

DAYANANDA SAGAR COLLEGE OF ARTS, SCIENCE AND COMMERCE

DEPARTMENT OF COMPUTER APPLICATIONS-BCA



Data Analytics Lab Manual-Part C

V Semester BCA

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Part- C: Power BI

1. Introduction to Power BI- Get Started with Power BI - Sign up for Power BI - Overview: Power BI data sources - Connect to a SaaS solution - Upload a local CSV file - Connect to Excel data that can be refreshed - Create a Report with Visualizations
2. Using visualizations - Create a new report - Create and arrange visualizations - Format a visualization - Use text, map, and gauge visualizations and save a report - Use a slicer to filter visualizations - Sort, copy, and paste visualizations
3. Modify and Print a Report - Rename and delete report pages - Add a filter to a page or report Set visualization interactions - Send a report to PowerPoint
4. Create a Dashboard - Create and manage dashboards - Pin a report tile to a dashboard - Pin a live report page to a dashboard - Pin a tile from another dashboard - Pin an Excel element to a dashboard - Add a tile to a dashboard

1. Introduction to PowerBI-Get Started with PowerBI-Sign up for PowerBI-Overview:PowerBI data sources-Connect-to-a-SaaS solution-Upload a local CSV file-Connect to Excel data that can be refreshed-Create a Report with Visualizations

Introduction to PowerBI

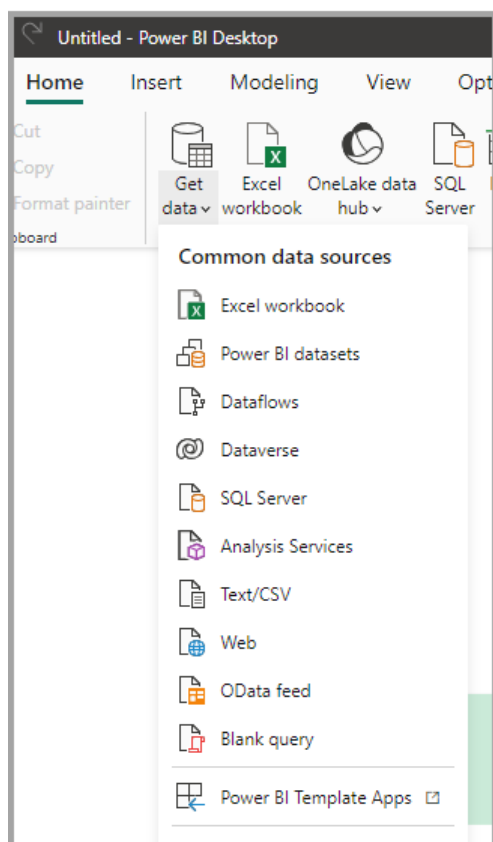
Power BI is a Data Visualization and Business Intelligence tool that converts data from different data sources to interactive dashboards and BI reports. Power BI suite provides multiple software, connector, and services - Power BI desktop, Power BI service based on SaaS, and mobile Power BI apps available for different platforms. These set of services are used by business users to consume data and build BI reports.

Connect-to-a-SaaS solution

Power BI desktop app is used to create reports, while Power BI Services (Software as a Service - SaaS) is used to publish the reports, and Power BI mobile app is used to view the reports and dashboards. Power BI Desktop is available in both 32-bit and 64-bit versions.

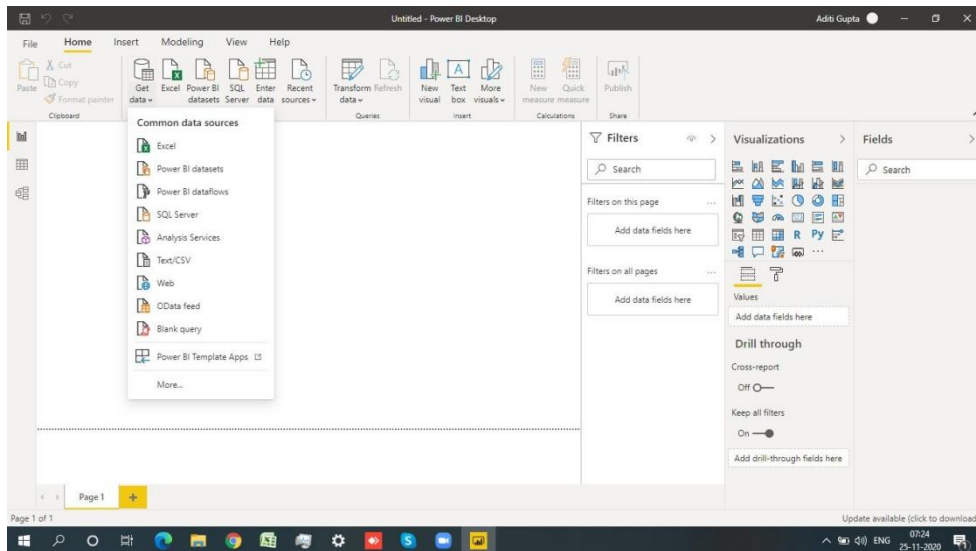
Power BI data sources:

To see available data sources, in the **Home** group of the Power BI Desktop ribbon, select the **Get data** button label or down arrow to open the **Common data sources** list. If the data source you want isn't listed under **Common data sources**, select **More** to open the **Get Data** dialog box.

