#### 1. Bar Chart

* **One-Liner:** Used to compare values across categories horizontally.
* **What:** Horizontal bars representing category data.
* **Why:** To easily compare values side by side.
* **When:** Use when category names are long or numerous.
* **Where:** Found in the Power BI Visualizations pane.
* **How:** Drag category to axis, values to value field.

#### 2. Column Chart

* **One-Liner:** Used to compare values across vertical bars.
* **What:** Vertical bars showing data by category.
* **Why:** Simple and effective for comparison.
* **When:** Ideal for a few items with clear differences.
* **Where:** Visualizations pane in Power BI.
* **How:** Drag fields to Axis and Values.

#### 3. Stacked Bar Chart

* **One-Liner:** Displays parts of a whole in horizontal bars.
* **What:** Segmented bars representing subcategories.
* **Why:** To show both total and individual category contribution.
* **When:** Use when visualizing composition within groups.
* **Where:** In Power BI Visuals.
* **How:** Add category to Axis, and subcategories to Legend.

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#### 4. Stacked Column Chart

* **One-Liner:** Shows total and parts in vertical bars.
* **What:** Vertical bars divided into colored segments.
* **Why:** To compare total values and their breakdown.
* **When:** When both individual and total values matter.
* **Where:** Visualizations pane.
* **How:** Use Axis for main category and Legend for sub-parts.

#### 5. Line Chart

* **One-Liner:** Used to show trends over time.
* **What:** Data points connected by a line.
* **Why:** For analyzing changes or trends.
* **When:** Best for time series data.
* **Where:** Power BI Desktop visuals.
* **How:** Date on Axis, metric on Values.

#### 6. Area Chart

* **One-Liner:** Line chart with filled color under the line.
* **What:** A line chart with shaded area.
* **Why:** To emphasize volume over time.
* **When:** When visual impact of totals is needed.
* **Where:** Power BI visuals pane.
* **How:** Same as Line Chart with Area format.

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#### 7. Pie Chart

* **One-Liner:** Shows proportions of categories.
* **What:** Circle divided into slices.
* **Why:** To represent parts of a whole.
* **When:** When only a few categories exist.
* **Where:** Visualizations pane.
* **How:** Drag category to Legend and value to Values.

#### 8. Donut Chart

* **One-Liner:** Circular chart with a hole, similar to pie chart.
* **What:** Ring-shaped chart.
* **Why:** For a compact, stylish summary.
* **When:** When limited space is available.
* **Where:** In the Visualizations pane.
* **How:** Like Pie Chart setup.

#### 9. Treemap

* **One-Liner:** Displays hierarchical data as nested rectangles.
* **What:** Boxed rectangles sized by value.
* **Why:** To show many categories in limited space.
* **When:** When there are too many values for a pie or bar chart.
* **Where:** Power BI Visuals.
* **How:** Add category to Group and metric to Values.

#### 10. Funnel Chart

* **One-Liner:** Visualizes data across stages in a process.
* **What:** Tapered chart representing flow.
* **Why:** To show reduction across steps.
* **When:** Ideal for sales and conversion funnels.
* **Where:** In Power BI Visuals.
* **How:** Use stages on Axis and values on Values.

#### 11. Gauge Chart

* **One-Liner:** Shows a single metric against a goal.
* **What:** Dial-style performance indicator.
* **Why:** For KPI tracking.
* **When:** When comparing actual to target.
* **Where:** Power BI Visual pane.
* **How:** Add Value, Minimum, and Maximum.

#### 12. Card

* **One-Liner:** Displays one big metric value.
* **What:** Single value summary tile.
* **Why:** To highlight a key figure.
* **When:** For dashboard KPIs.
* **Where:** Visuals pane.
* **How:** Drag a measure to the card visual.

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#### 13. Multi-Row Card

* **One-Liner:** Displays multiple values in card layout.
* **What:** Multi-value KPI summary.
* **Why:** For grouped or related KPIs.
* **When:** When showing multiple summaries together.
* **Where:** Visualizations area.
* **How:** Add multiple fields to Values.

#### 14. Table

* **One-Liner:** Shows detailed row-wise data.
* **What:** Grid of raw data.
* **Why:** To display precise values.
* **When:** When detailed reporting is required.
* **Where:** In Power BI Visuals.
* **How:** Drag fields into the table.

#### 15. Matrix

* **One-Liner:** Pivot-style summary table.
* **What:** Rows and columns with aggregated values.
* **Why:** For grouped, hierarchical data views.
* **When:** When needing cross-tab analysis.
* **Where:** Power BI Visuals.
* **How:** Use Rows, Columns, and Values fields.

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#### 16. Scatter Chart

* **One-Liner:** Displays correlation between two numeric fields.
* **What:** Dots plotted using X and Y coordinates.
* **Why:** To explore relationships or clusters.
* **When:** When comparing two measures.
* **Where:** Visuals panel.
* **How:** Use numeric fields for X, Y, and optionally size.

#### 17. Combo Chart

* **One-Liner:** Combines column and line chart.
* **What:** Bar and line chart in one.
* **Why:** To compare trends and values.
* **When:** When dual metrics are needed in one chart.
* **Where:** Power BI chart gallery.
* **How:** Set column value and line value separately.

#### 18. Map

* **One-Liner:** Plots data based on geographic location.
* **What:** Location-based scatter plot.
* **Why:** To visualize regional data.
* **When:** When geography is a dimension.
* **Where:** Map visual in Power BI.
* **How:** Drag location field and value field.

