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

    Applied Steps demonstrates every changes which we made in Power Query Editor and we can delete the step(s) if we want, because we can't directly come back the steps with ctrl + z.

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

    We can remove duplicate rows in several ways:

    1. Clicking table icon on the top-left side of table→remove duplicates
    2. In home, clicking remove rows in reduce rows section, and choose remove duplicates command

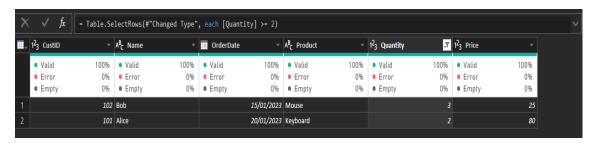3. **What does the "Filter" icon do in Power Query?**

    Filter icon gives chance to filter data in different ways including ascending, descending, or just drop data and keep others, and etc.

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

    We can rename by just clicking two times column name and write new column name, or clicking right side of mouse and choose rename command.

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

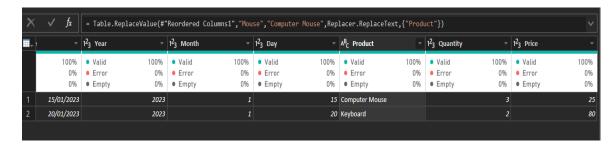Power Query is closed and transformed data is loaded.

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

`= Table.SelectRows(#"Changed Type", each [Quantity] >= 2)`

1²₃ CustID		Aᴮ꜀ Name		⊞ OrderDate		Aᴮ꜀ Product		1²₃ Quantity		1²₃ Price	
● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%
● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%
● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%
1	102	Bob		15/01/2023		Mouse		3		25	
2	101	Alice		20/01/2023		Keyboard		2		80	

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

1²₃ CustID		Aᴮ꜀ Name		⊞ OrderDate		1²₃ Year		1²₃ Month		1²₃ Day	
● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%
● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%
● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%
1	102	Bob		15/01/2023		2023		1		15	
2	101	Alice		20/01/2023		2023		1		20	

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

`= Table.ReplaceValue(#"Reordered Columns1","Mouse","Computer Mouse",Replacer.ReplaceText,{"Product"})`

		1²₃ Year		1²₃ Month		1²₃ Day		Aᴮ꜀ Product		1²₃ Quantity		1²₃ Price	
	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%
	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%
	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%
1	15/01/2023	2023		1		15		Computer Mouse		3		25	
2	20/01/2023	2023		1		20		Keyboard		2		80	

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

```
= Table.Sort(#"Replaced Value",{{"OrderDate", Order.Ascending}})
```

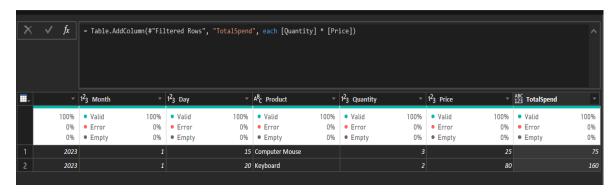| CustID	Name	OrderDate	Year	Month	Day	Product
● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid
● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error
● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty
1	102 Bob	15/01/2023	2023	1	15	Computer Mouse
2	101 Alice	20/01/2023	2023	1	20	Keyboard

10. How would you handle null values in the Price column?
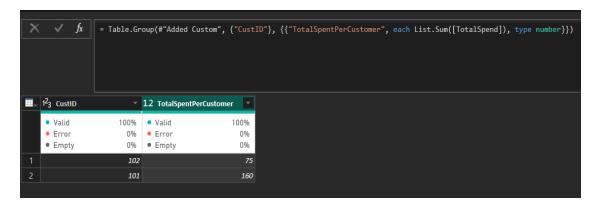
It usually depends on data and its type. For example, I change null values in text data with unknown, if it is number data type, I change usually with 0. And also there are many options average, median, or fill up and fill down, etc

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

Table.AddColumn(#"Filtered Rows", "TotalSpend", each [Quantity] * [Price])

```
= Table.AddColumn(#"Filtered Rows", "TotalSpend", each [Quantity] * [Price])
```

Month	Day	Product	Quantity	Price	TotalSpend
● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%
● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%
● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%
1	2023	1	15 Computer Mouse	3	25	75
2	2023	1	20 Keyboard	2	80	160

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

```
= Table.Group(#"Added Custom", {"CustID"}, {{"TotalSpentPerCustomer", each List.Sum([TotalSpend]), type number}})
```

1²₃ CustID	1.2 TotalSpentPerCustomer
● Valid 100%	● Valid 100%
● Error 0%	● Error 0%
● Empty 0%	● Empty 0%
1	102	75
2	101	160

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

```
= Table.TransformColumns(
    #"Filtered Rows",
    {{"OrderDate", each Date.ToText(_, "yyyy-MM-dd"), type text}}
)
```

1²₃ CustID	Aᴮ_C Name	Aᴮ_C OrderDate	1²₃ Year	1²₃ Month	1²₃ Day	Aᴮ_C Product
● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid
● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error
● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty
1	102	Bob	2023-01-15	2023		1	15 Computer Mouse
2	101	Alice	2023-01-20	2023		1	20 Keyboard

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

```
= Table.AddColumn(#"Added Custom", "Price Level", each if [Price] > 100 then "High Value" else "Normal Value")
```

	1²₃ Month	1²₃ Day	Aᴮ_C Product	1²₃ Quantity	1²₃ Price	ABC 123 Price Level
100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%
0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%	● Error 0%
0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%
1	2023	1	10 Laptop	1	1200	High Value
2	2023	1	15 Computer Mouse	3	25	Normal Value
3	2023	1	20 Keyboard	2	80	Normal Value
4	2023	1	25 Monitor	1	300	High Value

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

I removed Name column to optimize, because I have already customers name in other table