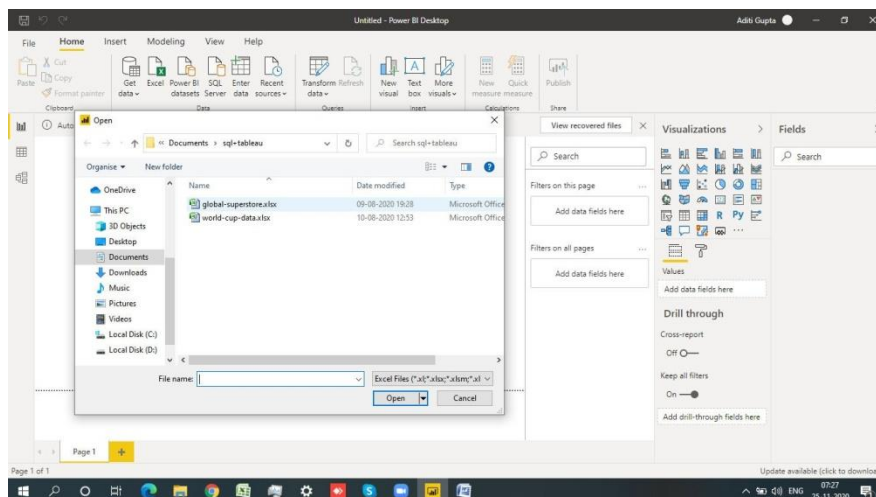


Connect to Excel data

Click on Get data -> Choose File



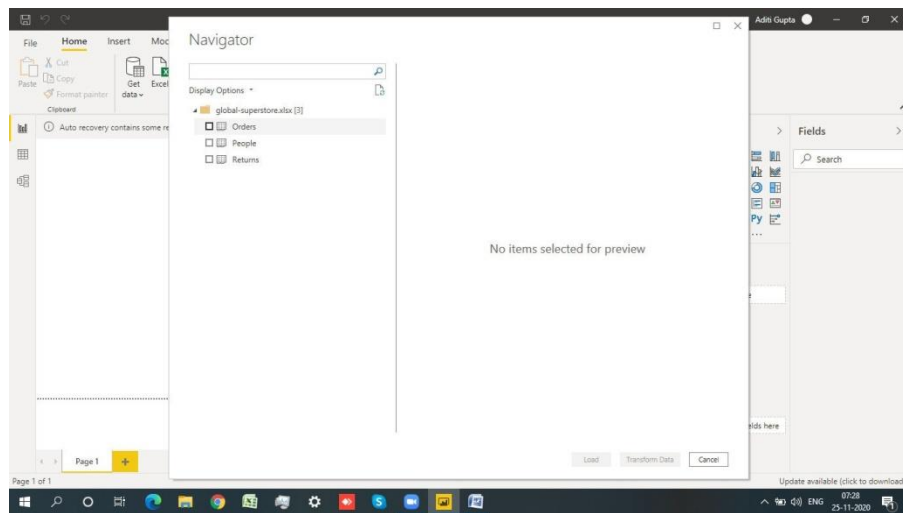
Select The Appropriate sheet



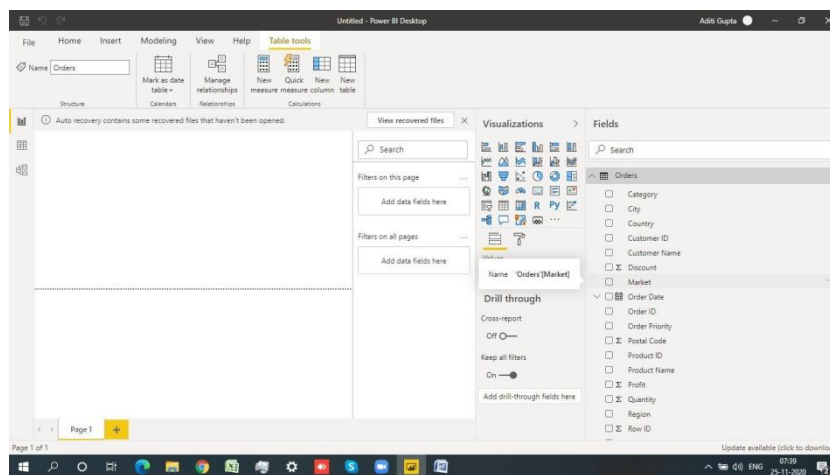
Click On Load or Transform Data

Load – Click on Load If the data is perfect, no change required or no calculated field required on the top of data.

Transform Data – If the data is incomplete you want to add some column or remove any field, basically for the formatting of data click on transform data and apply the changes you need then click on close & apply.



