**Lab 8: Applying Dashboard Filters and Dashboard Formatting in Power BI**

**Section 1: Dashboard Filters in Power BI**

**Introduction to Dashboard Filters**

Dashboard filters in Power BI make data exploration interactive, allowing users to isolate specific data segments. Filters can be applied at different levels—visual, page, and report—to provide targeted insights. Filters are essential for enhancing data comprehension and decision-making, enabling users to focus on what matters most.

**Step-by-Step Guide for Dashboard Filters**

**1. Slicers**

* Select **Slicer** from the **Visualizations** pane.
* Drag **Product Category** from the dataset’s fields into the slicer.
* This slicer allows users to filter sales data by category, such as Electronics, Groceries, etc.
* **Test**: Select "Electronics" to see only sales related to electronics products across all visuals.

**2. Visual Level Filters**

* Select a **Bar Chart** visualization and add it to your report.
* In the **Filters pane**, drag Sales Region as a **Visual Level Filter**.
* Choose a specific region, like "North" or "South," to limit the chart data to that region.
* **Test**: Select "North" to filter data only for sales in the North region on this chart.

**3. Page Level Filters**

* In the **Filters on this Page** section, drag **Date** into the page filter.
* Use this filter to set a date range, such as from January 2023 to March 2023.
* **Test**: Set the range to view sales data within these dates across all visuals on the page.

**4. Report Level Filters**

* In the **Filters on all Pages** section, drag **Customer Segment**.
* This filter applies globally across all report pages, allowing selection by customer segment.
* **Test**: Choose "Corporate" to filter the entire report to show only corporate customer data.

**5. Drillthrough Filters**

* Right-click on a data point, such as "Sales Region," in a chart.
* Select **Drillthrough** > **Detailed View** to view detailed sales data for that region.
* **Test**: Drill through "South" to view data specific to the South region.

**6. Top N Filters**

* Select a visualization, such as a **Column Chart**.
* Apply a **Top N Filter** by adding Sales Amount to the filters.
* Set it to display the **Top 5** highest sales values.
* **Test**: View the top five products with the highest sales amounts.

**7. Relative Date Filter**

* Add a slicer for the **Date** field and set it to **Relative Date**.
* Filter the data to show only sales from “Last Month” or “Last Year.”
* **Test**: Choose “Last Month” to display recent sales data.

**Section 2: Formatting Dashboards in Power BI**

**Introduction to Formatting Dashboards**

Formatting dashboards improves the aesthetics and clarity of data. Power BI offers various formatting options, from data labels and conditional colors to visual borders, which help to convey data insights more effectively and maintain visual consistency.

**Step-by-Step Guide for Formatting Options**

**1. Data Labels**

* Select a **Line Chart** showing sales trends over time.
* In the **Format pane**, turn **Data Labels** on.
* Customize the color, font, and position of data labels to show exact sales values.
* **Test**: Data labels will now display sales figures on each point of the trend line.

**2. Titles and Headers**

* Go to **Format pane** > **Title** and customize the title with a font style, size, and color.
* Add a relevant title such as “Sales by Region.”
* **Test**: The title helps users understand what data the visual is showing at a glance.

**3. Themes and Colors**

* Select **View** > **Themes** and apply a theme like “Corporate” for a consistent color scheme.
* Customizing themes can align dashboards with branding.
* **Test**: Themes unify the dashboard look, enhancing readability and professionalism.

**4. Gridlines and Borders**

* In a table visualization, go to **Format pane** > **Grid** and customize gridline style and thickness.
* Apply borders to visuals to define boundaries.
* **Test**: Borders make the dashboard visually organized, with clear separations between visuals.

**5. Conditional Formatting**

* For a **Table** visual, select **Sales Amount** and turn on **Conditional Formatting**.
* Apply a gradient, where lower sales are in red and higher sales in green.
* **Test**: Conditional formatting highlights high and low sales in a color-coded format.

**6. Backgrounds and Images**

* In **Format** > **Background**, set a background color or add a custom image.
* Adjust transparency to make the background subtle.
* **Test**: A light background visually separates visuals without overpowering them.

**7. Visual Borders and Shadowing**

* Enable **Borders** and **Shadow** from the Format pane for selected visuals.
* Use shadows to add depth and make visuals distinct.
* **Test**: Borders and shadows give structure, making the dashboard easy to navigate.

**Data Set**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Product Category** | **Product Name** | **Sales Region** | **Customer Segment** | **Sales Amount** | **Date** |
| Electronics | Smartphone | North | Retail | 50000 | 15-01-2023 |
| Electronics | Laptop | South | Corporate | 85000 | 18-01-2023 |
| Groceries | Rice | East | Retail | 5000 | 01-02-2023 |
| Beverages | Green Tea | West | Retail | 3000 | 15-02-2023 |
| Groceries | Sugar | North | Corporate | 2000 | 10-03-2023 |
| Electronics | Tablet | East | Retail | 15000 | 20-03-2023 |
| Appliances | Refrigerator | South | Corporate | 55000 | 02-04-2023 |
| Beverages | Coffee | West | Retail | 4500 | 15-04-2023 |
| Groceries | Flour | North | Retail | 2000 | 10-05-2023 |
| Appliances | Washing Machine | South | Corporate | 65000 | 01-06-2023 |