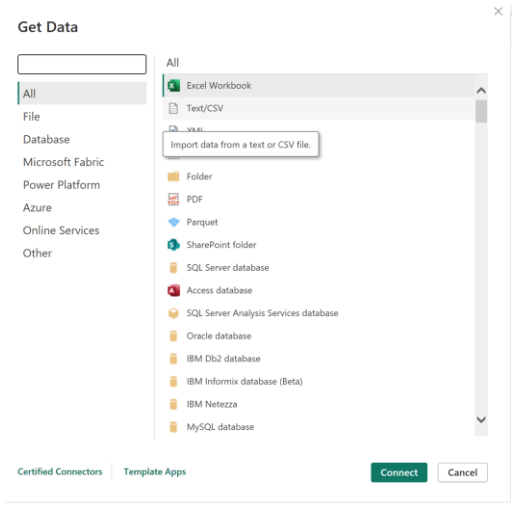
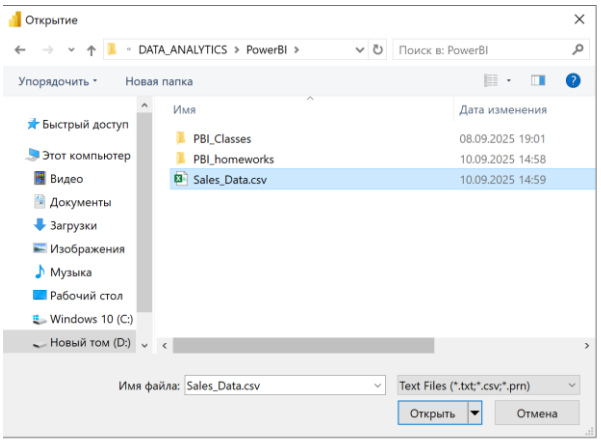
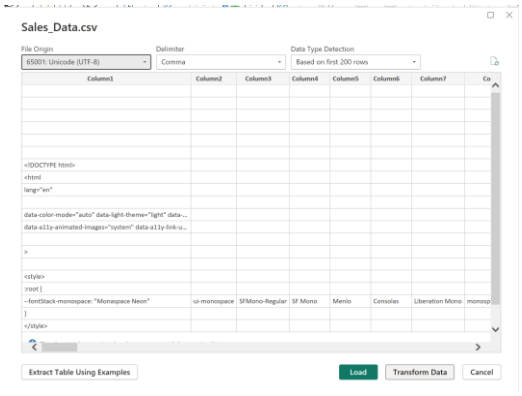
Lesson 2 – Importing Data into Power BI

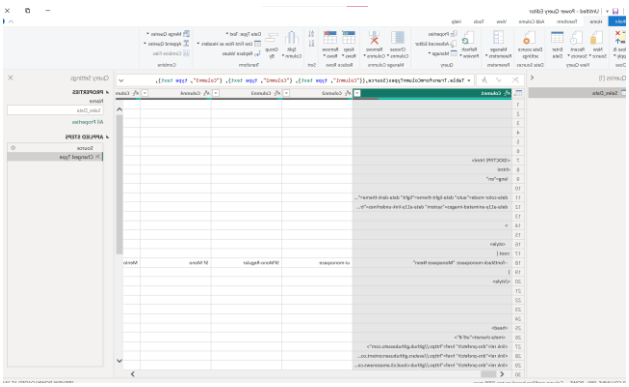
Topic: Importing Data into Power BI

Prerequisites: Download Sales_Data.csv









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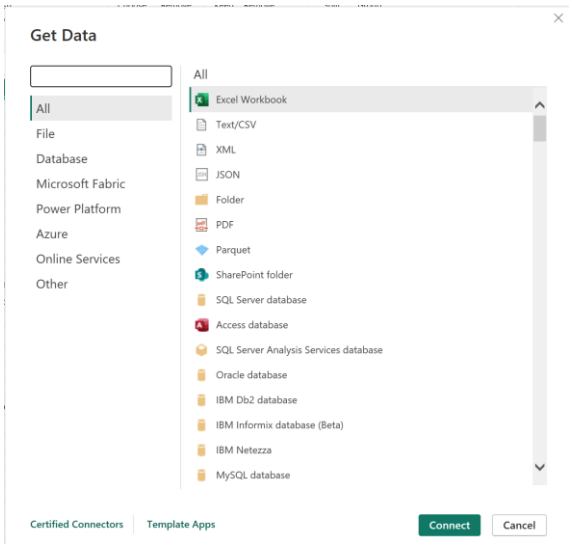
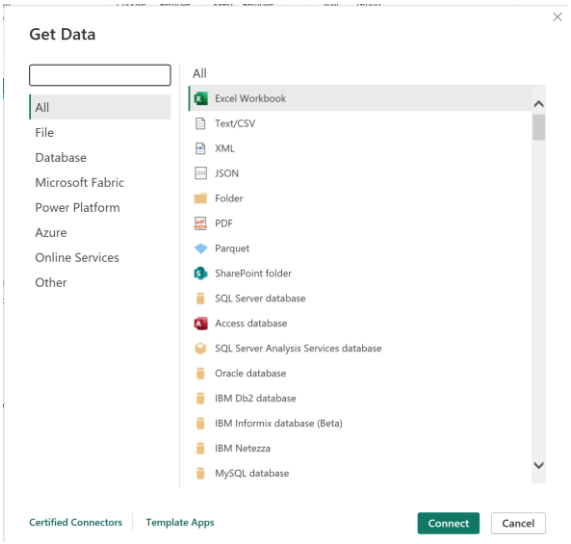
1. List three data sources Power BI can connect to.

