Introduction to PowerBI
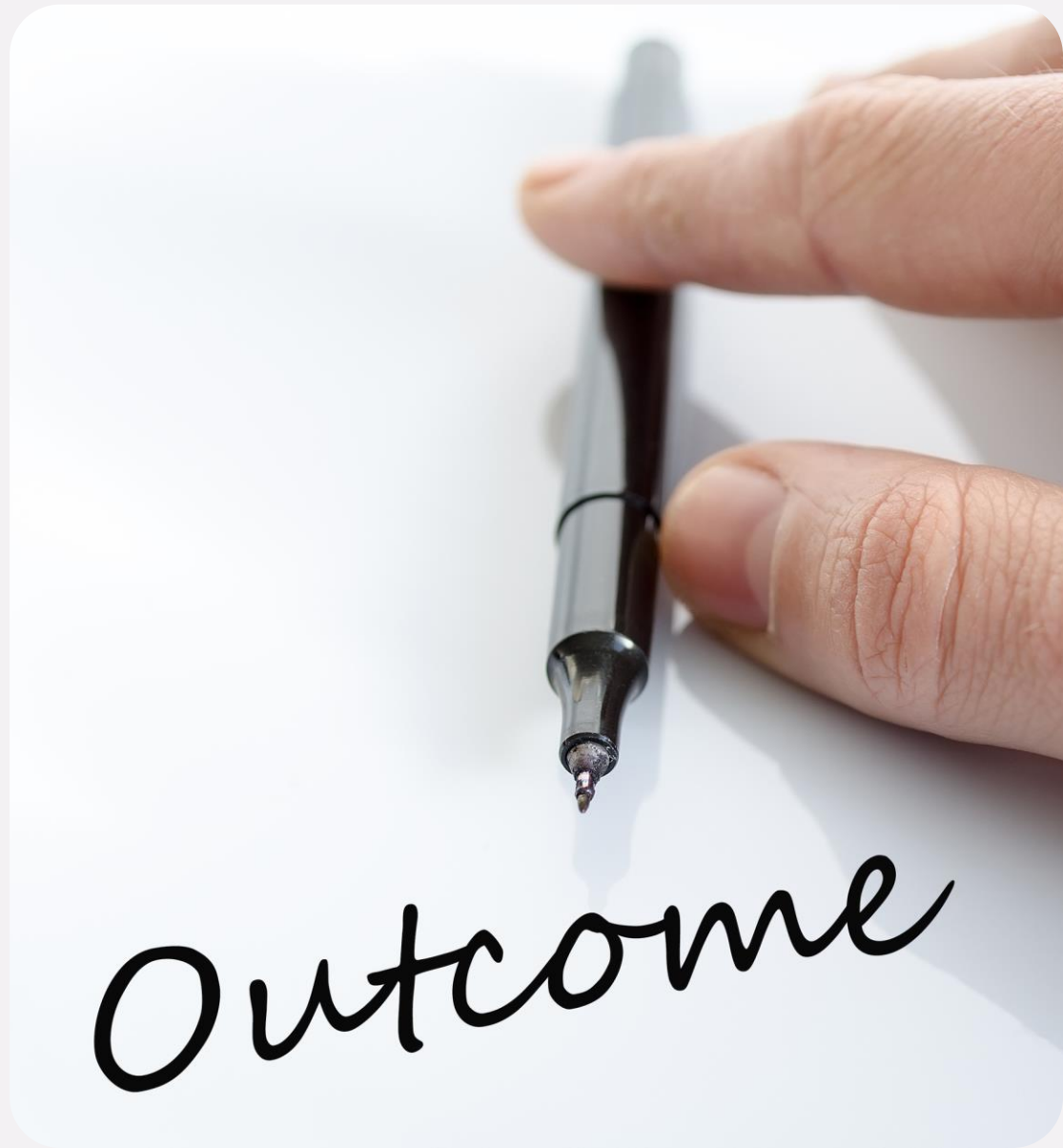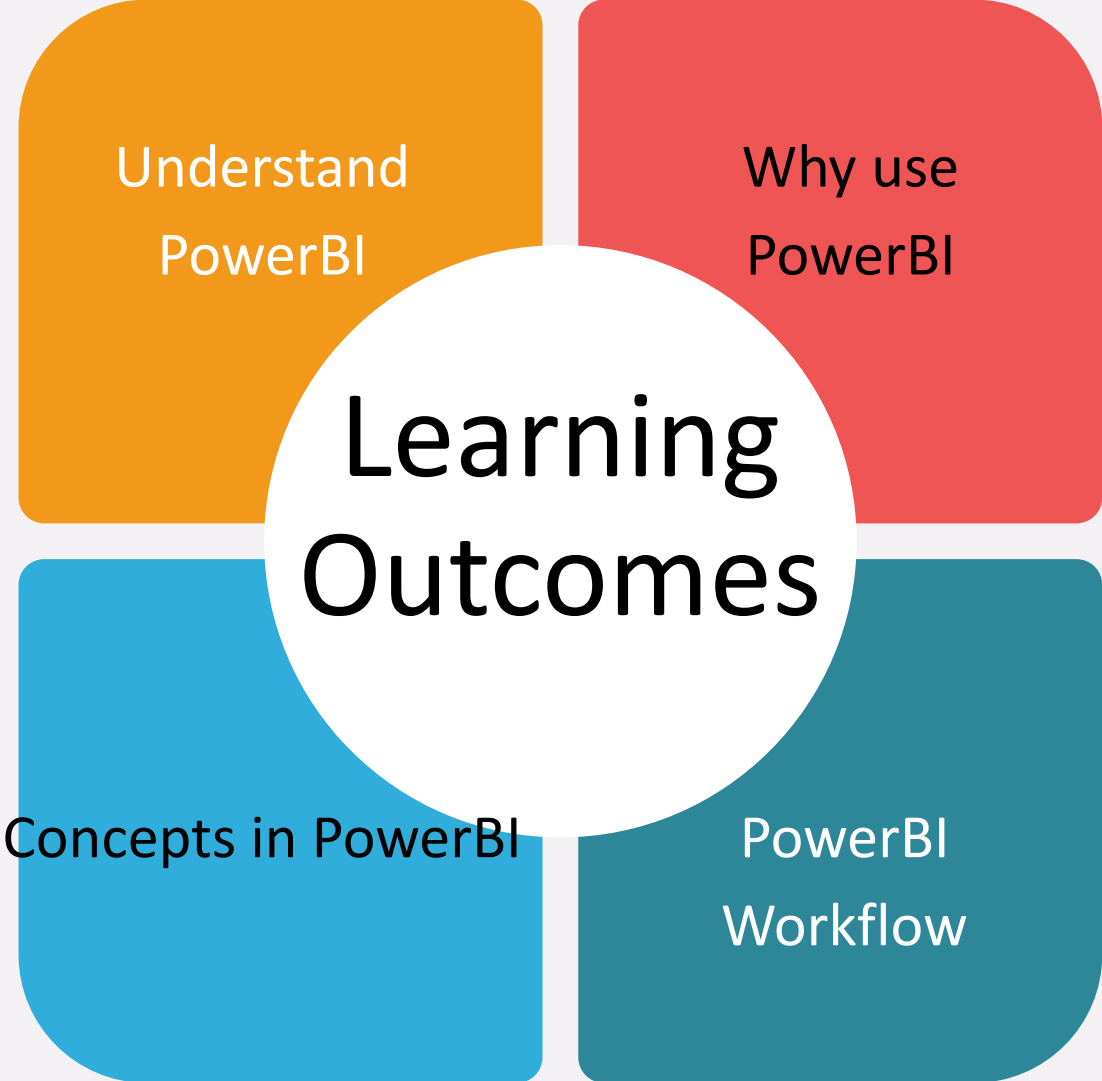
"Data is the new oil fueling businesses to drive success and growth."
-John Smith