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#### 19. Filled Map

* **One-Liner:** Colors areas on map based on values.
* **What:** Region-based shaded map.
* **Why:** For intensity comparison across areas.
* **When:** When viewing distribution density.
* **Where:** Filled Map in Visuals.
* **How:** Use geographic field and values.

#### 20. Waterfall Chart

* **One-Liner:** Shows step-by-step changes in value.
* **What:** Bar chart indicating additions/subtractions.
* **Why:** To visualize contribution to final total.
* **When:** For financial and sales analysis.
* **Where:** Visuals pane.
* **How:** Add category and value fields.

**Q**: What is Power BI?

**A**: Power BI is a business analytics service that helps visualize and analyze data to gain actionable insights.

**Q**: What are filters in Power BI?

**A**: Filters in Power BI are used to refine data displayed in a report by selecting specific values or ranges.

**Q**: What is Power Query?

**A**: Power Query is the data transformation engine in Power BI, used for cleaning, shaping, and preparing data before it's used in visualizations.

**Q**: What is Power Pivot?

**A**: Power Pivot is a data modeling component within Power BI that allows you to create data models from multiple sources.

**Q**: What is DAX?

**A**: DAX stands for Data Analysis Expressions and is the formula language used to create calculated columns and measures in Power BI.

**Q**: What is a slicer?

**A**: A slicer is a visual control that allows users to interactively filter data in Power BI reports.

**Q**: What are custom visuals?

**A**: Custom visuals are specialized visualizations that extend the standard visual library in Power BI.

**Q**: What is a measure?

**A**: A measure in Power BI is a DAX formula that calculates a value based on data in the model.

**Q**: What is a calculated column?

**A**: A calculated column in Power BI is a column added to a table that contains values derived from formulas or expressions.

**Q**: What is the Power BI Service?

**A**: The Power BI Service is the cloud-based platform where Power BI reports and dashboards are published, shared, and accessed.

**Q**: What is the role of the data gateway in Power BI?

**A**: The data gateway acts as a secure connection between Power BI and on-premises data sources, enabling data access for reporting.

**Q:** What are the main components of Power BI?  
 **A:** Power BI Desktop, Power BI Service, and Power BI Mobile.

**Q:** What is a dashboard in Power BI?  
 **A:** A dashboard is a single-page, interactive view of multiple visualizations.

**Q:** What is a report in Power BI?  
 **A:** A report is a multi-page collection of visualizations based on a dataset.

**Q:** What is the use of relationships in Power BI?  
 **A:** Relationships connect different tables to perform cross-table calculations.

**Q:** What is DirectQuery in Power BI?  
 **A:** DirectQuery connects to the data source in real time without importing data.

**Q:** What is the difference between calculated column and measure?  
 **A:** Calculated columns are row-level, while measures are aggregation-level calculations.

**Q:** What is a bar chart used for in Power BI?  
 **A:** To compare categorical data across different groups.

**Q:** What is a line chart used for?  
 **A:** To show trends over time.

**Q:** What is a pie chart best suited for?  
 **A:** To show proportional data or percentage of a whole.

**Q:** When should you use a column chart?  
 **A:** To compare values across vertical bars.

**Q:** What is a stacked bar chart?  
 **A:** A bar chart where data segments are stacked on top of each other.

**Q:** What is a waterfall chart used for?  
 **A:** To show running totals and how values increase or decrease.

**Q:** What does a scatter chart display?  
 **A:** Relationships between two numerical variables..

**Q:** What is a tree map?  
 **A:** A hierarchical chart using nested rectangles to represent parts of a whole.

**Q:** What does a gauge chart show?  
 **A:** A single value compared against a target.

**Q:** What is a funnel chart used for?  
 **A:** To show data flow through stages in a process.

**Q:** What does a map visual display?  
 **A:** Geographic data using locations and values.

**Q:** What is a matrix visual?  
 **A:** A visual like a pivot table with rows, columns, and values.

**Q:** What is the use of a card visual?  
 **A:** To display a single summary value.

**Q**: What is a measure?

**A**: A measure in Power BI is a DAX formula that calculates a value based on data in the model.

**Q**: What is Power Query?

**A**: Power Query is the data transformation engine in Power BI, used for cleaning, shaping, and preparing data before it's used in visualizations.

**Q**: What is DAX?

**A**: DAX stands for Data Analysis Expressions and is the formula language used to create calculated columns and measures in Power BI.

Q: How to merge data in power BI?

A: To merge data in Power BI, use “Merge Queries” in Power Query to combine tables based on a common column.

Q: How to merge 2 tables into 1 in power BI?

A: To merge 2 tables into 1 in Power BI, go to Power Query > Home > Merge Queries, select both tables and a common column, then choose the join type.

Q: How to append queries in power BI?

A: In power BI, to append queries, go to POWER QUERY EDITOR - click on “ Append Queries” - choose the tables you want to combine - click ok.

Q: what is append queries in power BI?

A: append queries in power BI means stacking two or more tables on top of each other to create one combined table.

Q: what is the different between merge data and append data?

A: marge data combines tables side by side ( add columns ) ,while append stacks tables on top of each other ( add rows ).

Q: How to remove error in power BI?

A: In power BI, go to Power Query Editor - right click the column with errors - choose “ Remove Errors.”

Q: How to replace value in power BI?

A: In power BI, go to Power Query Editor - right click the column - select “ Replace Values” - enter the old ( null ) value and new value ( 2024 ).

Q: what is the use of keep errors in DAX Power BI?

A: Keep errors in power bi is used to show only the rows with errors in a column, so you can check and fix them.