- Excel
- SQL Server
- Web (API / website)

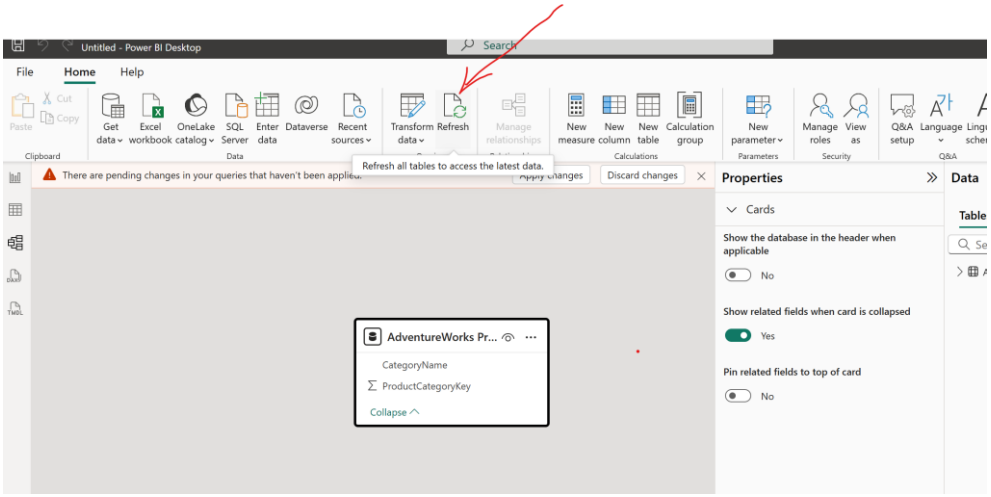
(Other examples: SharePoint, Oracle, JSON, CSV, Azure, etc.)



2. What is the first step to import data into Power BI Desktop?
Open Power BI → **Home** → **Get Data** → select a data source.



3. How do you refresh imported data in Power BI?
On the ribbon → **Home** → **Refresh** (or press Ctrl+R).

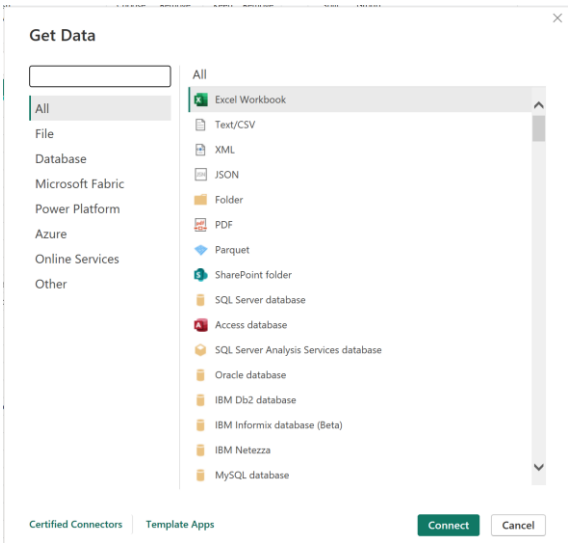


4. What file formats can Power BI import directly? (Name two.)

- .csv
- .xlsx

(Also JSON, XML, txt, etc.)

5. What does the "Navigator" window show after selecting a data source?
It displays a list of tables/sheets/objects available for loading.



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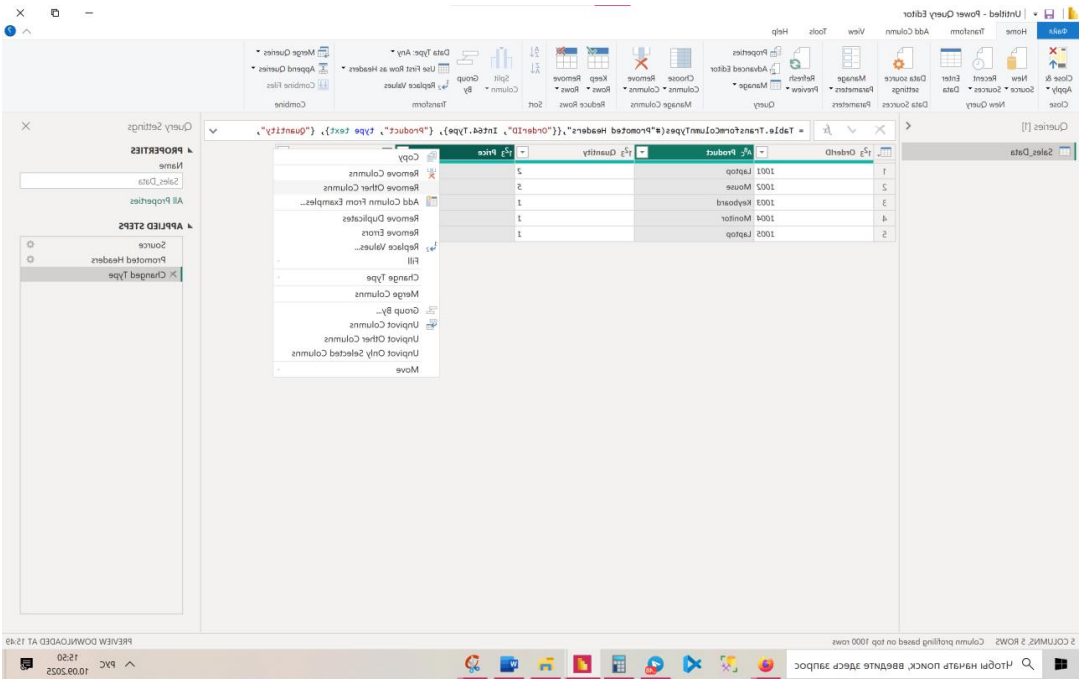
6. Import Sales_Data.csv and load only the "Product" and "Price" columns.