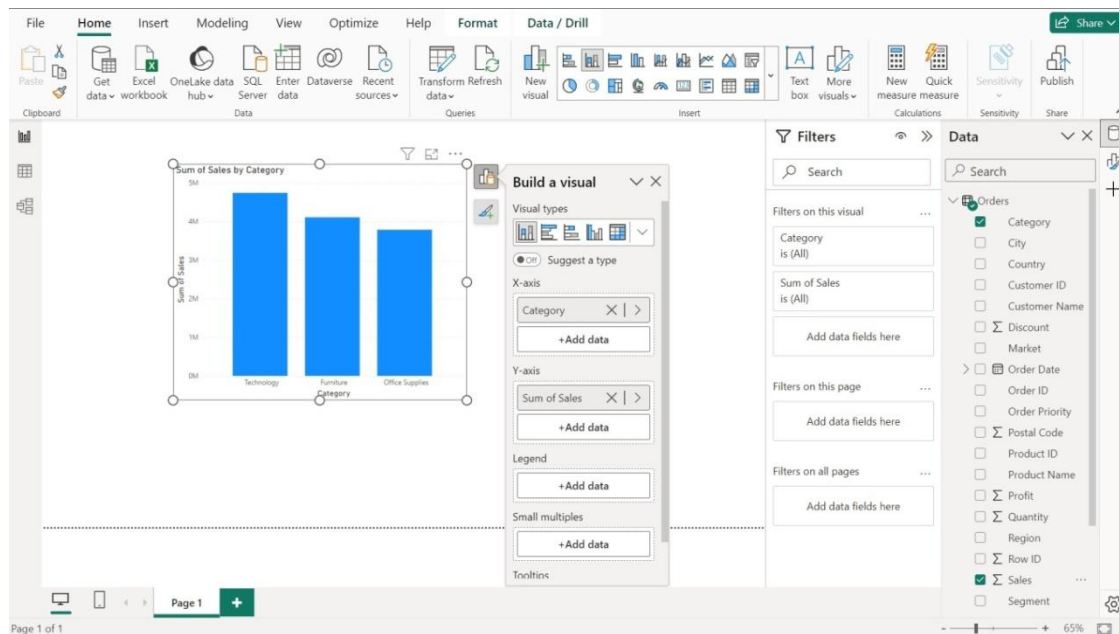
It will load automatically and visible in the fields section.



2. Using visualizations-Create a new report-Create and arrange visualizations-Format a visualization-Use text, map, and gauge visualizations and save a report-Use a slicer to filter visualizations-Sort, copy, and paste visualizations

Create a new report: Create a new report: Power BI offers two main tools for creating reports: Power BI Desktop and Power BI Service

Open Power BI Desktop->Select Visual->Add data fields (from Right corner)

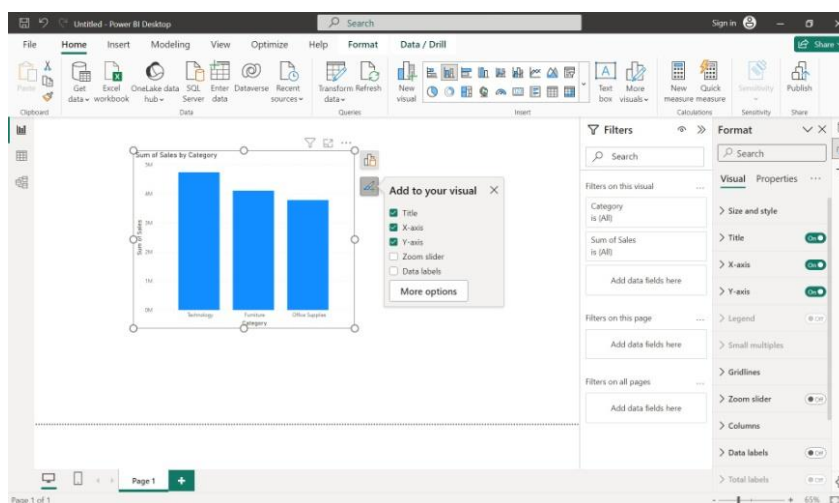


Drag and drop the data fields to the canvas to create visualization.

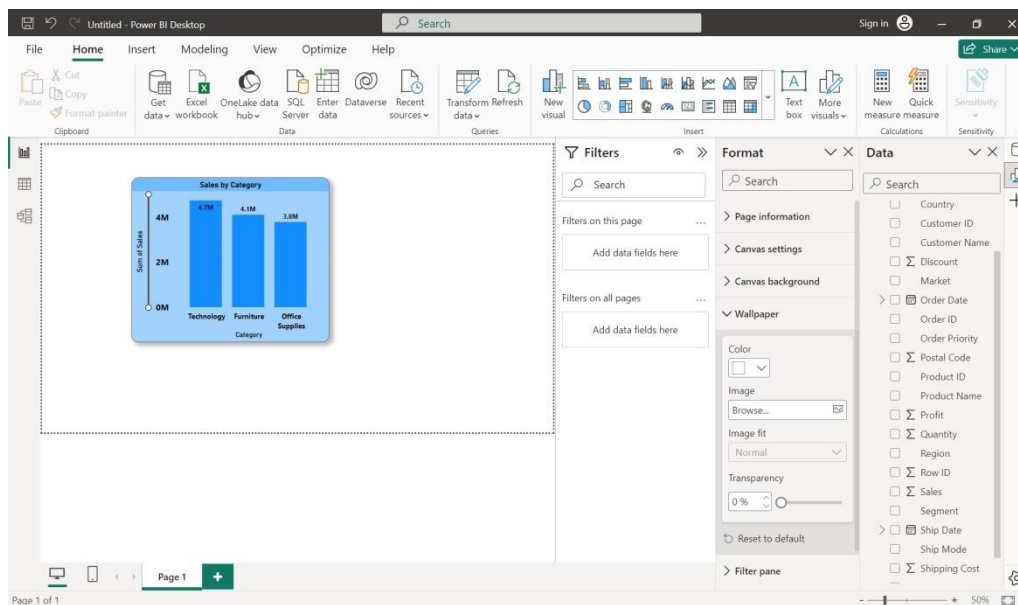
Report consists of multiple visualization including bar chart, pie chart, map, gauge, etc...