PRESENTED BY: TEMITOPE WAHEEB

6/26/2024

POWER BI TRAINING

Learning Outcomes

Understand PowerBI

Why use PowerBI

Concepts in PowerBI

PowerBI Workflow

Outcome

What is PowerBI?

PowerBI is a powerful business intelligence and data visualization tool developed by Microsoft.

01

It allows users to connect to various data sources, transform, clean and create interactive reports.

02

PowerBI comes in different versions: PowerBI Desktop, PowerBI Service, and PowerBI Mobile.

03

Why use PowerBI?

Seamless Data Integration

Ability to consolidate data from multiple systems.

Scalable and Flexible

Can handle large datasets making it suitable for organizations of all sizes.

Collaboration and Sharing

Ability to share your reports and dashboards with colleagues

Ease of Use

User-friendly interface and intuitive drag-and-drop functionality.

Continuous Updates

Constant features update which access to the latest tools and capabilities

Key Concepts in PowerBI

Data Connection

This allow to connect to range of data sources, including Excel, databases, cloud services, and more.

Data modeling

To create relationships between different data tables, enabling complex data analysis.

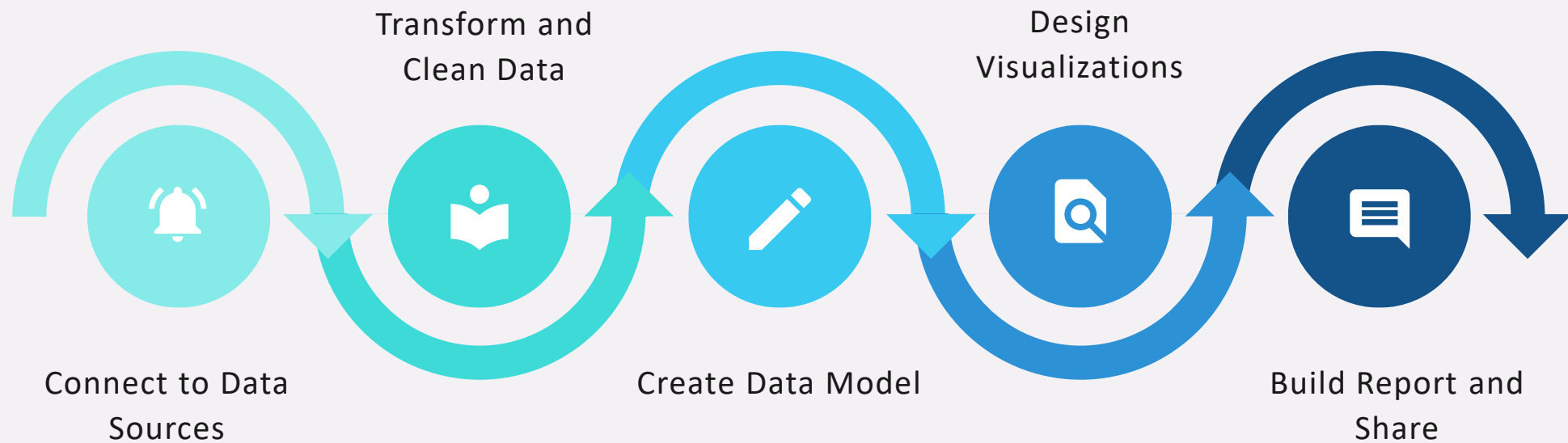### Measures and Calculated Columns

Creating custom calculations and metrics within data model.

Visualization

Using visuals such as charts, graphs, maps, and cards, to effectively present data insights.

PowerBI Workflow

Connect to Data Sources

Transform and Clean Data

Create Data Model

Design Visualizations

Build Report and Share

Key PowerBI Terms

Tables

Tables are the fundamental building blocks of your data model which represents a collection of data, organized into rows and columns,

Type of Tables

✓ Fact Table

Fact tables contain the primary measures or metrics you want to analyze, such as sales, revenue, or production data.

✓ Dimensional Table

Dimension tables provide the context and attributes for the facts, such as product information, customer details, or time data.

Keys

Keys are the unique identifiers that establish relationships between tables in your PowerBI data model.

Type of Keys

✓ Primary Key

A primary key is a column that uniquely identifies each row in a table. Used to establish relationships between tables and ensure data integrity.

