Lesson 2

1. **List three data sources Power BI can connect to.**

Power BI can connect to a vast array of data sources, categorized broadly into Files, Databases, Azure services, and Online Services. Here are three common data sources Power BI can connect to: 1) File Data Sources; 2) Database Data Sources; 3) Online Services

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

The first step to import data into Power BI Desktop is to connect to the data source using the "Get Data" feature.

3. **How do you refresh imported data in Power BI?**

We can refresh imported data in PBI using 3 primary methods: 1. Manual Refresh; 2. Scheduled Refresh; 3. On-Demand Refresh.

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

Power BI Desktop supports a wide variety of file formats for direct import under the "File" connector category.

Two of the most common file formats you can import directly are:

Excel Workbook (.xlsx, .xlsm): This is the most common format. Power BI can read data from tables, named ranges, or the entire worksheet.

CSV (Comma-Separated Values) (.csv): This is a very popular, simple format for flat, structured data where values are separated by a delimiter, typically a comma.

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

The Navigator window in Power BI Desktop appears immediately after you successfully connect to a data source (like a database, an Excel file, or a web link).

It serves as a key intermediary step that allows you to specify exactly which parts of the data source you want to import.

6. **What is the difference between "Load" and "Transform Data" in the import dialog?**

The Load and Transform Data options in the Power BI Navigator window represent two fundamentally different actions you can take with your data before it becomes part of your Power BI model.

Here is the difference between them:

Transform Data (Recommended for Most Cases). Choosing Transform Data (or Edit) opens the data in the Power Query Editor. This is the specialized tool Power BI uses for data preparation.

Load. Choosing Load bypasses the data cleaning step and immediately imports the selected data directly into the Power BI data model.

7. **Why might you see an error when connecting to a SQL database? (Name one reason.)**

One of the most common reasons you might see an error when connecting to a SQL database from Power BI is Invalid Credentials/Authentication Failure.

Invalid Credentials

This occurs when Power BI successfully finds the server but cannot gain access to the database itself because the login details are incorrect or lack the necessary permissions.

Incorrect Username/Password: If you are using Database (SQL Server) Authentication, the username or password you entered in Power BI is wrong.

Insufficient Permissions: Even if the login is correct, the SQL user account (whether Windows or SQL authentication) must have the explicit permission to access the specific database and tables you are trying to query. If the user is disabled or doesn't have the required read access, the connection will fail.

Other Common Reasons Include:

Network/Firewall Block: The server is not found or not accessible because a firewall (on the SQL server itself or somewhere in the network path) is blocking the connection, often on the default SQL port (TCP port 1433).

Incorrect Server Name or Instance Name: You have misspelled the server name, used the wrong format for a named instance, or the SQL Server service is simply not running.

Encryption Issues (SSL): If the database is configured to enforce encrypted connections and the client (Power BI) or the server's SSL certificate is not properly configured or trusted, you may receive a certificate chain error.

8. **How do you replace a data source after importing it?**

You can replace a data source in Power BI Desktop using one of two primary methods, depending on whether you are simply changing the location of the existing source type or changing to an entirely different source type.

The key objective is to maintain the name, structure, and column types of the original query so that the downstream data model, DAX calculations, and visuals are not broken.

1. Changing the Source Location or Credentials (Same Connector Type)

This is the easiest method and is used when you move a file (e.g., from a test to a production server) or need to update a file path or database name.

Method 1: Data Source Settings. This method is best for updating the location or credentials for multiple queries that share the same underlying source.

Method 2: Editing the Source Step in Power Query. This method is efficient for changing the source of a single query.