Format a visualization:

Select visual->click on the format option->More options

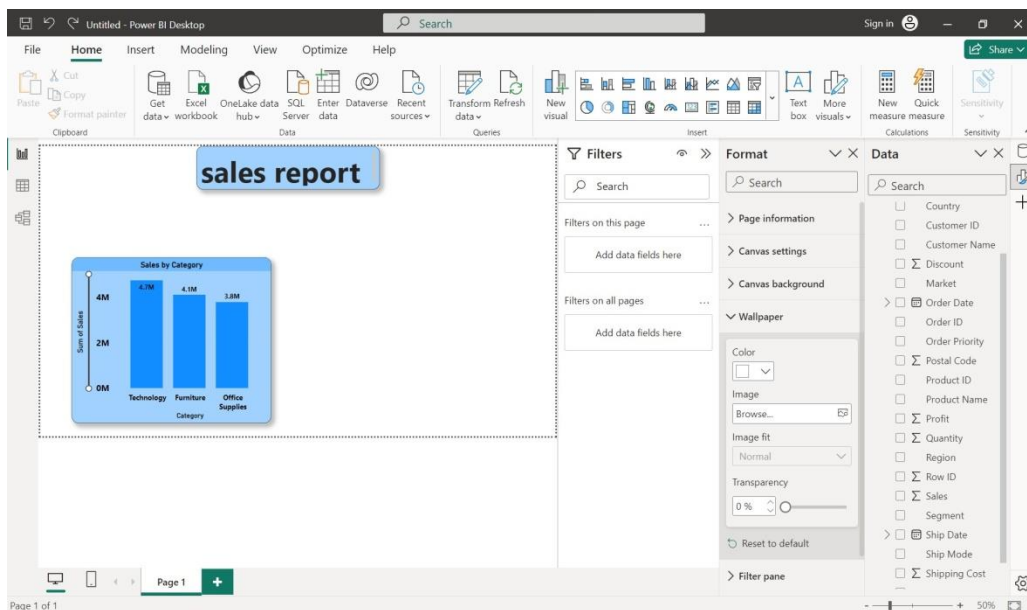


Format the visual using formatting pane as per your interest

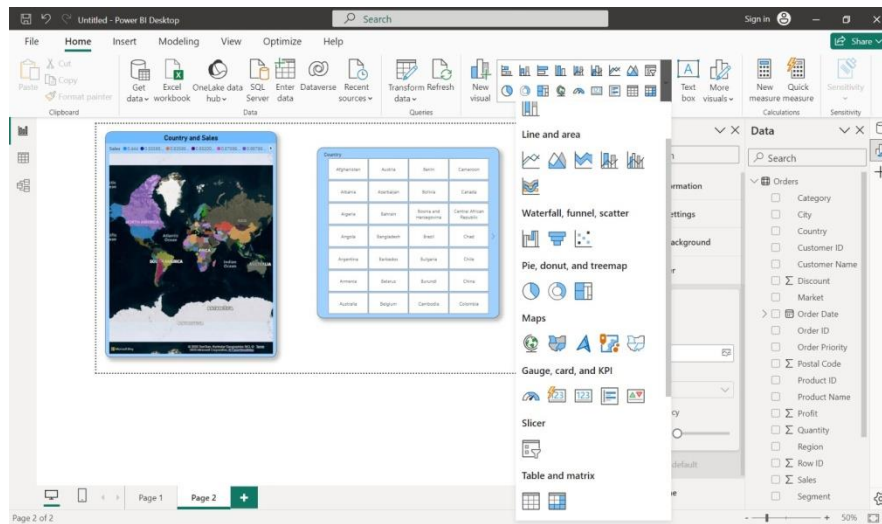


Text:- Text can be used to tell a story within your Power BI report. By combining text with visuals, you can create an informative report.

