
1. What is the difference between "Merge" and "Append" in Power Query?

- **Merge** joins **columns** from two tables based on a key (like SQL JOIN).
- **Append** stacks **rows** from two or more tables with the same structure (like SQL UNION).

2. How do you split a "Full Name" column into "First Name" and "Last Name"?

```
Table.SplitColumn(Source, "Full Name", Splitter.SplitTextByDelimiter(" ",  
QuoteStyle.Csv), {"First Name", "Last Name"})
```

3. What is "Pivot Columns" used for?

- Pivot Columns turn **row values into column headers**, used for summarizing or reshaping data (e.g., convert "Product" values to columns with quantities).

4. How do you undo a step in Power Query?

- In the **Applied Steps** pane, right-click the step and choose **Delete**, or click the "X" icon next to the step.

5. What is the purpose of "Reference" vs. "Duplicate" in queries?

- **Duplicate**: Creates an independent copy of a query.
- **Reference**: Creates a new query that depends on and updates with the original query (linked dynamically).

6. Merge Orders.csv and Customers.xlsx on CustID (inner join)

```
Table.NestedJoin(Orders, "CustID", Customers, "CustID", "Merged",  
JoinKind.Inner)
```

- Then expand the "Merged" column to access customer data.

7. Pivot the Product column to show total Quantity per product

```
Table.Pivot(
  Table.Group(Source, {"CustomerID", "Product"}, {{"TotalQuantity", each
List.Sum([Quantity]), type number}}),
  List.Distinct(Source[Product]),
  "Product",
  "TotalQuantity"
)
```

8. Append two tables with identical columns (e.g., Orders_Jan.csv + Orders_Feb.csv)

```
Table.Combine({Orders_Jan, Orders_Feb})
```

9. Use "Fill Down" to replace nulls in the Email column with the previous value

```
Table.FillDown(Source, {"Email"})
```

10. Extract the domain (e.g., "example.com") from the Email column

```
Table.AddColumn(Source, "Domain", each Text.AfterDelimiter([Email], "@"), type
text)
```

11. Write M-code to merge queries dynamically based on a parameter (e.g., JoinType = "Inner")

```
let
  JoinType = "Inner",
  JoinKindMap = [
    Inner = JoinKind.Inner,
    LeftOuter = JoinKind.LeftOuter,
    RightOuter = JoinKind.RightOuter,
    FullOuter = JoinKind.FullOuter
  ],
  Merged = Table.NestedJoin(Orders, "CustID", Customers, "CustID", "Merged",
JoinKindMap{JoinType})
in
  Merged
```

12. Unpivot a table with columns like "Jan_Sales," "Feb_Sales" into a "Month" and "Sales" format

```
Table.UnpivotOtherColumns(Source, {"CustomerID"}, "Month", "Sales")
```

13. Handle errors in a custom column (e.g., division by zero) using try...otherwise

```
Table.AddColumn(Source, "Result", each try [Revenue] / [Units] otherwise null)
```

14. Create a function in Power Query to clean phone numbers (e.g., remove dashes)

```
let
    CleanPhone = (phone as text) =>
        Text.Select(phone, {"0".."9"})
in
    CleanPhone
```

Usage example:

```
Table.AddColumn(Source, "CleanedPhone", each CleanPhone([Phone]), type text)
```

15. Optimize a query with 10+ steps—identify bottlenecks and simplify

- Combine multiple steps into one when possible (e.g., filter before expand).
- Remove redundant `Changed Type` steps.
- Use `Table.Buffer()` if a query is recalculated multiple times.
- Disable "Auto Detect Types" and manually apply only needed transformations.
- Group steps logically to improve performance and readability.