Lesson-2

`Question 1:` List three data sources Power BI can connect to.

1. Excel/CSV Files
2. Cloud Databases (e.g., Azure SQL, Google BigQuery)
3. Online Services (e.g., Salesforce, SharePoint)

`Question 2:` What is the first step to import data into Power BI Desktop?

Click "Get Data" on the Home ribbon and import from needed source.

`Question 3:` How do you refresh imported data in Power BI?

In Power BI Desktop:

1. Open your report (.pbix file).
2. Look at the top menu bar.
3. Click the ☐ Refresh button on the Home tab.

`Question 4:` What file formats can Power BI import directly? (Name two.

1. Excel (.xlsx, .xlsm)
2. CSV (.csv)

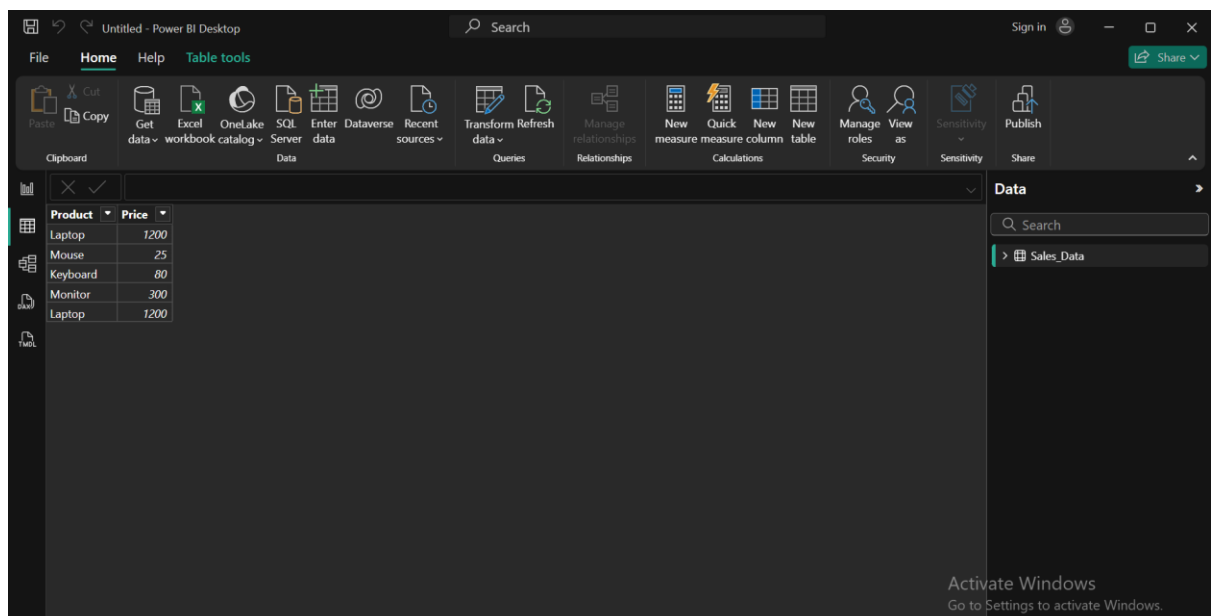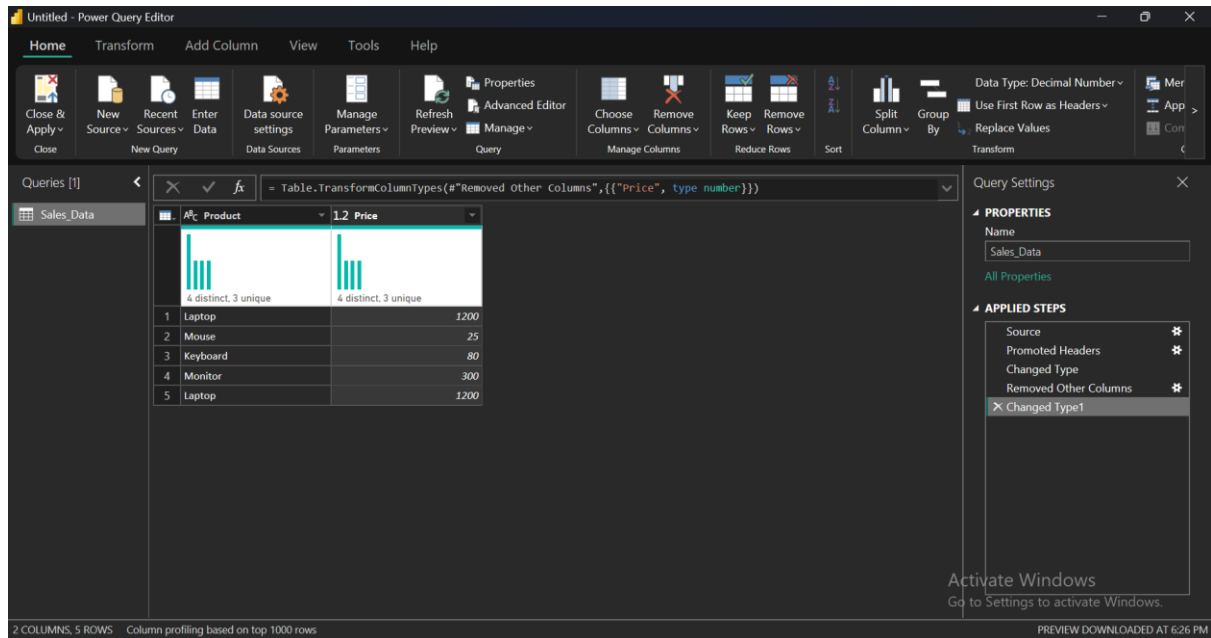`Question 5:` What does the "Navigator" window show after selecting a data source?

