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## Basic Questions:

1. **Name three types of visuals you can create in Power BI:**
    - Bar chart
    - Line chart
    - Pie chart
  2. **How do you add a slicer to a report?**
    - Go to the **Visualizations pane**, select the **Slicer** visual, then drag a field (e.g., Quarter or Product) into the slicer's **Field well**.
  3. **What is the difference between a bar chart and a column chart?**
    - A **bar chart** displays data using **horizontal** bars, while a **column chart** uses **vertical** bars. Both are used to compare values across categories.
  4. **How do you change the color of a visual background?**
    - Select the visual, go to the **Format pane**, expand the **Background** section, toggle it **On**, and choose your desired **color**.
  5. **What does "drill-down" mean in a visual?**
    - Drill-down allows users to **explore data hierarchies** within a visual (e.g., from Region to Product to Quarter) by clicking on visual elements to navigate into deeper levels of detail.
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## Tasks:

6. **Create a bar chart showing SalesAmount by Region:**
  - Insert a **bar chart** → drag `Region` to **Axis** and `SalesAmount` to **Values**.
7. **Add a slicer for Quarter to filter all visuals on the page:**
  - Insert a **Slicer visual** → drag `Quarter` to the slicer field → ensure "Sync slicers" is on (see step 12).
8. **Format the bar chart to show data labels:**
  - Select the bar chart → go to **Format pane** → turn **Data labels** to **On**.
9. **Use a line chart to show SalesAmount trends over Quarter:**
  - Insert a **Line chart** → drag `Quarter` to **Axis** and `SalesAmount` to **Values**.
10. **Add a tooltip to display Product details when hovering over bars:**
  - Create a new **tooltip page** → add `Product` and `SalesAmount` → mark it as **Tooltip** in Page Information → go back to the bar chart → under **Format > Tooltip**, set the **Tooltip page**.
11. **Sync slicers across multiple report pages:**
  - Select the slicer → go to the **View tab** → open **Sync slicers pane** → check the pages where you want the slicer to be synced and visible.
12. **Create a custom visual with dynamic measure selection (e.g., Sales vs. Profit):**
  - Create a disconnected table with measure names → use a slicer to select the measure → use a DAX measure with `SWITCH()` or `SELECTEDVALUE()` to dynamically switch the visual's metric.
13. **Implement a hierarchy for Region > Product > Quarter drill-down:**

- In your data model or Fields pane, create a **hierarchy** → drag `Region`, `Product`, and `Quarter` into it → use this hierarchy in a visual → enable **drill mode** via the **expand/drill icons** on the visual.

14. Use **bookmarks** to toggle between two visuals in the same space:

- Place both visuals in the same spot → use **Selection pane** to control visibility → create **Bookmarks** for each view → add **Buttons** to toggle bookmarks.

15. Optimize a slow-rendering report with 10+ visuals:

- Use best practices such as:
  - **Reduce visuals per page**
  - **Use aggregations or pre-calculated measures**
  - **Turn off Auto Date/Time**
  - **Use performance analyzer tool**
  - **Limit data using filters or page-level slicers**