

# Beginner's Handout

## (Power BI for Data Analysis)

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### 1. What is Power BI?

Power BI is a tool from Microsoft that helps you turn raw data into easy-to-understand charts and reports. Think of it as an automatic storyteller for your data.






Example: Instead of looking at hundreds of sales rows, you can see a simple bar chart showing which product sold the most.

### 2. Why Use Power BI?

- Connects to different data sources (Excel, SQL, cloud apps).
- Cleans and organizes messy data.
- Creates interactive dashboards (you can click and explore).
- Helps you find trends and insights quickly.

### 3. Power BI Environment

When you open Power BI Desktop, you'll see:

- **Ribbon** (top) → Tabs like Home, Modeling, View.
- **Report View**  → Build dashboards/visuals
- **Data View**  → See tables & rows
- **Model View**  → Manage relationships
- **DAX Query View**  → Run DAX queries
- **TMDL View**  → Edit model in code form
- **Fields Pane** (right) → List of tables and columns.
- **Visualizations Pane** (right) → Different chart types.

### 4. Steps to Create a Report

1. **Get Data** → Import from Excel, SQL, or other sources.
2. **Transform Data** → Clean it in the Power Query Editor (remove blanks, rename columns)
3. **Model Data** → Connect tables (like matching Student ID with Marks).
4. **Create Visuals** → Drag and drop fields into charts.
5. **Publish Report** → Share with others on Power BI Service (online).

## 5. Common Visuals

- Bar/Column Chart → Compare categories (e.g., sales by region).
- Line Chart → Show trends over time.
- Pie/Donut Chart → Show parts of a whole.
- Cards → Show single numbers (e.g., Total Sales).
- Maps → Show data by location.

## 6. Filters and Slicers

- **Filter** → Narrow down the data shown (e.g., show only 2023 sales).
- **Slicer** → A button-like filter you can click (e.g., select region from a dropdown).

## 7. Example Use Case

Imagine you have this sales data in Excel:

| Product | Region | Sales |
|---------|--------|-------|
| Apples  | East   | 200   |
| Oranges | West   | 150   |
| Mangoes | East   | 300   |

In Power BI, you can:

- Create a Bar Chart → Sales by Product.
- Create a Map → Sales by Region.
- Add a Card → Show Total Sales.

Now, you have a dashboard that tells a clear story at a glance! 🎉

## 8. Tips for Beginners

- Start with small Excel data and practice.
- Explore different chart types – but don't overuse.
- Keep dashboards simple (less clutter = better).
- Save your work often.

✅ By now, you should understand:

- ✓ What Power BI is
- ✓ How to import and clean data
- ✓ How to create simple charts
- ✓ How filters and slicers make dashboards interactive

----- All the Best -----