It shows a preview of the available tables or sheets from your data source. You check the boxes to select which ones to load into Power BI.

`Question 6:` Import Sales_Data.csv and load only the "Product" and "Price" columns.
Steps Taken:

1. In Power BI Desktop, I clicked "Get Data" > "Text/CSV" and selected the `Sales_Data.csv` file.
2. In the preview window, I clicked "Transform Data" to open the Power Query Editor.
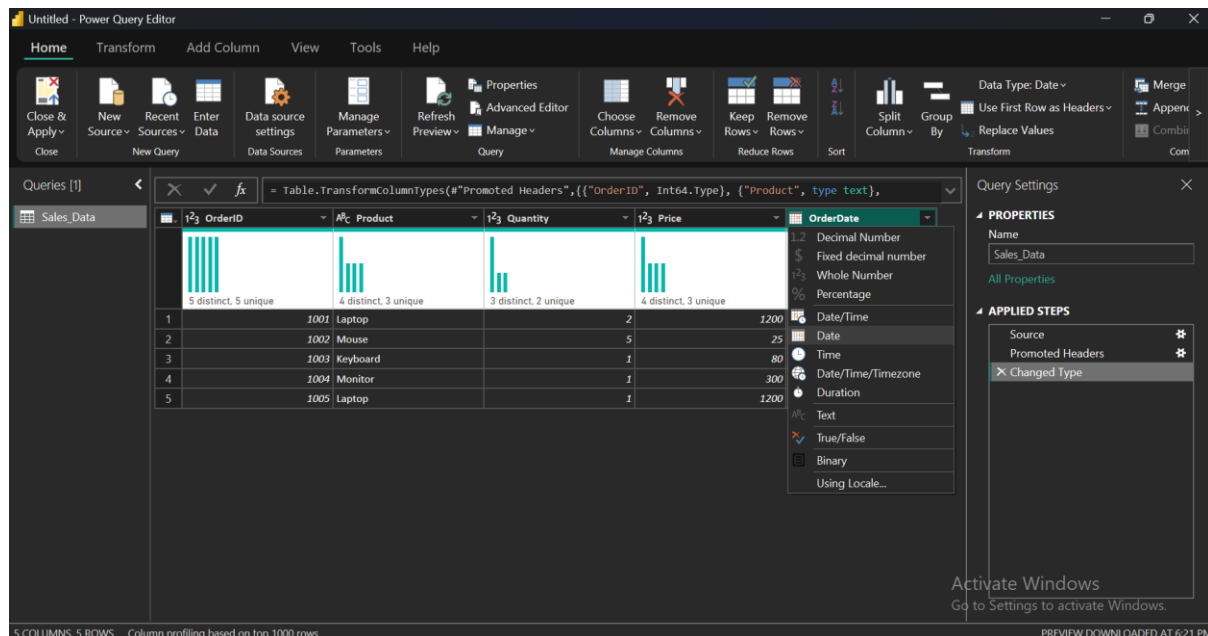
3. In the Power Query Editor, I used the "Choose Columns" button on the 'Home' tab.
4. From the list, I selected only the "Product" and "Price" columns and clicked "OK".
5. I then clicked "Close & Apply" to load only those two columns into the data model.

