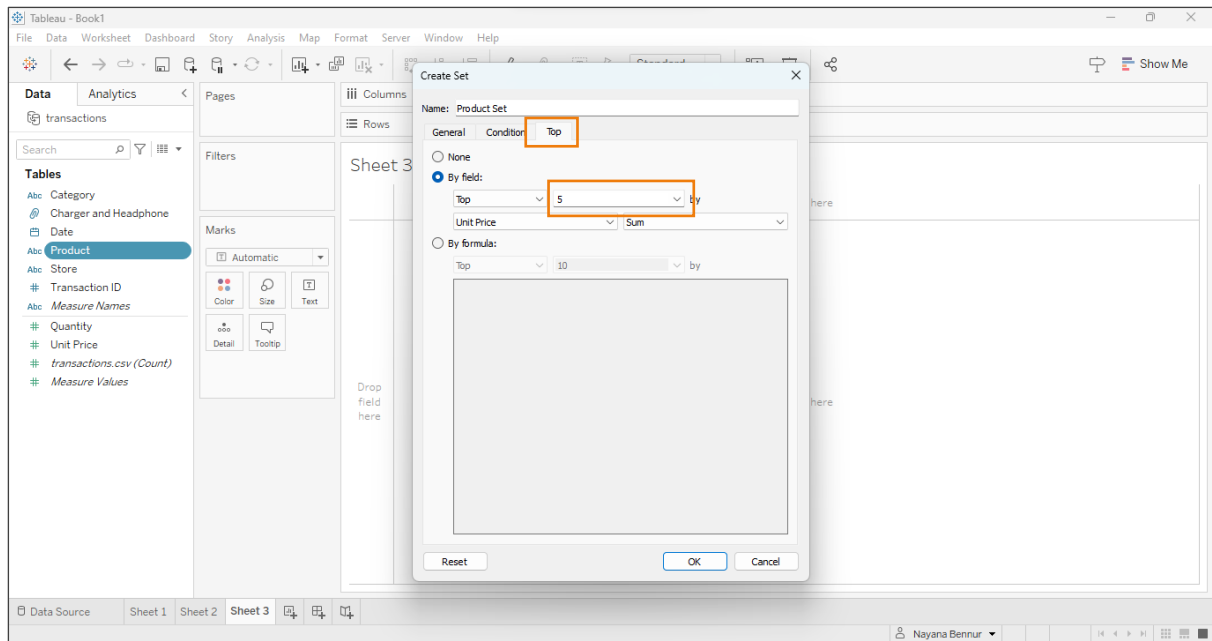




- Use Sets:
 - To identify top-performing products, right-click on the **Product** field and select **Create**, then select **Set**



- Define the set to include **top 5 products** based on unit price, click on **Top** tab, and then mention **5** under **By field** section and click on **OK**



- Drag **Product Set, Group** (for example Charger and Headphone) into the Columns and **Unit Price** to Rows