In Power Query Editor → select the required columns → **Remove Other Columns** → **Close & Load**.



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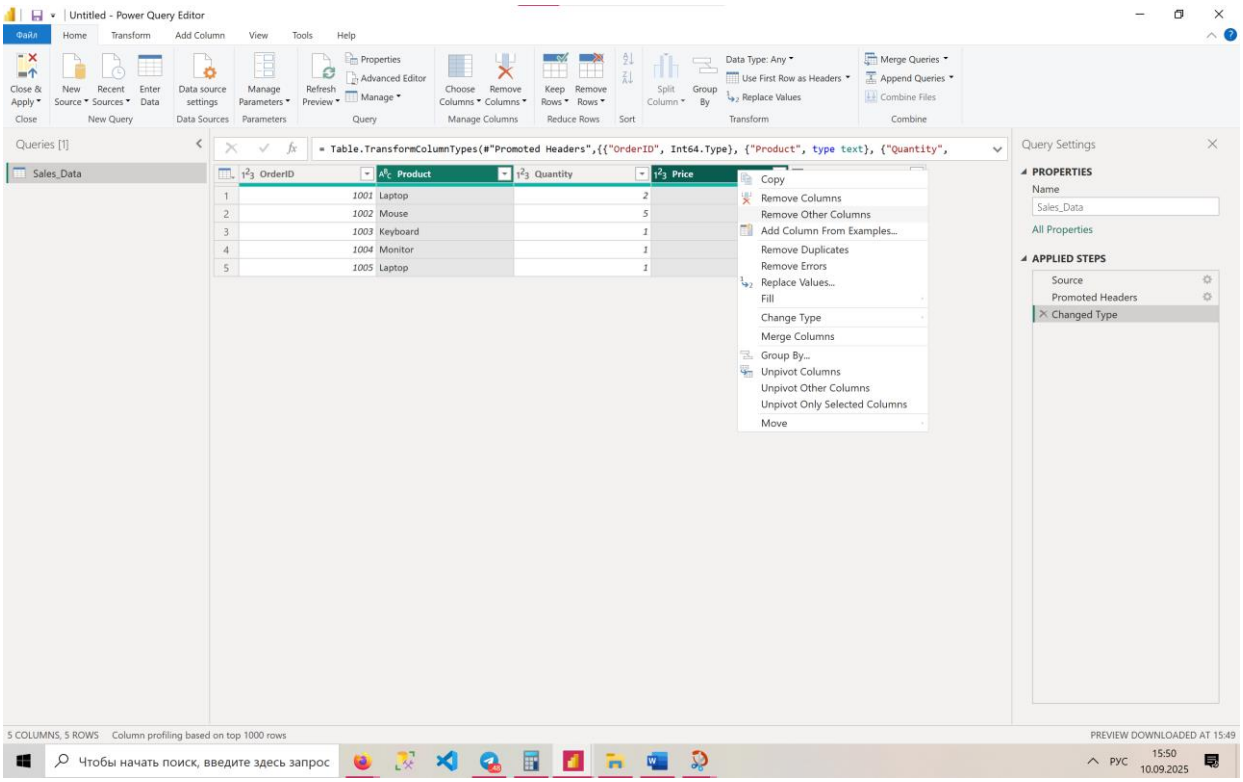
7. How would you change OrderDate to a date format during import?

In Power Query Editor:

- Select the **OrderDate** column
- In the **Data Type** menu choose **Date**



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8. What is the difference between "Load" and "Transform Data" in the import dialog?

- **Load** – immediately loads the data into the model without changes.
- **Transform Data** – opens Power Query Editor to clean and prepare data.

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9. Why might you see an error when connecting to a SQL database? (Name one reason.)

- Incorrect login/password
- No access rights to the server
- Firewall blocking the connection

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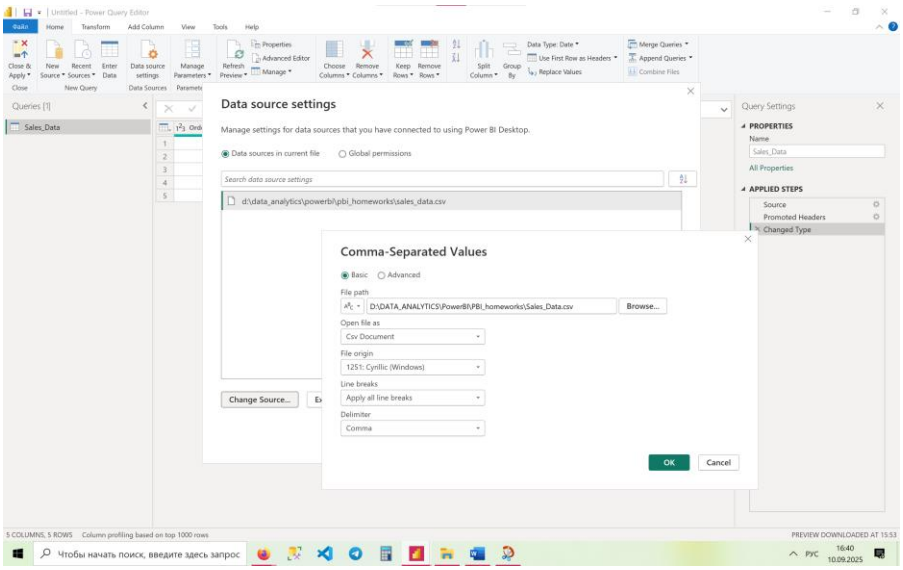
10. How do you replace a data source after importing it?