`Question 7:` How would you change OrderDate to a date format during import?

In Power Query Editor:

1. Right-click the OrderDate column header.
2. Select Change Type.
3. Choose Date (or Date/Time).

`Question 8:` What is the difference between "Load" and "Transform Data" in the import dialog?

Transform Data: Opens the Power Query Editor to clean, filter, and shape your data *before* it loads.
Load: Imports the data as-is directly into Power BI.
You pick Transform to change things first, or Load if the data is already ready to use.
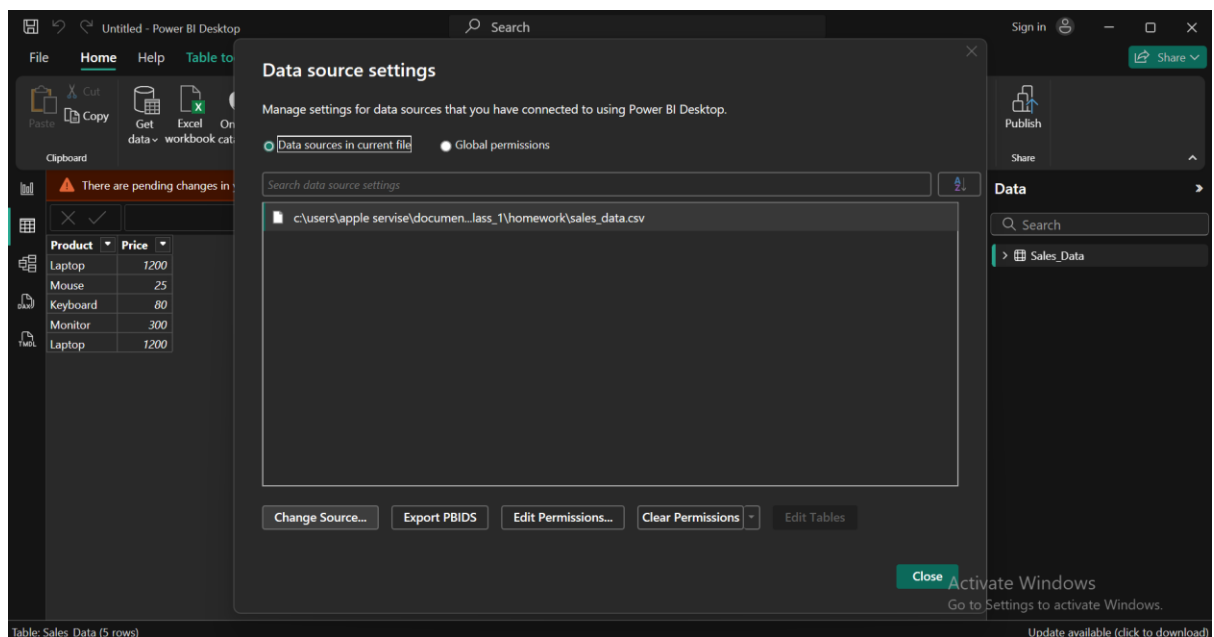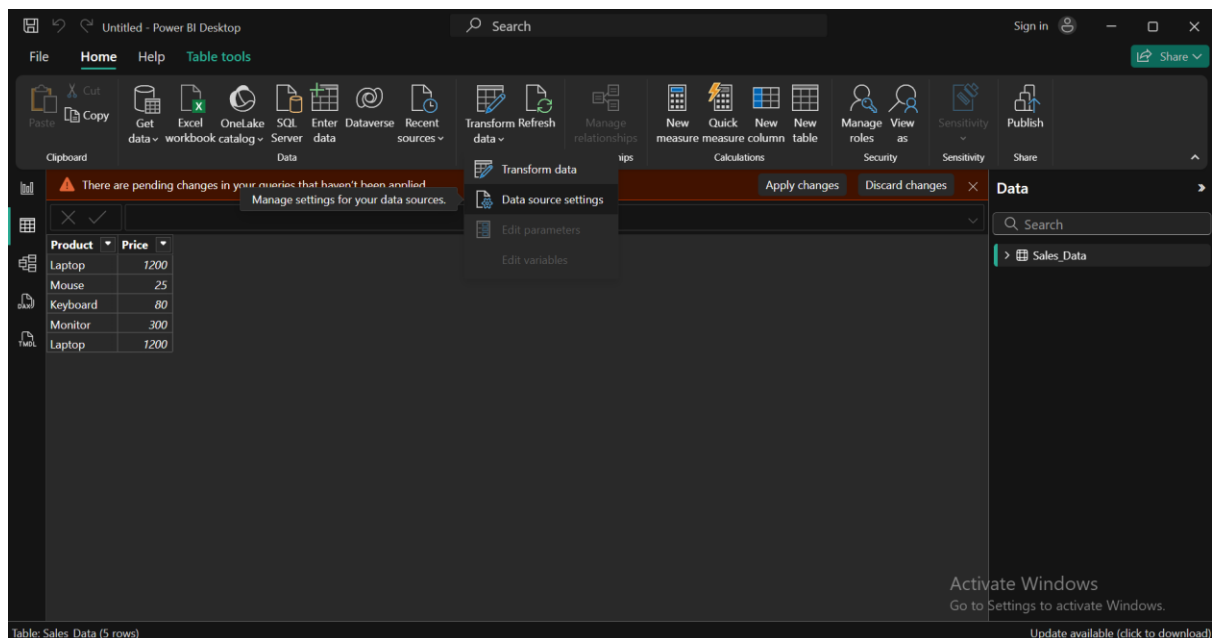
`Question 9:` Why might you see an error when connecting to a SQL database? (Name one reason.)