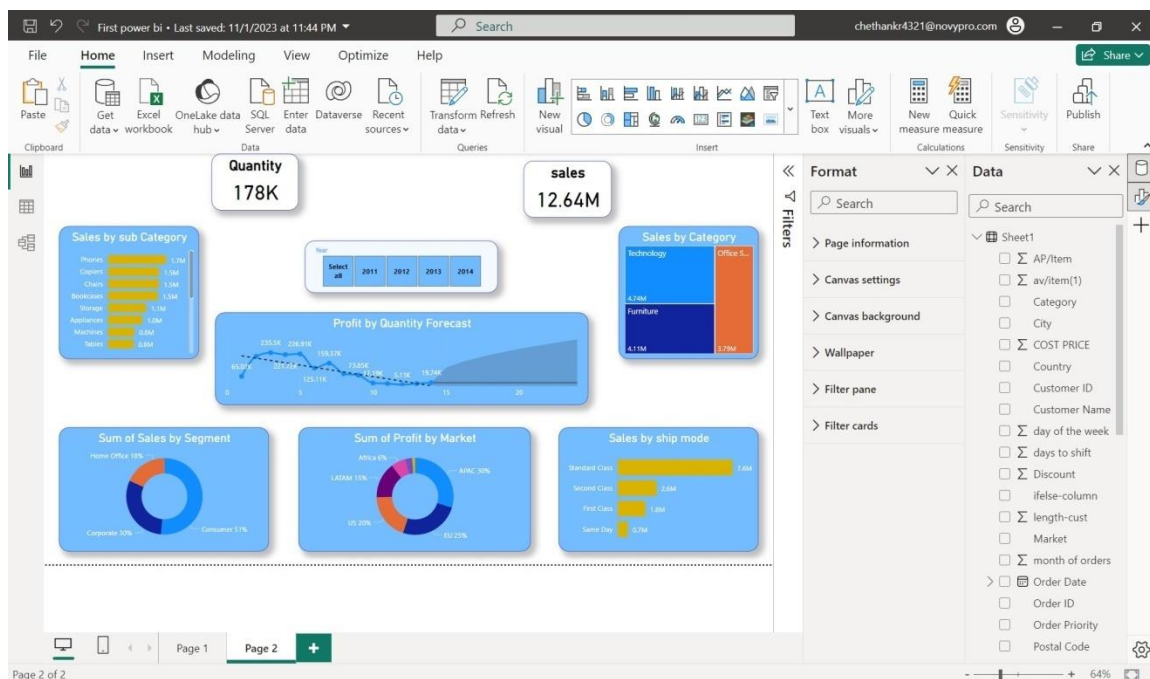
Open Power BI desktop->Text box->Name the Report



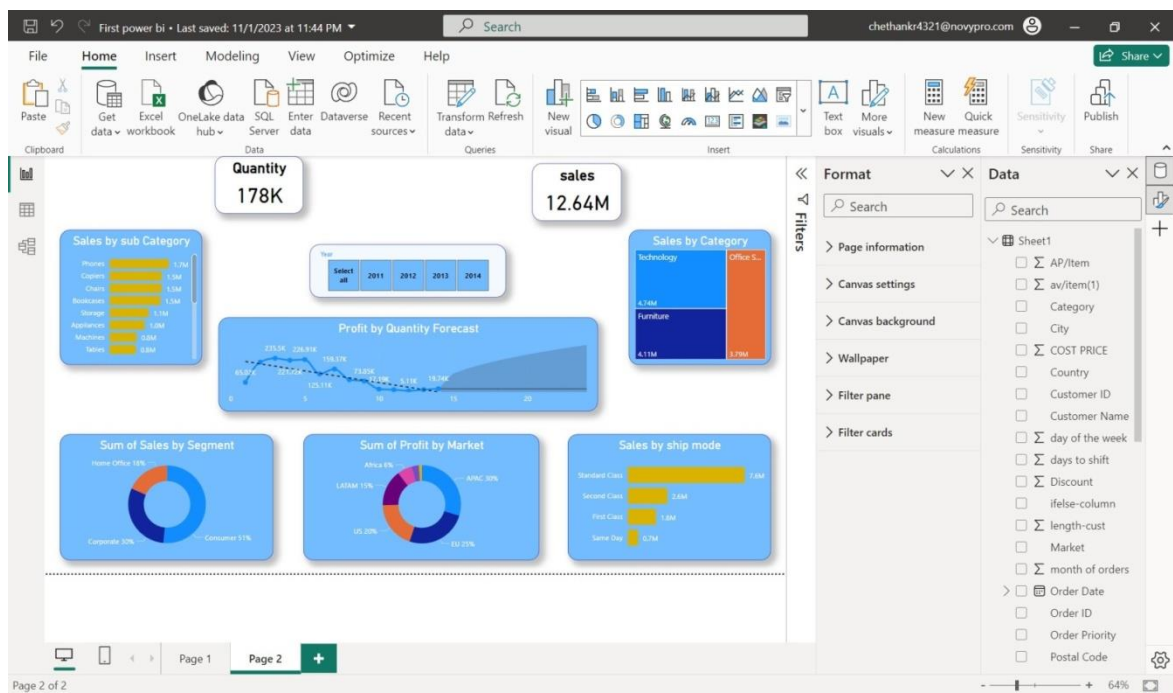
Create Map Visual: Maps are an excellent way to visualize data that has a geographic component. They allow you to represent data in the context of locations, regions, or points on a map, making it easier to understand spatial patterns and relationships you can apply a filter to show data for a particular city, state, or country, and the map visual will adjust to display data only within theselected location.