Go to Power Query Editor → **Home** → **Data source settings** → Change Source.



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11. Write the M-code to import only rows where Quantity > 1.

```
let
    Source = Csv.Document(File.Contents("C:\Sales_Data.csv"),
[Delimiter=",", Columns=5, Encoding=65001, QuoteStyle=QuoteStyle.None]),
    PromotedHeaders = Table.PromoteHeaders(Source,
[PromoteAllScalars=true]),
    ChangedType = Table.TransformColumnTypes(PromotedHeaders,
{{"OrderID", Int64.Type}, {"Product", type text}, {"Quantity", Int64.Type},
{"Price", Int64.Type}, {"OrderDate", type date}}),
    FilteredRows = Table.SelectRows(ChangedType, each [Quantity] > 1)
In FilteredRows
```

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12. How would you change the data source if Sales_Data.csv changed?

Through **Data source settings → Change Source** and point to the new file path.

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13. Troubleshoot: Your CSV import fails due to a "mixed data type" error—how do you fix it?

- In Power Query → select the column → **Change Type** to the correct type (e.g., Text or Number).
- If values are inconsistent → replace or remove invalid rows.

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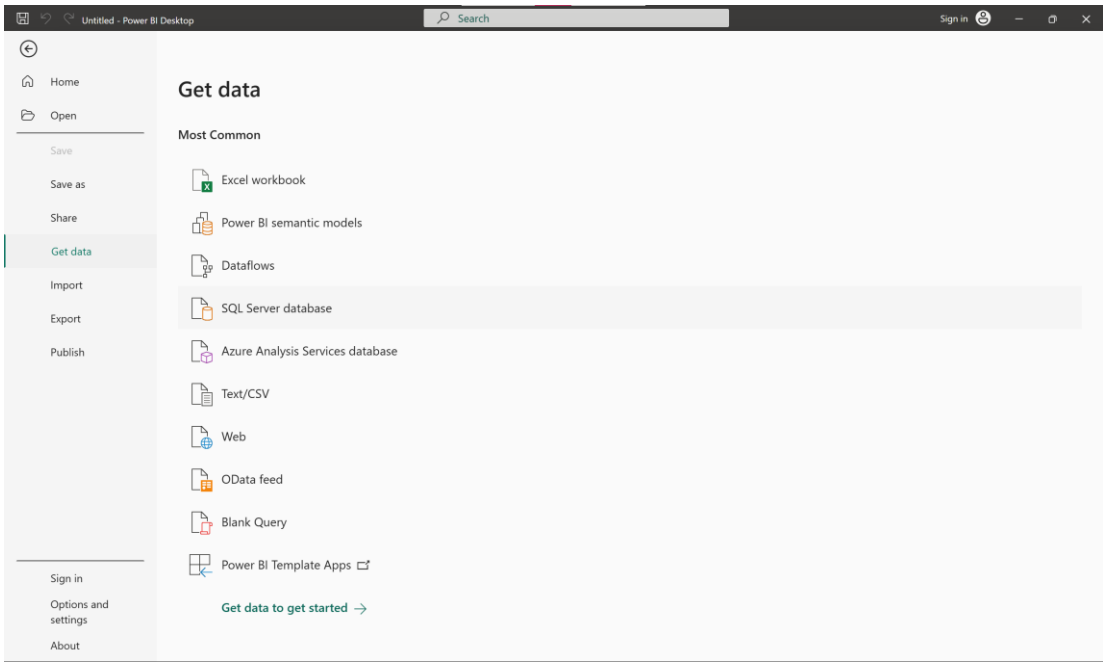
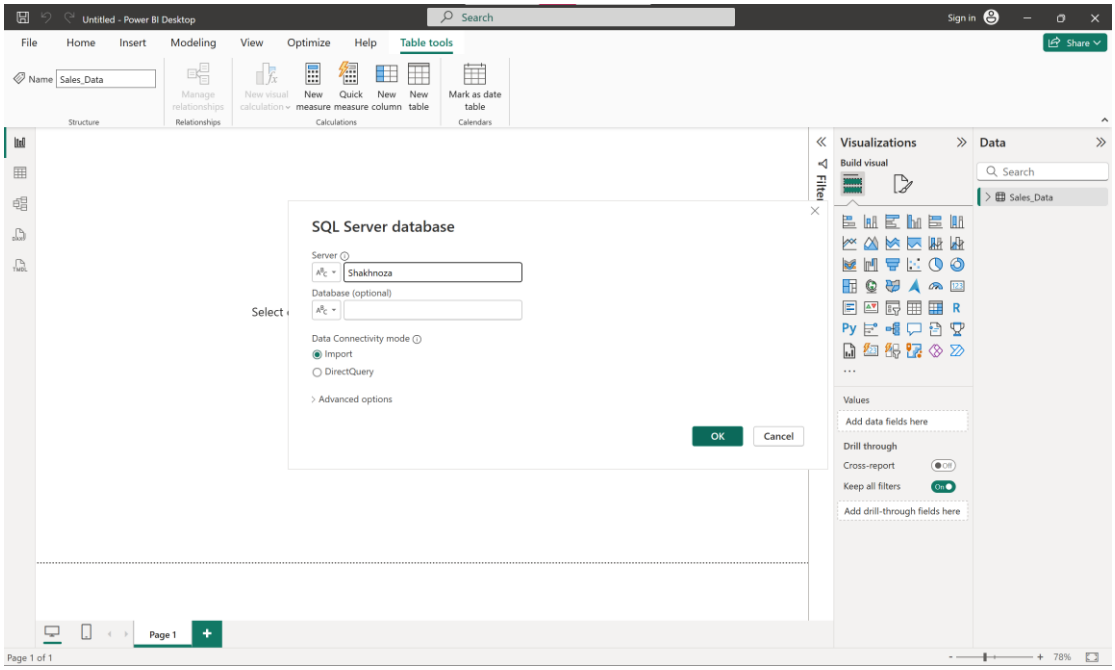
14. Connect to a live SQL database with parameters (e.g., filter by year).

