1) List three data sources Power BI can connect to

-SQL Server

-TEXT/CSV

-EXCEL workbook

2) What is the first step to import data into Power BI Desktop?

Open Power BI Desktop

Double-click the Power BI Desktop icon to start the program.

Click "Get Data"

- On the **Home** tab (top ribbon), click **"Get Data."**
- You'll see a list of data sources such as **Excel, SQL Server, Web, Text/CSV, Folder, et c.**

Choose Your Data Source

- Select where your data is stored — for example, **Excel workbook** or **SQL Server datab ase**.
- Then click **"Connect."**

Select Your Table or Sheet

- A **Navigator window** appears showing available tables or sheets.
- Select the ones you want to load.

Click "Load" or "Transform Data"

- Click **"Load"** to import directly,
- or **"Transform Data"** to clean/edit it first using **Power Query**.

3) How do you refresh imported data in Power BI?

Click "Refresh" on the Home tab

4) What file formats can Power BI import directly? (Name two.)

Excel (.xlsx or .xls)

CSV (.csv)

5) What does the "Navigator" window show after selecting a data source?

The **Navigator window** in Power BI displays **all available tables, sheets, or queries** from the s elected data source and provides a **preview** so you can choose which data to **load or transform**.

6) **Import Sales_Data.csv and load only the "Product" and "Price" columns.**

Done

7) How would you change OrderDate to a date format during import?

Open Power BI Desktop.

Go to **Home → Get Data → Excel/CSV/Database** → select your file.

In the **Navigator window**, click **Transform Data** instead of "Load."

→ This opens the **Power Query Editor.**

In Power Query, find the **OrderDate** column.

Click the **column header** (OrderDate) to select it.

Go to the **Home tab** → in the **Transform group**, click the **Data Type icon** (looks like "ABC12 3").

Choose **Date** from the dropdown list.

Power BI will now convert that column into **date format (e.g., 2025-10-05).**

Finally, click **Close & Apply** to save and load the data into Power BI.

8) **What is the difference between "Load" and "Transform Data" in the import dial og?**

1. Load

- **Meaning:** Imports the data **directly** into Power BI *as it is*.
- **What happens:**
  - Power BI **loads the selected tables** into your data model.
  - You can immediately start building **visuals, charts, and reports**.
  - **No changes or cleaning** are applied.

Use when:

Our data is already clean, formatted, and ready for analysis.

2. Transform Data

- **Meaning:** Opens the **Power Query Editor** before loading.
- **What happens:**
  - You can **clean, filter, merge, rename, or change data types** (like changing *Orde rDate* to Date).
  - The changes are recorded as **steps** in the Query Editor.
  - After cleaning, you click **Close & Apply** to load the cleaned data.

Use when:

Our data needs **cleaning, formatting, or combining** before using it in reports.

9) **Why might you see an error when connecting to a SQL database? (Name one rea son.)**

- Incorrect server name or database credentials.
- The **server name** (for example: ServerName\InstanceName)
- The **database name**
- And sometimes **username and password** (if not using Windows authentication)

If any of these are **wrong or mistyped**, Power BI can't connect, and you'll get an error like:

"Cannot connect to server. Please verify the server name and credentials."

10) How do you replace a data source after importing it?

You can do this easily using the **Data Source Settings** option.

Open your Power BI Desktop file.

Go to the **Home** tab on the ribbon.

Click **Transform Data → Data Source Settings.**

This opens a window showing all the data connections used in your report.

In the list, **select the data source** you want to replace or change.

Click **Change Source…**

In the dialog box that appears:

- If it's an **Excel file**, browse and select the **new file path**.
- If it's a **database**, update the **server name** or **database name**.

Click **OK**, then **Close** the Data Source Settings window.

Finally, click **Refresh** on the Home tab to reload your data from the new source.

11) Write the M-code to import only rows where Quantity > 1.

```
let

    Source = Csv.Document(File.Contents("C:\Users\Lenovo\Desktop\Power BI\lesson-1\Sales_Data (1).csv"),[Delimiter=",", Columns=5, Encoding=1252, QuoteStyle=QuoteStyle.None]),

    #"Promoted Headers" = Table.PromoteHeaders(Source, [PromoteAllScalars=true]),
```

```
    #"Changed Type" = Table.TransformColumnTypes(#"Promoted Headers",{{"OrderID", Int64
.Type}, {"Product", type text}, {"Quantity", Int64.Type}, {"Price", Int64.Type}, {"OrderDate", t
ype date}}),

    FilteredRows = Table.SelectRows( #"Changed Type" , each[Quantity]> 1)

in

    FilteredRows
```

12) How would you change the data source if Sales_Data.csv changed?

Change it via "Data Source Settings"

1. Open your **Power BI Desktop** file.
2. On the **Home** tab, click **Transform Data → Data Source Settings.**
3. In the window that opens, find your data source (e.g., the path to your old Sales_Data.csv).
4. Select it and click **Change Source…**
5. In the new dialog, browse to your new CSV file (e.g., Sales_Data_New.csv) or new folde r location.
6. Click **OK** → then **Close** the window.
7. Click **Refresh** on the Home tab to reload data from the new file.

Best for: When your file path or file name has changed.

pro tip: we can also use a **parameter** for the file path, so next time you only need to change one value (no editing code).

13) Troubleshoot: Your CSV import fails due to a "mixed data type" error—how do you fix it?

Fix it in Power Query Editor

1. When you see the error, click **Transform Data** to open **Power Query Editor**.
2. Find the column causing the error (it will usually have a small **error icon**).
3. Click the **column header → Remove Errors**
4. (Home tab → *Remove Rows → Remove Errors*).
    - This deletes any rows that caused the data type issue.
5. **OR**, to keep all rows:
    - Click the **Data Type icon** (ABC123) on top of the column → choose **Text**.
    - This lets Power BI store both numbers and text safely.
6. Click **Close & Apply** to reload clean data.

Use "Text" type if your column sometimes includes non-numeric values (like "N/A" or "Unknown").

Use "Remove Errors" if you want to drop bad rows completely.

14) Connect to a live SQL database with parameters (e.g., filter by year).

15) How would you automate data imports using Power BI and Power Automate?

1.Publish your report to Power BI Service

- Open your report in **Power BI Desktop**.
- Click **Home → Publish → Select a workspace** (for example, *My Workspace*).
- Your dataset is now stored in the Power BI cloud.

2. Open Power Automate

- Go to https://flow.microsoft.com.
- Sign in with the same account you use for Power BI.

3. Create a new flow

- Click **Create → Scheduled cloud flow**.
- Set when you want it to run — for example:
- "Every day at 8:00 AM."

4. Add the Power BI action

- Click **+ New step → Search "Power BI"**.
- Choose **"Refresh a dataset"**.

5. Configure the refresh

- Select your **Workspace**.
- Choose the **Dataset** you published earlier (for example, *Sales Report*).
- This step tells Power Automate to refresh that dataset automatically.

6. (Optional) Add notifications

You can add extra actions like:

- "Send me an email when refresh completes"
- "Post a message in Teams if refresh fails"

7. Save and test your flow

- Click **Save → Test → Run flow**.
- If everything works, you'll see your dataset refreshed automatically in Power BI Service.