Arrange the visual: The arrangement of visuals in a Power BI reportplays a crucial role in effectively communicating the insights and information to the report's audience. A well-organized layout can make it easier for users to understand the data, draw insights, and make informed decisions.



How to save Report: File->Save as->Select folder->save



3. Modify and Print a Report-Rename and delete report pages-Add a filter to a page or report Set visualization interactions-Send a report to PowerPoint

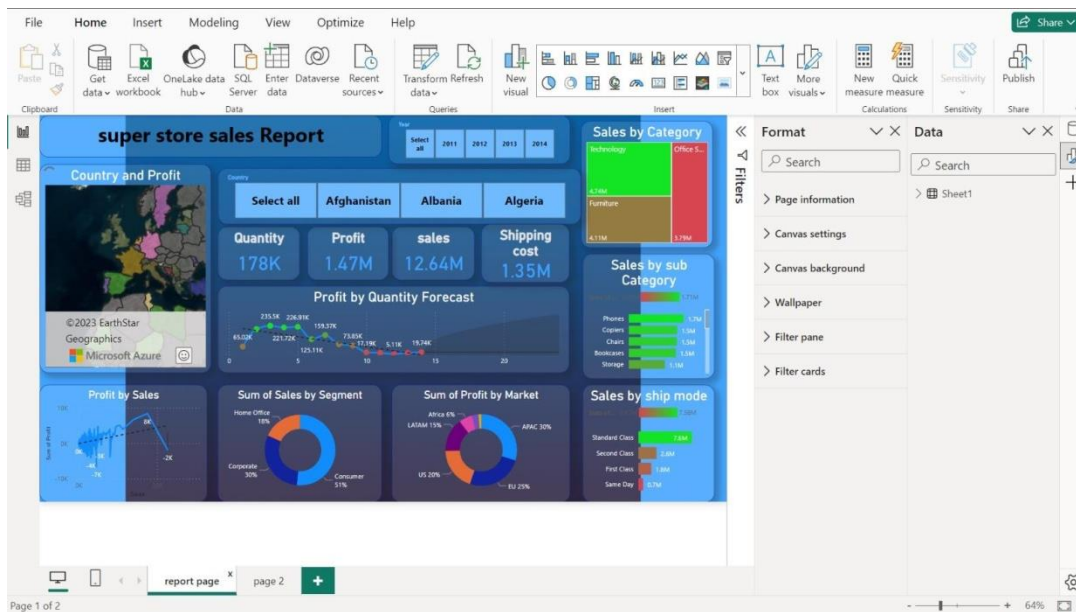
Modify the report: You can change the data source by going to the "Home" tab and selecting "Edit Queries." This allows you to modify the data source, apply transformations, and load new data.

Transform data->power Query editor->right click on any column->remove /duplicate column