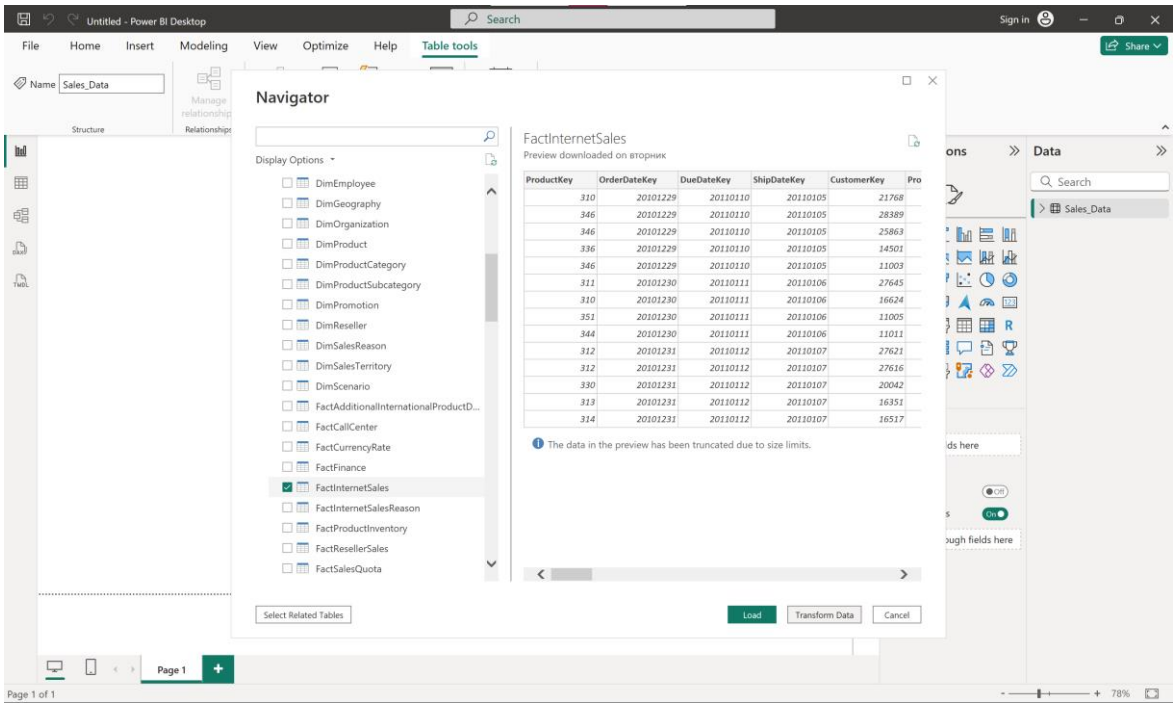
In Power Query you can define a parameter:

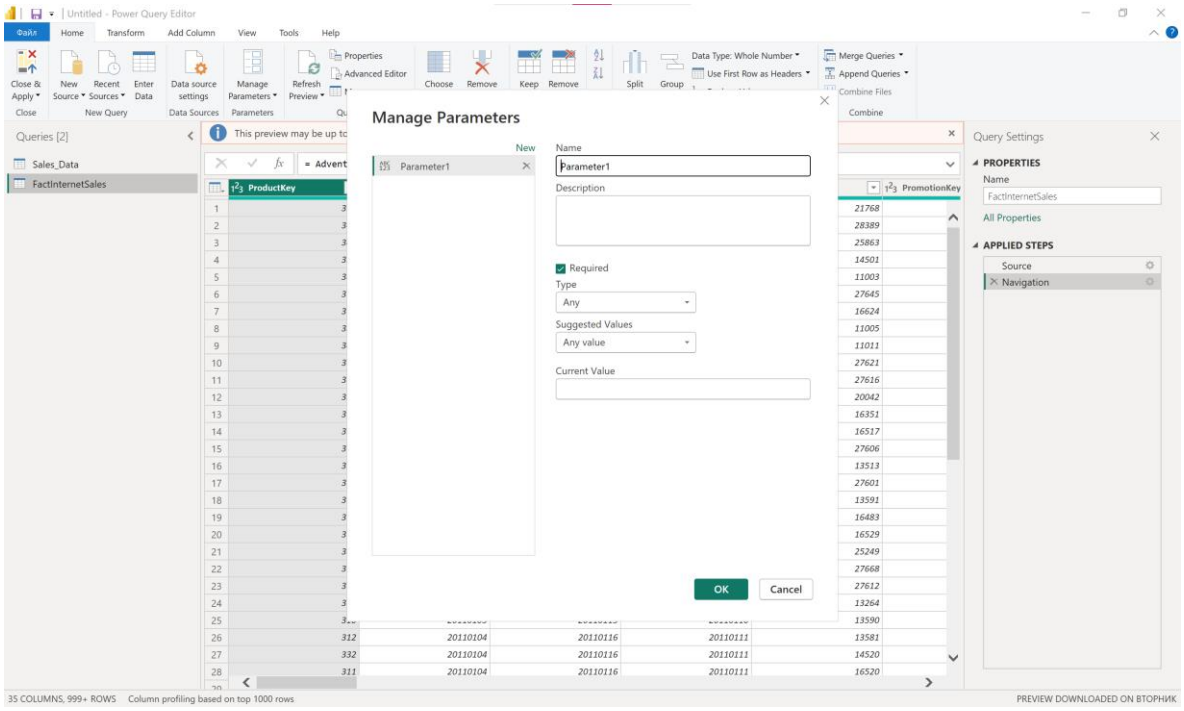
```
let
    YearParam = 2023,
    Source = Sql.Database("ServerName", "DatabaseName"),
    SalesTable = Source{[Schema="dbo",Item="Sales"]}[Data],
```

