**Power BI Questions**

**1. How do you set up row-level security (RLS) in Power BI, and what are its use cases?**

**Steps to implement RLS:**

1. In Power BI Desktop, go to **Modeling** → **Manage Roles**.
2. Click **Create** and define a role with a DAX filter, e.g.

[Region] = "East"

1. Assign this role to users in Power BI Service under Security settings.
2. Users will only see data that matches their role.

**2. What is the purpose of the Power Query Editor, and how can it help in data transformation?**

**Power Query Editor** allows users to clean, shape, and transform data before loading it into Power BI.

**Key Capabilities:**

* **Data Cleaning**: Remove duplicates, handle missing values.
* **Transformation**: Merge, append, split columns, pivot/unpivot data.
* **Formatting**: Change data types, rename columns.
* **Query Optimization**: Apply transformations before data is loaded to improve performance.

**3.Difference Between Slicer and Filter in Power BI**

**1. Usage**

* **Slicer**: Used for **interactive filtering**, allowing users to dynamically change the displayed data.
* **Filter**: Used for **background filtering**, applying predefined conditions to limit the data shown.

**2. Location**

* **Slicer**: Added directly to the **report page** as a visual element.
* **Filter**: Found in the **Filter Pane**, applied at different levels (visual, page, report).

**3. Types**

* **Slicer**: Supports **dropdowns, checkboxes, buttons**, and multi-selection options.
* **Filter**: Includes **visual filters, page filters, report filters, and drillthrough filters**.

**4. User Control**

* **Slicer**: Users can **interact directly** with it to modify the data view.
* **Filter**: Can be **pre-set by the report creator**, ensuring consistency across the report.

**5. Example**

* **Slicer**: Allows users to filter data by **Year (2019, 2020, 2021)** dynamically.
* **Filter**: A report filter can be applied to show **only the last 6 months’ sales**, regardless of user input.

**4. How do you use Power BI’s “Drillthrough” feature to enhance report interactivity?**

**Drillthrough** allows users to **navigate from a summary page to a detailed page** by clicking on a data point.

**Steps to Implement:**

1. Create a **new page** and add visuals.
2. Add a **Drillthrough field** (e.g., Customer Name, Product).
3. Users can right-click on a data point and **Drillthrough** to view details.

**Use Cases:**

* Click on a **region** to see sales breakdown.
* Click on a **customer** to see their purchase history.

**5. What is the importance of using star schema design in Power BI data modeling?**

A **star schema** consists of a central **fact table** connected to **dimension tables**, optimizing data relationships.

**Benefits:**

* **Improved Performance**: Reduces data redundancy and speeds up queries.
* **Easier DAX Calculations**: Simplifies measure creation.
* **Better Relationships**: Ensures a clear **one-to-many** relationship structure.

**Example:**

* **Fact Table**: Sales (OrderID, Date, CustomerID, ProductID, SalesAmount).
* **Dimension Tables**: Customers, Products, Dates.