1. In Power Query, both Merge and Append are used to combine queries (tables), but they work in different ways:

🔹 1. Append Queries

- Think of Append like "stacking tables on top of each other" (like UNION ALL in SQL).
- It combines rows from two or more tables that have the same or similar structure (same columns).

✅ Example:

Table 1 (Sales Jan):

Customer	Product	Sales
Alice	Laptop	1000
Bob	Phone	800

Table 2 (Sales Feb):

Customer	Product	Sales
Charlie	Laptop	1200
David	Phone	900

Append Result (Jan + Feb):

Customer	Product	Sales
Alice	Laptop	1000
Bob	Phone	800
Charlie	Laptop	1200
David	Phone	900

📌 Use Append when you want to combine data from different time periods or sources into one big table.

🔹 2. Merge Queries

- Think of Merge like a JOIN in SQL.
- It combines two tables side by side by matching rows based on a common key (column).
- You can choose join types (Left, Right, Inner, Full Outer, etc.).

✅ Example:

Table 1 (Customers):

CustomerID	Name
1	Alice
2	Bob
3	Charlie

Table 2 (Orders):

OrderID	CustomerID	Amount
101	1	500
102	2	700
103	4	900

Merge (Left Join on CustomerID):

CustomerID	Name	OrderID	Amount
1	Alice	101	500
2	Bob	102	700
3	Charlie	null	null

📌 Use Merge when you want to look up related information from another table.

🔹 Summary

Feature	Append Queries (UNION)	Merge Queries (JOIN)
Purpose	Add more rows	Add more columns
Structure	Tables must have same/similar columns	Tables can be different
SQL Analogy	UNION / UNION ALL	JOIN (Left, Right, Inner, Full)
Use Case	Combine monthly files into one	Add lookup info (e.g., Customer names to Orders)

2. 🔹 Method 1: Using the Split Column Feature

1. In Power Query Editor, select your column (e.g., Full Name).
2. Go to the Home or Transform tab → click Split Column → By Delimiter.
3. Choose Space as the delimiter (since names are separated by spaces).
4. Choose At the left-most delimiter if you want:
    - First word → First Name
    - Remaining part → Last Name
5. Now you will have two new columns: Full Name.1 (First Name) and Full Name.2 (Last Name).
6. Rename them as First Name and Last Name. ✅

🔹 Method 2: Custom Column with Formula

If names are always two parts only (e.g., "John Smith"):

- Add a Custom Column with this formula:
- Text.BeforeDelimiter([Full Name], " ")

→ Extracts First Name

- Another column for Last Name:
- Text.AfterDelimiter([Full Name], " ")

→ Extracts Last Name

🔹 Example

Full Name	First Name	Last Name
John Smith	John	Smith
Alice Johnson	Alice	Johnson
Bob Lee	Bob	Lee

⚠️ Note: If some people have middle names (e.g., "Mary Ann Lee"), splitting by space will create three columns. In that case you need rules (e.g., take first word as First Name, last word as Last Name, middle names in another column).

3. In Power Query, the Pivot Columns feature is used to transform row values into new columns.

🔹 What it does:

- Takes a column that contains *categories* (e.g., Product type, Month, Region).
- Turns those unique values into separate columns.
- Then it aggregates the data (e.g., sum, count, average) for another column.

🔹 Example

Suppose you have this table:

Customer	Product	Quantity
Alice	Apple	5
Alice	Banana	3
Bob	Apple	2
Bob	Banana	4

If you Pivot the Product column, with Quantity as values, you get:

Customer	Apple	Banana
Alice	5	3
Bob	2	4

👉 Now each product becomes its own column.

🔹 Why it's useful:

- Makes the table wider instead of longer.
- Useful for reporting, cross-tab analysis, comparisons.
- Often used when preparing data for charts or dashboards.

⚠️ Opposite of Pivot = Unpivot Columns (turns columns into rows).

4. In Power Query, every change you make is recorded as a step in the Applied Steps pane (on the right).
If you want to undo something, you have a few options:

✅ Ways to Undo a Step:

1. Delete a Step
   - Go to the Applied Steps pane (right side).
   - Find the step you want to remove.
   - Click the ❌ (X) next to it.
   - That action will be undone.
2. Use Right-Click → Delete
   - Right-click on the step name in the Applied Steps list.
   - Choose Delete (removes only that step).
   - Or choose Delete Until End (removes this and all steps after it).
3. Keyboard Shortcut
   - If you just made the change, press Ctrl + Z (Undo).
   - This works only for the last action.

👉 So the easiest way: look at Applied Steps → click ❌ next to the unwanted step.

5. 🔹 Duplicate

- Makes a full copy of the query (including all applied steps).
- The new query is independent of the original.
- If you later change the original query, the duplicated one will not update.
- Think of it like *copy-paste*.

👉 Use case: When you want to start from the same data but then build a totally separate transformation process.

🔹 Reference

- Creates a linked query that points back to the original query's output.
- If you update the original query, the reference query automatically reflects those changes.
- Reference queries are lightweight, because they don't duplicate the steps.

👉 Use case: When you want to reuse the cleaned data from an existing query for different purposes (e.g., one version for a summary table, another for detailed analysis).

⚡ Example:

- Query Orders → you clean and filter raw order data.
- Reference Orders → use it to group by Customer.
- Reference Orders again → use it to calculate sales by Product.

This way, you keep one single source of truth (Orders), and multiple outputs depend on it.