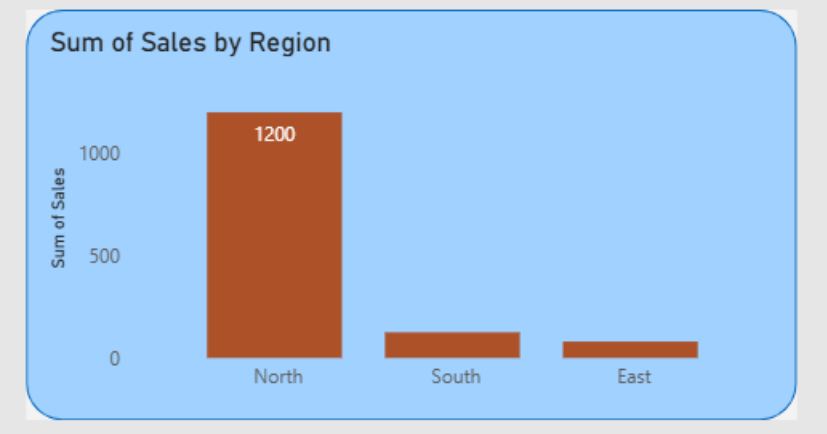
Lesson 7

Topic: Project 1 - Basic Sales Dashboard
Prerequisites: Download Retail_sales_data.xlsx file

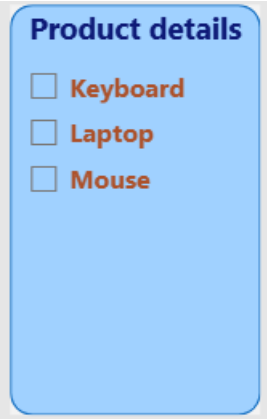
1. Import Retail_Sales_Data.xlsx into Power BI.

   Home>Get Data>Excel Workbook and select the file Retail_Sales_Data.xlsx from the downloaded folder.

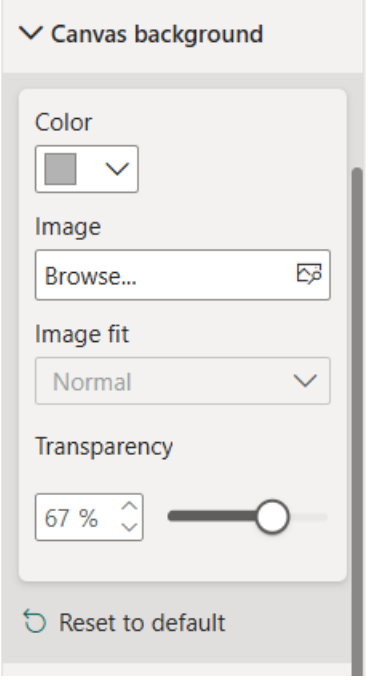
2. Create a table visual showing Region and Sales.