Rename: Open Power BI Report->right click on page->rename page

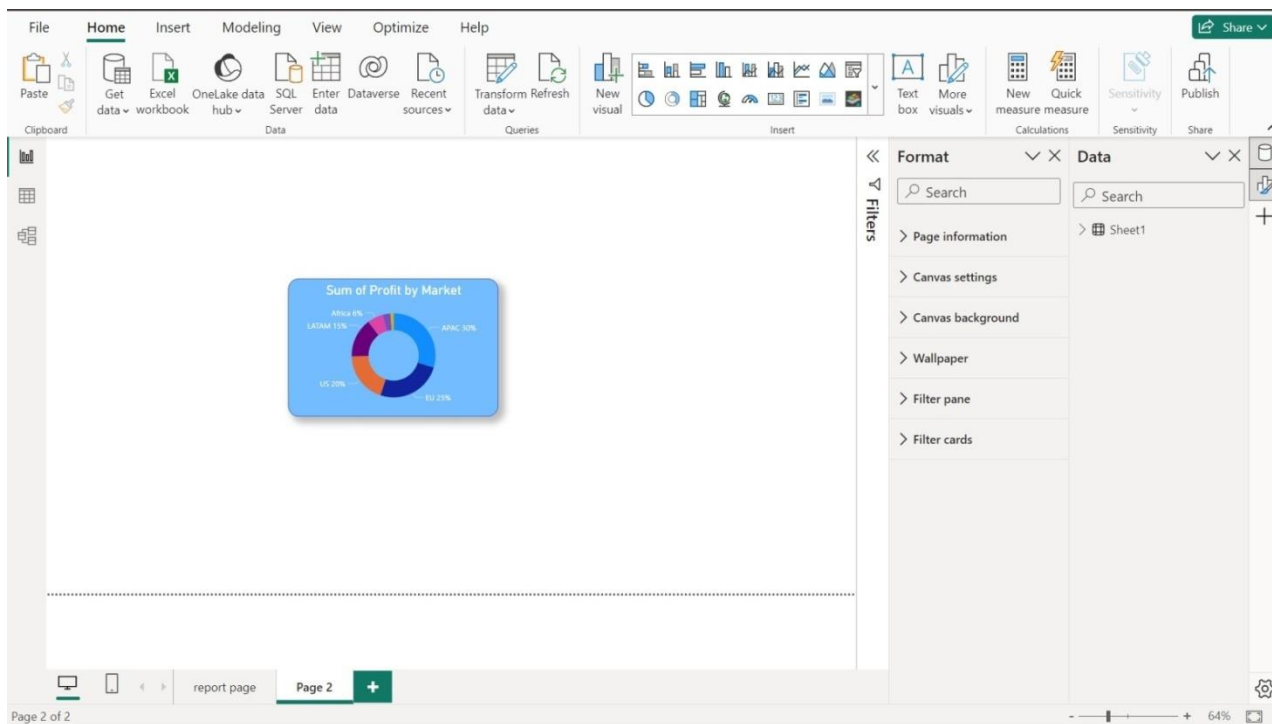
The image displays two screenshots of the Microsoft Power BI interface. The top screenshot shows the Power Query Editor window. The ribbon includes tabs for File, Home, Transform, Add Column, View, Tools, and Help. The main area shows a table with columns: Row ID, Order ID, Order Date, Ship Date, and Ship Mode. A context menu is open over the 'Order ID' column, showing options like 'Copy', 'Remove', 'Duplicate Column', 'Add Column From Examples...', 'Remove Duplicates', 'Remove Errors', 'Change Type', 'Transform', 'Replace Values...', 'Replace Errors...', 'Group By...', 'Fill', 'Unpivot Columns', 'Unpivot Other Columns', 'Unpivot Only Selected Columns', 'Rename...', 'Move', 'Drill Down', and 'Add as New Query'. The bottom screenshot shows a report page titled 'Country and Profit'. It features a map of Europe, a table with columns for Quantity, Profit, sales, and Shipping cost, and several charts including 'Profit by Quantity Forecast', 'Sum of Sales by Segment', 'Sum of Profit by Market', 'Sales by sub Category', and 'Sales by ship mode'. A context menu is open over the report page, showing options like 'Duplicate Page', 'Rename Page', 'Delete Page', and 'Hide Page'.

Delete :open Power Bi Report->right click on page->delete page



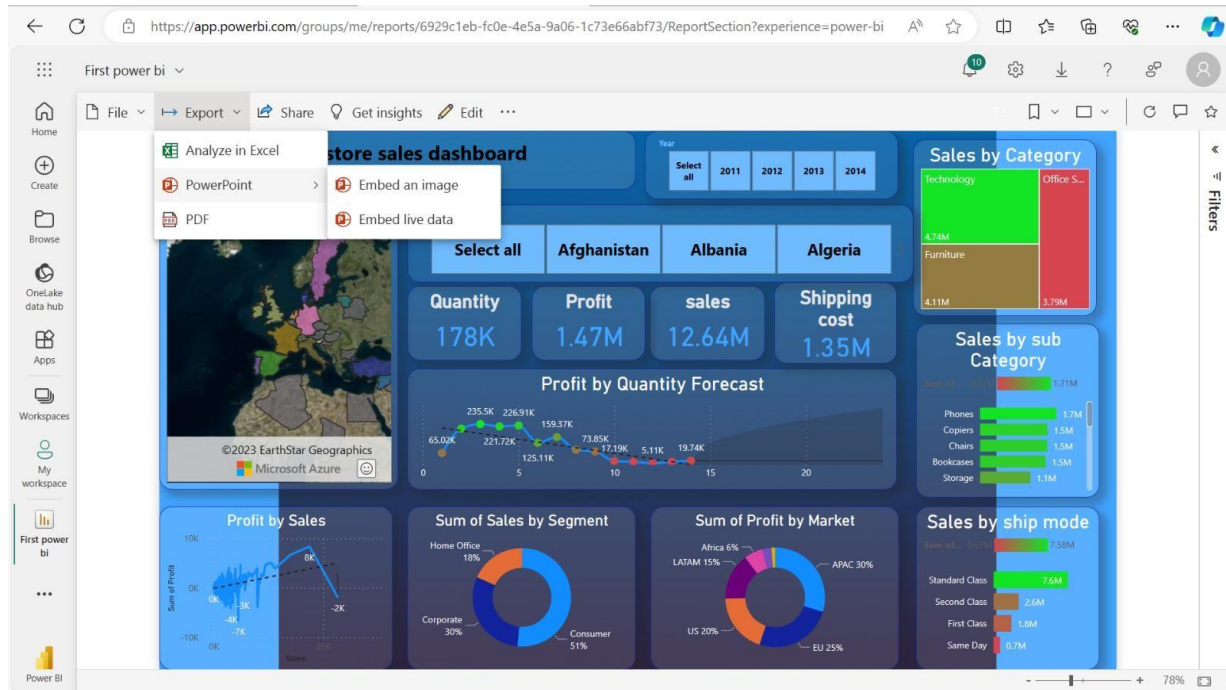
Page-3 is deleted from the report.

