

Lesson 3

Topic: Data Transformation with Power Query (Part 1)

Prerequisites: Download Customer_Orders.txt, Orders.txt

1. What is the purpose of the "Applied Steps" pane in Power Query?

- It shows each transformation step applied to your data in sequence, allowing you to edit, delete, or reorder steps.

2. How do you remove duplicate rows in Power Query?

- Use Home → Remove Rows → Remove Duplicates, or M-code: `Table.Distinct(Source)`.

3. What does the "Filter" icon do in Power Query?

- It allows you to keep or remove rows based on column values.

4. How would you rename a column from "CustID" to "CustomerID"?

- Right-click the column header → Rename, or M-code: `Table.RenameColumns(Source, {"CustID", "CustomerID"})`.

5. What happens if you click "Close & Apply" in Power Query?

- It applies the changes to the data model and closes the Power Query Editor.

6. Remove all rows where Quantity is less than 2.

- M-code: `Table.SelectRows(Source, each [Quantity] >= 2)`.

7. Split the OrderDate column into separate "Year," "Month," and "Day" columns.

- Use Transform → Date → Year/Month/Day, or "Split Column" by delimiter.

8. Replace all "Mouse" entries in the Product column with "Computer Mouse."

- M-code: `Table.ReplaceValue(Source, "Mouse", "Computer Mouse", Replacer.ReplaceText, {"Product"})`.

9. Sort the table by OrderDate (newest first).

- Home → Sort Descending, or M-code: `Table.Sort(Source, {"OrderDate", Order.Descending})`.

10. How would you handle null values in the Price column?

- Replace them with 0 or an average value: Transform → Replace Values.

11. Write custom M-code to add a column calculating TotalSpent = Quantity * Price.

- `Table.AddColumn(Source, "TotalSpent", each [Quantity] * [Price], type number)`.

12. Group the table by CustID to show total spending per customer.

- Home → Group By, aggregate TotalSpent using Sum.

13. Fix inconsistent date formats in OrderDate.

- Transform → Data Type → Date, choose correct locale.

14. Create a conditional column: Label orders as "High Value" if Price > 100.

- Add Column → Conditional Column.

15. Optimize the query to reduce refresh time.

- Remove unused columns early, filter rows before expanding tables, and disable loading of intermediate queries.