

### 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?

Purpose: It shows each transformation step applied to your data, in order. You can review, delete, or edit any step. This makes data preparation transparent and easy to adjust.

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

Method: Select the columns you want to check for duplicates, then go to the Home tab and click Remove Duplicates.

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

Purpose: The Filter icon lets you include or exclude specific values or ranges in a column, just like Excel filters.

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

Method: Right-click the "CustID" column header and choose Rename, then type "CustomerID".

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

Result: All applied steps are saved, and the transformed data is loaded back into Power BI for reporting or modeling.

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

Method: Filter the Quantity column to keep only rows where Quantity  $\geq 2$  (Filter dropdown or right-click → Number Filters).

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

Method: Select the OrderDate column, go to Add Column > Date > Year/Month/Day, or use Split Column by delimiter if needed.

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

Method: Select Product column, right-click, choose Replace Values, set "Mouse" as the value to find and "Computer Mouse" as the replacement.

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

Method: Click the dropdown arrow on the OrderDate column and select Sort Descending.

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

Method: Replace nulls with a default value using Transform > Replace Values or filter out nulls.

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

powerquery

Копировать

Редактировать

= Table.AddColumn(PreviousStep, "TotalSpent", each [Quantity] \* [Price])

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

Method: Go to Home > Group By, select CustID, aggregate TotalSpent (Sum), or Price\*Quantity as needed.

13. Fix inconsistent date formats (e.g., 01/10/2023 vs. 2023-01-10) in OrderDate.

Method: Change the column type to Date (Transform > Data Type > Date). Power Query will auto-parse most common formats.

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

Method: Use Add Column > Conditional Column or write a custom formula: if [Price] > 100 then "High Value" else "Low Value"

15. Optimize the query to reduce refresh time (e.g., remove unused columns early).

Method: Remove unnecessary columns as early as possible using Remove Columns. This reduces data processed in later steps and speeds up refresh.