Copy and paste: use “**ctrl c**” for copy and “**ctrl v**” for paste from onepage to another page



Donut chart is copied from **report** page to **page 2** using standard copy,paste functionality

Report to PowerPoint: create Power BI official account->login using chrome->my workspace->select and open the report->export->powerpoint

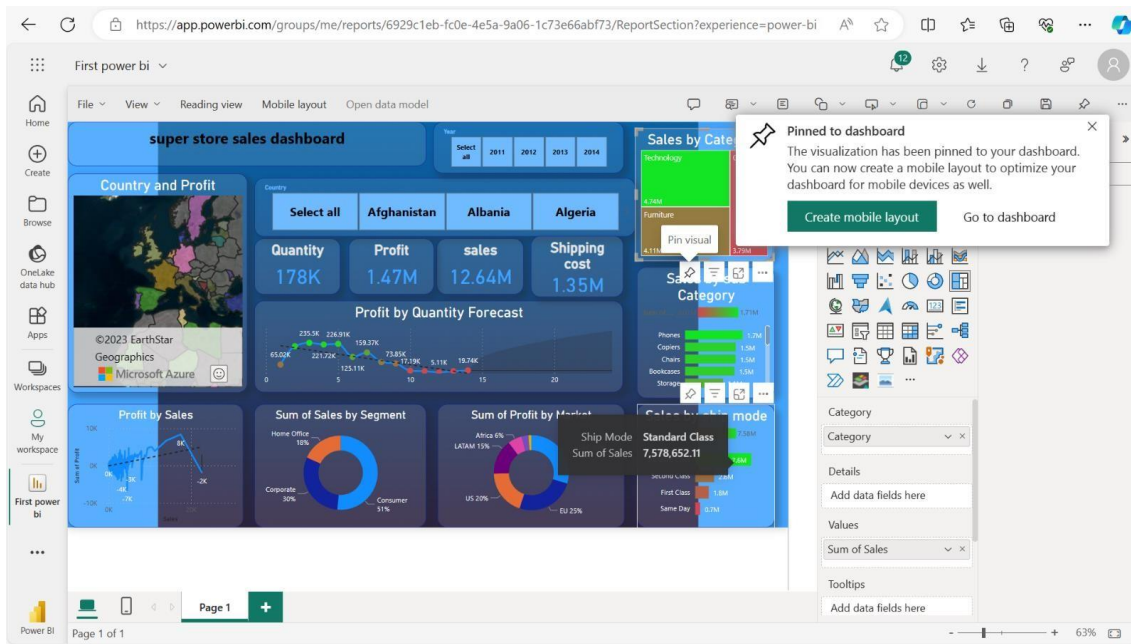


4. Create a Dashboard-Create and manage dashboards-Pin a report tile to a dashboard-Pin a live report page to a dashboard-Pin a tile from another dashboard-Pin an Excel element to a dashboard-Add a tile to a dashboard

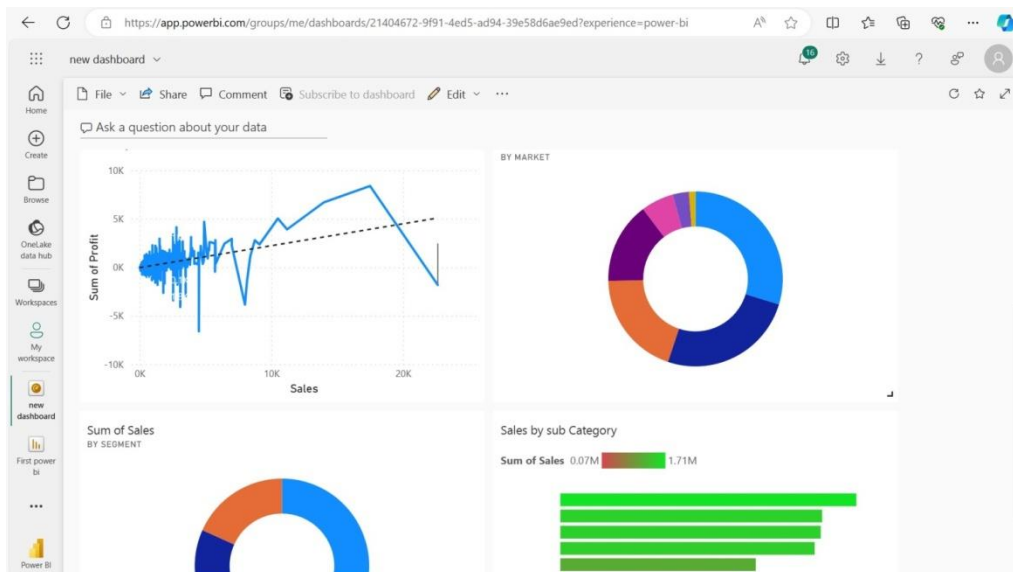
Creating dashboard:

Open Power BI Service->my workspace->open

Report->edit->click on the visual/tile->pin->create new dashboard->Pin->go to dashboard



Dashboard:- Multiple tiles/visual are pinned to dashboard



Manage Dashboard:-

Edit the dashboard or change the theme of the Dashboard, pin themultiple visuals that gives meaningful insights to take decision.