✓ Foreign Key

A foreign key is a column in one table that references the primary key of another table.
It is used to effectively link to the primary keys in another table.
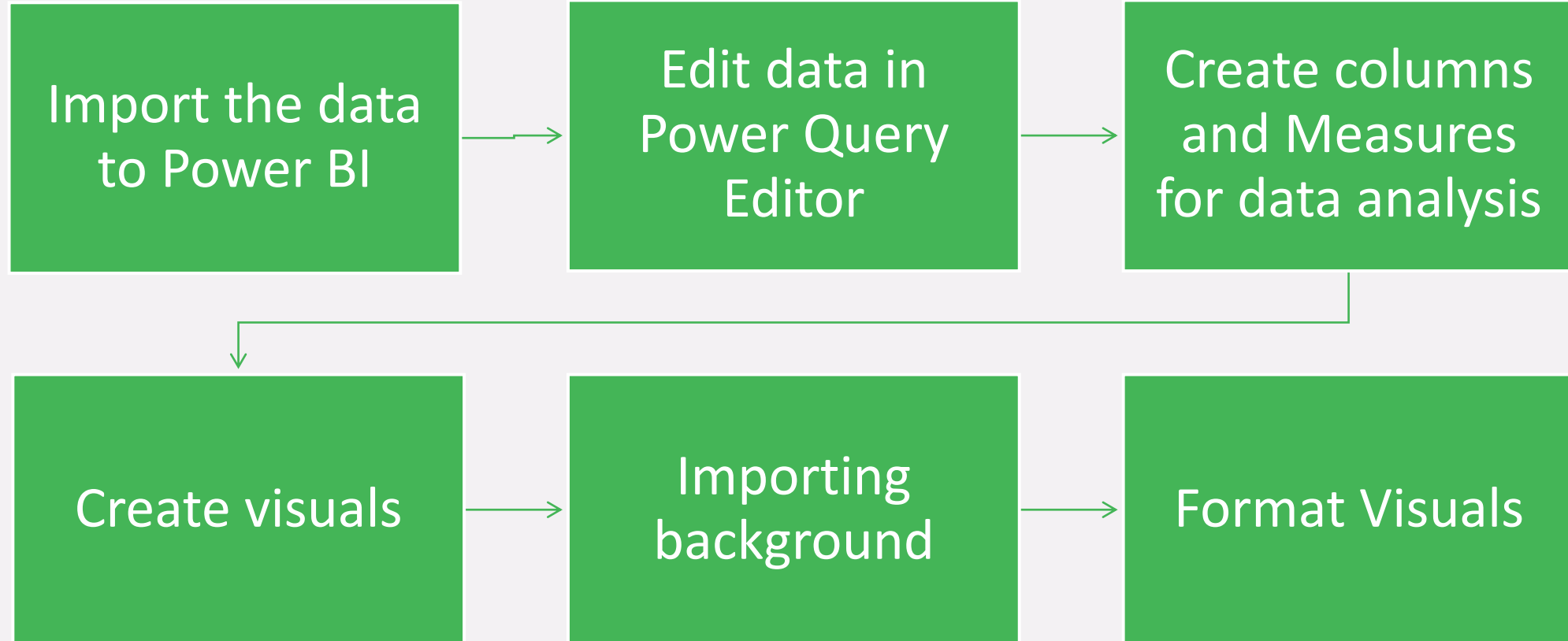
Thank you for listening

Next is Practical

Wheel of Fortune
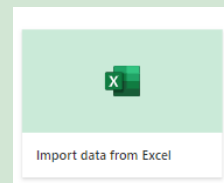
https://spinthewheel.app/9nEzbDmjiZ

Steps

Import the data to Power BI	→	Edit data in Power Query Editor	→	Create columns and Measures for data analysis

Create visuals	→	Importing background	→	Format Visuals

Step 1: Import data to Power BI

1

Open a blank Power BI report page

2

Click "Import data from Excel"

Import data from Excel

3

Locate "Power BI training folder", select "Sales Data"

4

On the navigator pane, check the first two tables and click on import below
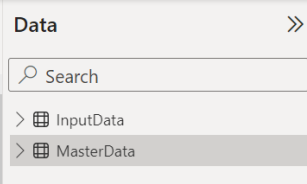
5

Click on table view to preview the data

Step 2: Edit data in Power Query Editor

1

On the data pane, right click on any of the tables and click "edit query"

Data »

🔍 Search

> ⊞ InputData
> ⊞ MasterData

2

Using the date column extract the "year", "Month" and "Month Name" column
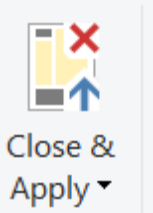
3

Using the "Month Name" extract only first three characters of the month

4

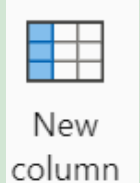Merge "Master data" with "Input data" using the "Product Id"

5

Uncheck the product Id on "master table" and click "close and apply"

Close & Apply ▾

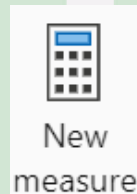# Step 3: Create Columns and Measures for data analysis