One common reason: The server name or database name was typed incorrectly in the connection window.

`Question 10:` How do you replace a data source after importing it?

In Power BI Desktop:

1. Go to Transform data > Data source settings.
2. Select the source and click Change Source....
3. Browse to the new file or enter the new connection details.
4. Click OK.

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

let

Source = Csv.Document(File.Contents("C:\YourPath\Sales_Data.csv"), [Delimiter=",", Columns=3, Encoding=1252, QuoteStyle=QuoteStyle.None]),
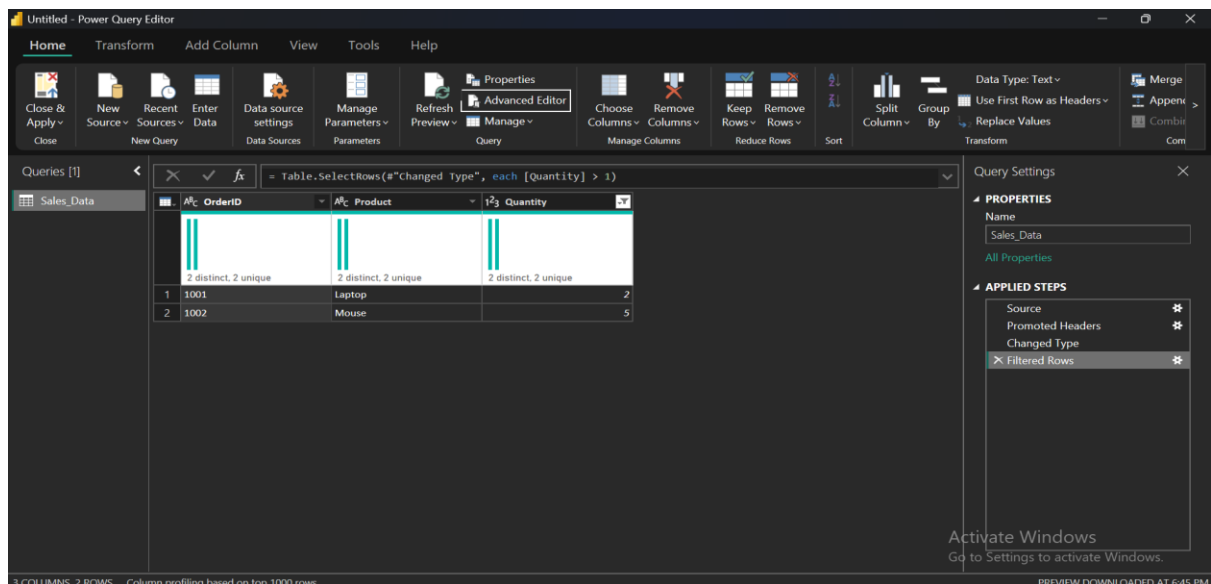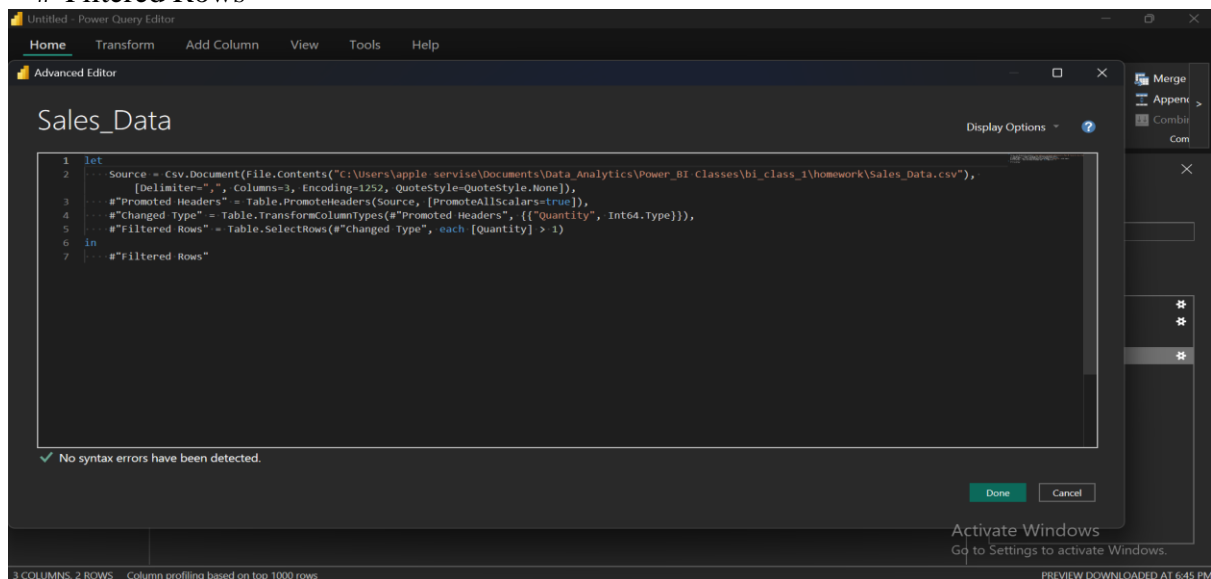
#"Promoted Headers" = Table.PromoteHeaders(Source, [PromoteAllScalars=true]),

#"Changed Type" = Table.TransformColumnTypes(#"Promoted Headers", {{"Quantity", Int64.Type}}),

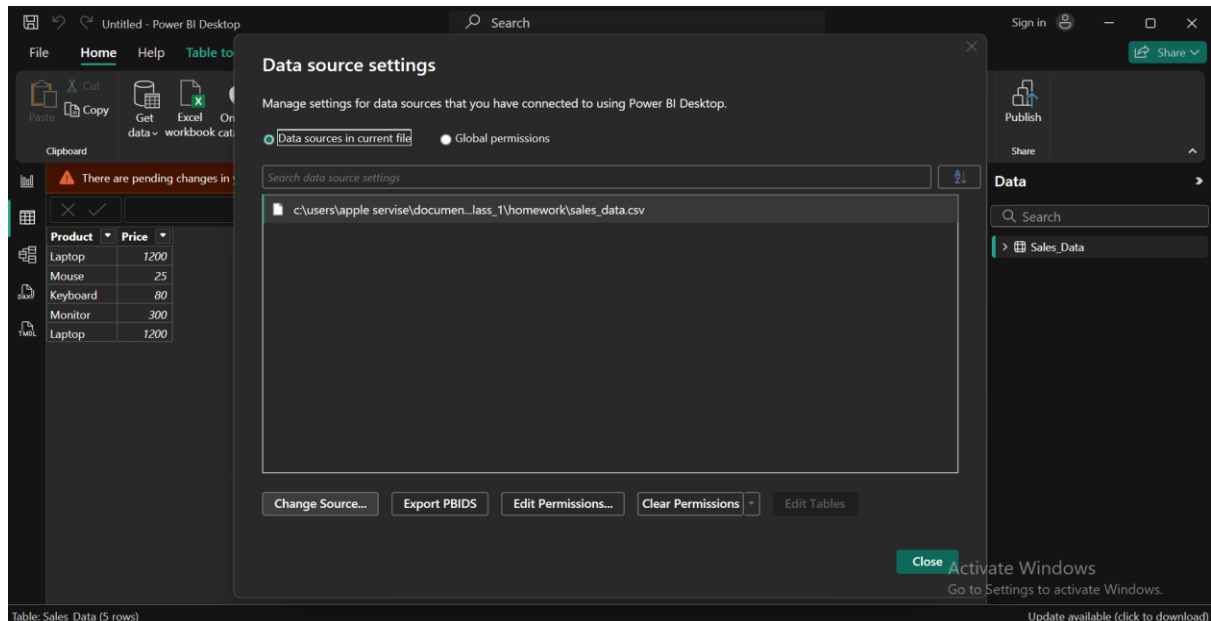#"Filtered Rows" = Table.SelectRows(#"Changed Type", each [Quantity] > 1)