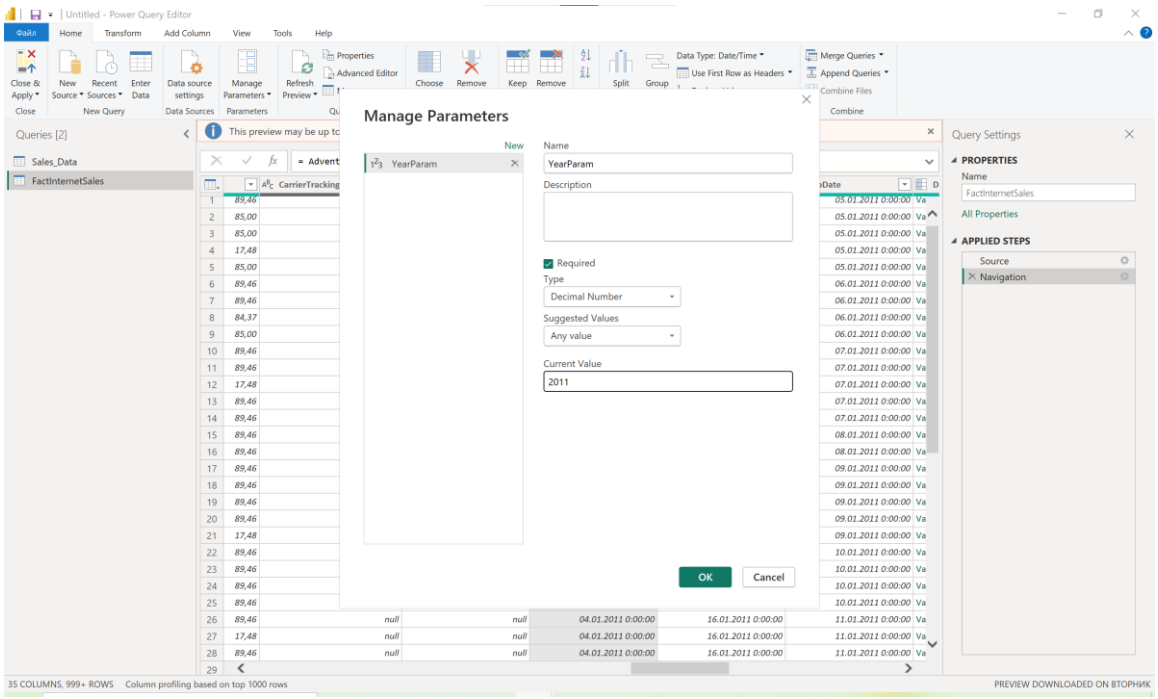
FilteredRows = Table.SelectRows(SalesTable, each Date.Year([OrderDate]) = YearParam)
in
FilteredRows