1
Create Columns for "Total buying value" and "Total selling value"

New column

2
Create new measure for "Profit" and change format to whole num.

New measure

3
Create new measure for "Profit %" change format to percent and 0 decimal

4
Return to report view for next step

Report view

Total Buying Value = Quantity * Buying Price

Total selling Value = Quantity * Selling Price * (1-Discount)

Profit= Sum(Total selling value) – Sum(Total buying value)

Profit %= Profit/sum(Total Buying value)

Step 4: Create Visuals

1

Create slicers for "Year", "Month", "Sales type" and "Mode of Payment"

Change the first two to Vertical Slicer and the last two to dropdown

2

Add total selling value using card, remove background , text size 24 and 0 decimal, copy it and place six times

3

Arrange the cards and change the data to profit, profit percentage, top product, top category

4

Add stacked column chart for monthly visual, check month name, total selling value and profit respectively. Sort by month name and ascending order. Add profit % as tooltip

For step 3

Data= Use quantity for 1, uom for 2, total selling value for 3 and 4 respectively,

Filter= use product id for 1 2 and 3, category for 4.

Show items= Top, N-1

Filter Value= Total selling value for all

Step 4: Create Visuals

1 Add horizontal column chart, check total selling value and product

2 Add area chart, use day as x-axis and total selling value as y-axis

3 Add pie chart, check total selling value and Sales type, duplicate the pie chart and change sale type to payment mode

4 Add treemap visual and check category and total selling value

Remove category from cards, title and background from charts.
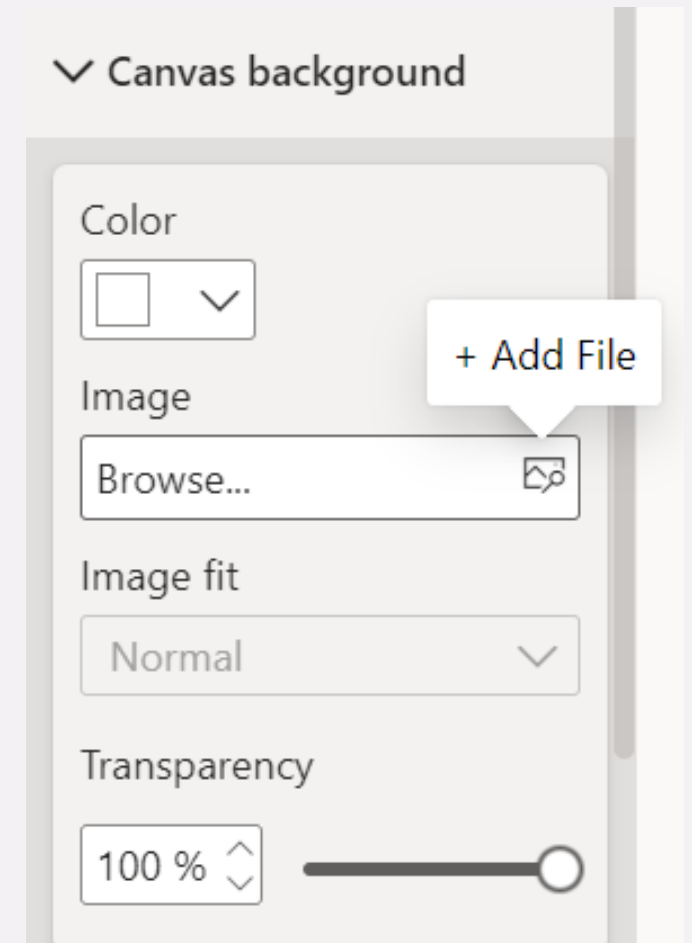
Step 5: Import Background

1

Import background template from power bi training folder using (2)

2

Click on canvas background, add file under browse and locate the background template

3

Change transparency to 0 and image fit to fit

Canvas background

Color

Image

+ Add File

Browse...

Image fit

Normal

Transparency

100 %

Step 6: Format Visuals

1

Click view, down arrow and customize current theme.

Change text to white (FFFFFF) for all. Apply and align the visuals

2

Enter all color codes in color palette or load the theme file in the Powerbi training folder.

3

Adjust color of the visuals to the updated colors.

4

Add button to clear all filters

You are a super star
Keep doing hard things!