in

#"Filtered Rows"

`Question 12:` How would you change the data source if Sales_Data.csv changed?

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Steps to Change the Data Source:

1. In Power BI Desktop, go to the Home tab.
2. Click Transform data > Data source settings.
3. Select the Sales_Data.csv source and click Change Source....
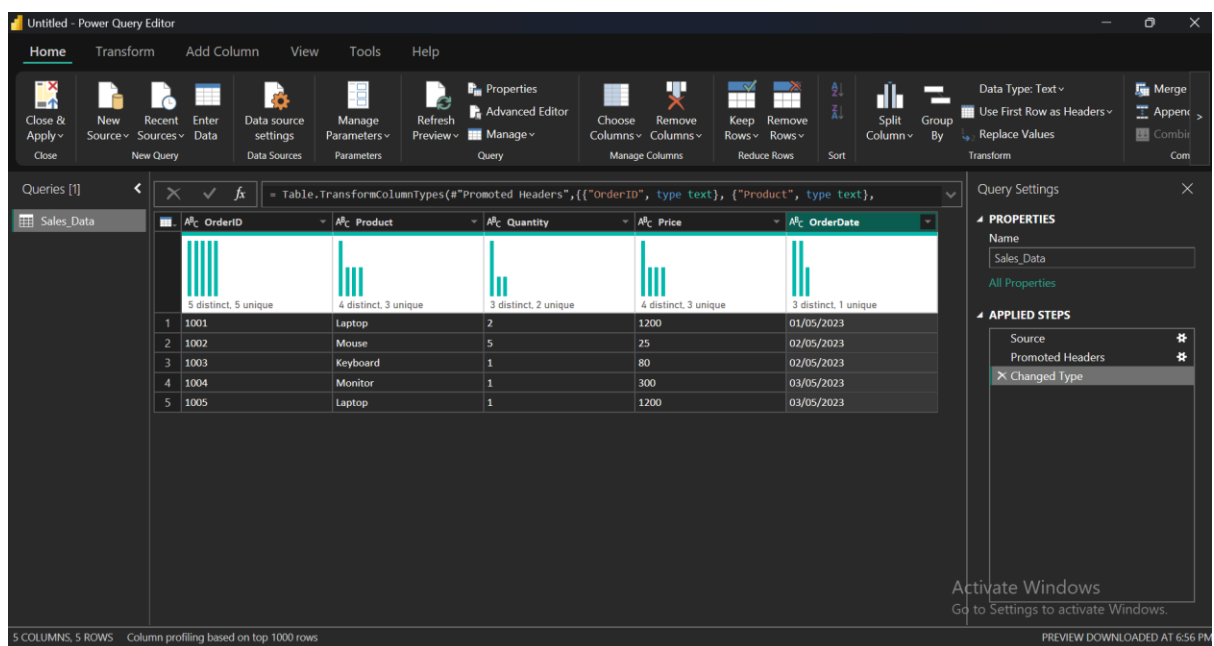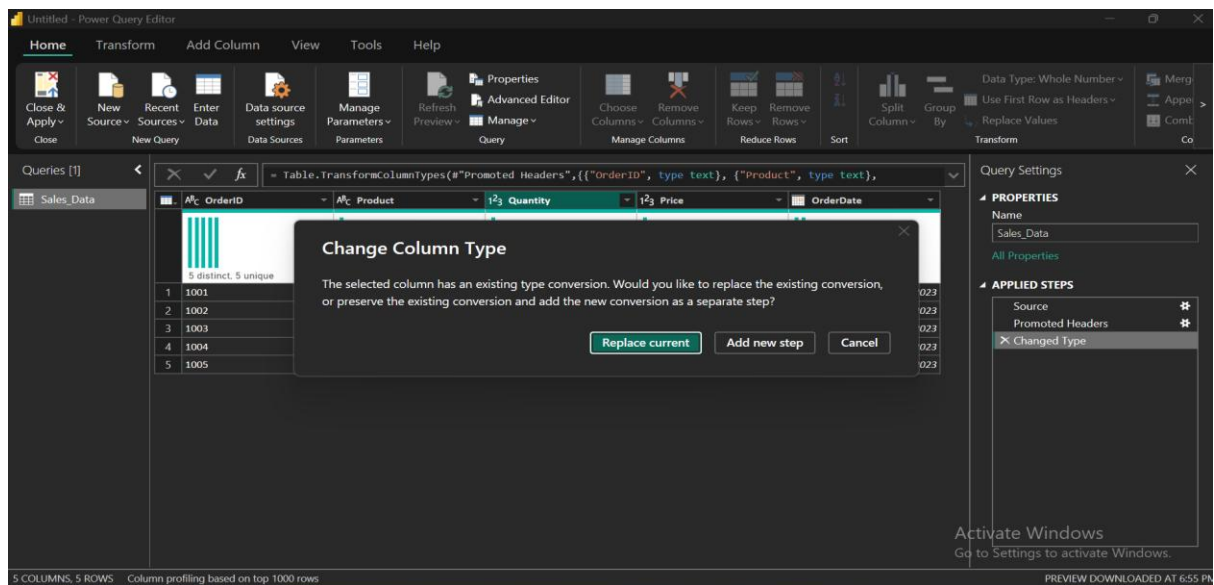4. Browse and select the new file.
5. Click OK.