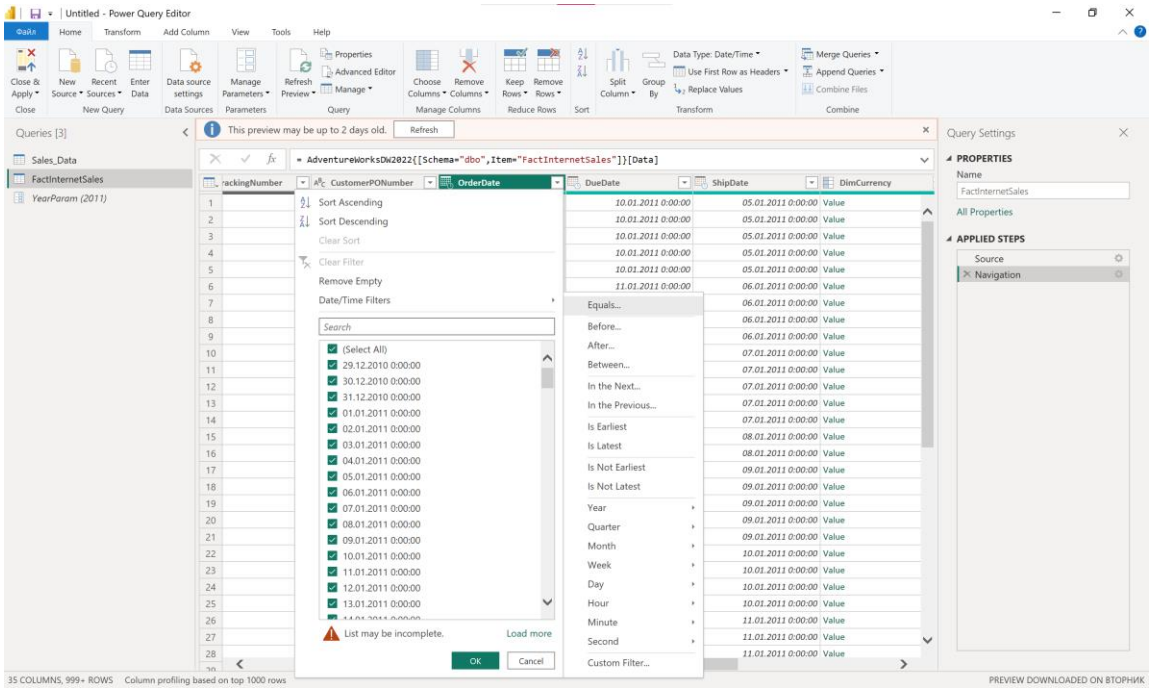


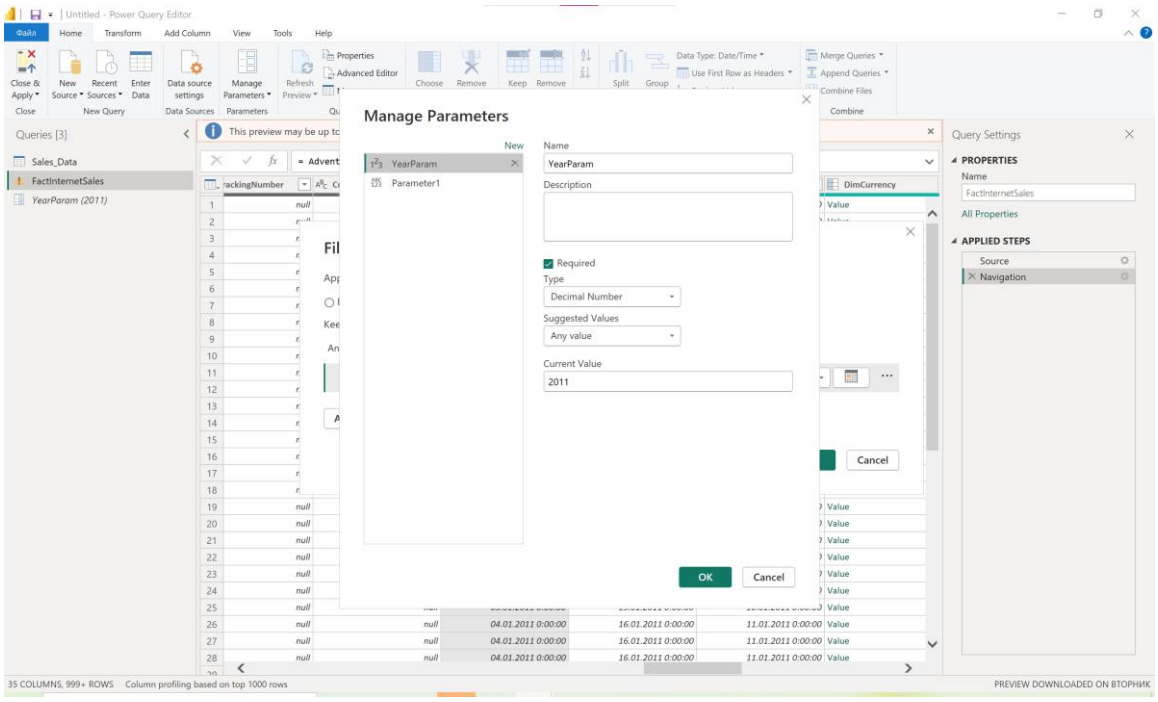


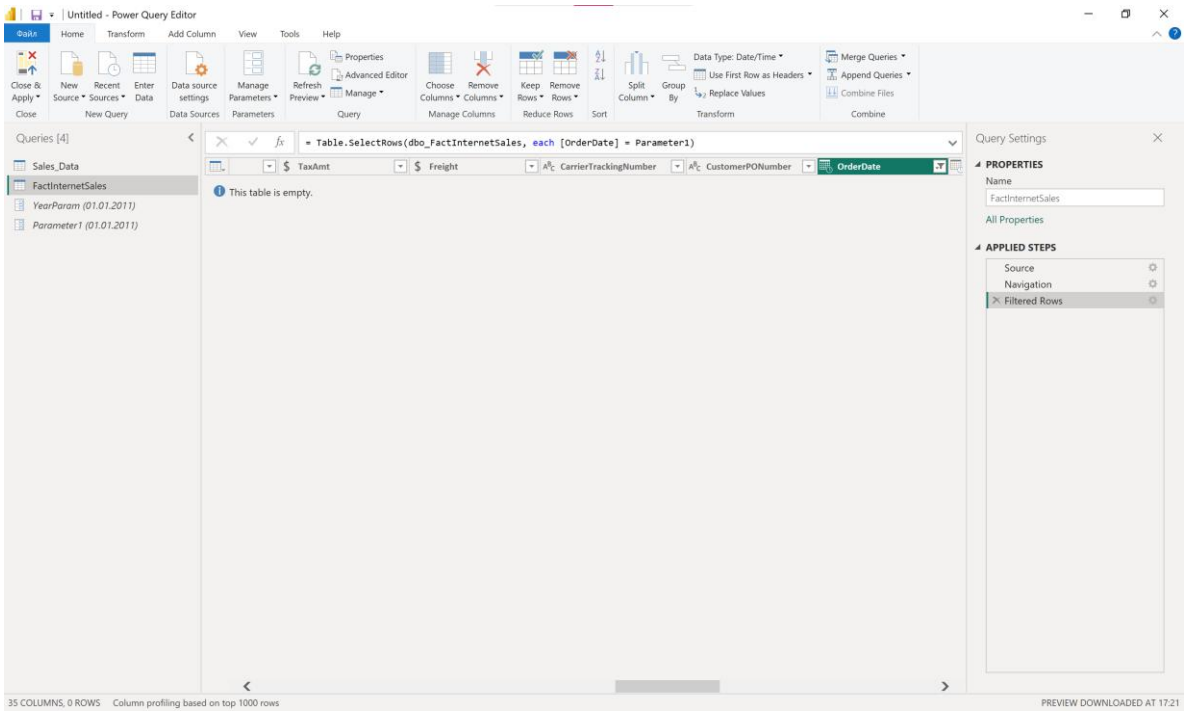

Untitled - Power BI Desktop
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Table tools
Share
Name
Sales_Data
Structure
Relationships
Navigator
Display Options
DimEmployee
DimGeography
DimOrganization
DimProduct
DimProductCategory
DimProductSubcategory
DimPromotion
DimReseller
DimSalesReason
DimSalesTerritory
DimScenario
FactAdditionalInternationalProductD...
FactCallCenter
FactCurrencyRate
FactFinance
FactInternetSales
FactInternetSalesReason
FactProductInventory
FactResellerSales
FactSalesQuota
FactInternetSales
Preview downloaded on вторник
ProductKey
OrderDateKey
DueDateKey
ShipDateKey
CustomerKey
Pro
310 20101229 20110110 20110105 21768
346 20101229 20110110 20110105 28389
346 20101229 20110110 20110105 25863
336 20101229 20110110 20110105 14501
346 20101229 20110110 20110105 11003
311 20101230 20110111 20110106 27645
310 20101230 20110111 20110106 16624
351 20101230 20110111 20110106 11005
344 20101230 20110111 20110106 11011
312 20101231 20110112 20110107 27621
312 20101231 20110112 20110107 27616
330 20101231 20110112 20110107 20042
313 20101231 20110112 20110107 16351
314 20101231 20110112 20110107 16517
The data in the preview has been truncated due to size limits.
Select Related Tables
Load
Transform Data
Cancel
Data
Search
Sales_Data
Page 1
Page 1 of 1
78%


Untitled - Power Query Editor
File
Home
Transform
Add Column
View
Tools
Help
Close & Apply
New Source
Recent Sources
Enter Data
Data source settings
Manage Parameters
Refresh Preview
Properties
Advanced Editor
Choose
Remove
Keep
Remove
Split
Group
Data Type: Whole Number