3. Add a slicer for Product.

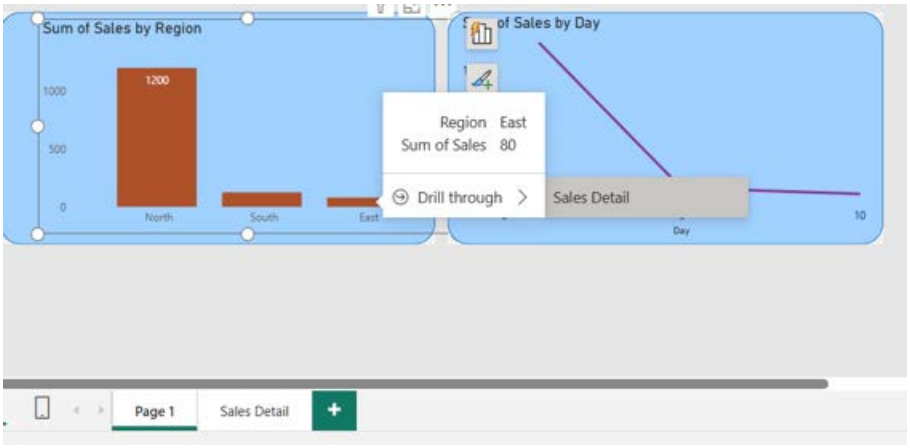


4. Format the dashboard theme to "Dark Mode."



5. What is the purpose of the "Data/Model" view in Power BI?
    - Data view allows you to inspect and modify data within individual tables, while the Model view provides a visual canvas to create and manage relationships between tables, ensuring your data model is accurate, efficient, and easy to understand for report creation.
6. Build a dashboard with:
    - A bar chart of Sales by Region.
    - A line chart of Sales over Date.
    - A card showing total Profit.

7. Add a drill-through filter from Region to a detailed sales page.



8. Use conditional formatting to highlight high-profit regions.

Month	Day	Sum of Sales
January	5	18775
January	10	15535
January	1	14975
January	4	10160
January	3	7060
January	2	5140
January	9	2650
January	7	1200
January	6	150
Total		**75645**

9. Publish the dashboard to Power BI Service.
    - To publish from Power BI Desktop to the Power BI service, open the report, click the File menu, then Publish, and select Publish to Power BI. We need to sign in to our account, select a destination workspace, and then click Select to upload the report to the Power BI service, where we can then view it in our browser.
10. Share the report with a colleague (simulate steps).

- To share a Power BI report with a colleague, we must first publish the report from Power BI Desktop to the Power BI service. Once published, we can share the report by selecting the Share button from the report itself or its workspace and then adding the colleague's email address (for example: israr@gmail.com), or copying and sending a shareable link. Alternatively, we can embed the report in Microsoft Teams or SharePoint, or publish it to the web for public access.

11. Add a custom "Sales Growth %" measure without DAX (use Quick Measures).
    - Quick Measure generated as following:

```
``` Sum of Sales MoM% 2 =

VAR __PREV_MONTH = CALCULATE(SUM('salesData2'[Sales]), DATEADD('DateTable'[Date], -1, MONTH))
RETURN
    DIVIDE(SUM('salesData2'[Sales]) - __PREV_MONTH, __PREV_MONTH)
        ```
```

12. Optimize the dataset for faster refresh (e.g., remove unused columns).
    - Remove Unused Columns:
    - In Power Query Editor, identify and remove any columns that are not used in your reports, measures, or relationships. This directly reduces the amount of data imported and processed during refresh.
    - Filter Unnecessary Rows:
    - Apply filters in Power Query Editor to limit the rows loaded into your model. For instance, if you only need data from the last two years, filter out older records at the source.
    - Summarize or Aggregate Data:
    - If detailed transactional data is not required for your analysis, pre-aggregate data in Power Query or at the source to reduce the number of rows loaded into your fact tables.
    - Optimize Column Data Types:
    - Ensure columns have the most efficient data type. For example, convert text-based codes to integers if possible, and use appropriate numeric types (e.g., Whole Number instead of Decimal Number if no decimals are needed).

13. Troubleshoot: Slicers not affecting all visuals—how to fix?

- To fix a Power BI slicer not affecting all visuals, first check and correct table relationships in your data model to ensure they are properly linked to the slicer's data. If the data model is correct, use the Edit interactions feature under the Format tab to set the desired interaction between the slicer and other visuals, choosing Filter, Highlight, or None for each visual to control its response to slicer selections.

14. Embed the dashboard into a PowerPoint presentation.
    - To embed a live Power BI report or individual visual in PowerPoint, install the Power BI add-in, navigate to your report in the Power BI service, get the report's URL, then paste the URL into the add-in on your desired slide in PowerPoint and click Insert. You can also use the "Export to PowerPoint" option in the Power BI service to create a new presentation with your live data embedded automatically.
15. Set up a scheduled refresh for the dataset in Power BI Service.
    - To set up scheduled refresh in Power BI Service, go to your Workspace, select the desired Semantic Model, then click Refresh > Schedule refresh. Turn on the schedule, set the frequency (daily or weekly), specify a time zone and refresh times, and optionally add notifications for failures. Finally, click Apply to enable the scheduled refresh.