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

Fix: Force the column to a text type during import.

Steps:

1. In the Power Query Editor, click the data type icon (e.g., `ABC123`) next to the column header.
2. Select Text.
3. Click Replace Current to apply the change.

This ensures all values (numbers, text, errors) are read as text, avoiding the mixed-type conflict. Clean or split the data later if needed.

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

I couldnt do it because i had problems with connecting to the server because of other issues but here is how to do it:

Steps to connect to live SQL with a parameter (e.g., filter by year):

1. **Create a Parameter:**

o In Power BI Desktop, go to **Home** > **Transform data** > **Manage Parameters** > **New**.
o Name: `YearFilter`, Type: **Whole Number**, Value: `2023`.
2. **Connect to SQL Server:**

o **Get Data** > **SQL Server**.
o Enter **Server** and **Database** names.

o   Go to **Advanced Options** and paste:

```sql
SELECT * FROM Sales WHERE Year = @Year
```

o   Click **OK**. A prompt will appear to map `@Year` to your `YearFilter` parameter.

3. **Load Data:**

o   Confirm the mapping. Only data for the specified year will load.

`Question 15:` How would you automate data imports using Power BI and Power Automate?

To automate data imports/refreshes using Power BI + Power Automate:

1. **In Power BI Service:**

o   Publish your .pbix file to a **Power BI Workspace**.
o   Configure your data source credentials (e.g., SQL Server, SharePoint) in the dataset settings.

2. **In Power Automate:**

o   Create a new **automated cloud flow**.
o   Choose a trigger:

▪   **Recurrence** (e.g., refresh daily at 8 AM).
▪   **Event** (e.g., when a new file is added to SharePoint/OneDrive).

o   Add an action: Search for **"Refresh a dataset"**.
o   Select your **Power BI Workspace** and **Dataset**.
o   Save the flow.

Now your dataset will refresh automatically on a schedule or when new data is detected. No manual effort needed.