Use First Row as Headers
Merge Queries
Append Queries
Combine Files
Close
New Query
Data Sources
Parameters
Combine
Queries [2]
Sales_Data
FactInternetSales
Manage Parameters
New
Parameter1
Name
Parameter1
Description
Required
Type
Any
Suggested Values
Any value
Current Value
OK
Cancel
Query Settings
PROPERTIES
Name
FactInternetSales
All Properties
APPLIED STEPS
Source
Navigation
ProductKey
PromotionKey
35 COLUMNS, 999+ ROWS
Column profiling based on top 1000 rows
PREVIEW DOWNLOADED ON ВТОРНИК


Untitled - Power Query Editor
Manage Parameters
New
YearParam
Name
YearParam
Description
Required
Type
Decimal Number
Suggested Values
Any value
Current Value
2011
OK
Cancel
Queries [2]
Sales_Data
FactInternetSales
Query Settings
PROPERTIES
Name
FactInternetSales
All Properties
APPLIED STEPS
Source
Navigation
35 COLUMNS, 999+ ROWS
Column profiling based on top 1000 rows
PREVIEW DOWNLOADED ON BTOPHИК


Untitled - Power Query Editor
Queries [3]
Sales_Data
FactInternetSales
YearParam (2011)
This preview may be up to 2 days old.
Refresh
= AdventureWorksDW2022[[Schema="dbo",Item="FactInternetSales"]]{Data}
CustomerPONumber
OrderDate
DueDate
ShipDate
DimCurrency
Sort Ascending
Sort Descending
Clear Sort
Clear Filter
Remove Empty
Date/Time Filters
Search
(Select All)
29.12.2010 0:00:00
30.12.2010 0:00:00
31.12.2010 0:00:00
01.01.2011 0:00:00
02.01.2011 0:00:00
03.01.2011 0:00:00
04.01.2011 0:00:00
05.01.2011 0:00:00
06.01.2011 0:00:00
07.01.2011 0:00:00
08.01.2011 0:00:00
09.01.2011 0:00:00
10.01.2011 0:00:00
11.01.2011 0:00:00
12.01.2011 0:00:00
13.01.2011 0:00:00
List may be incomplete.
Load more
OK
Cancel
Equals...
Before...
After...
Between...
In the Next...
In the Previous...
Is Earliest
Is Latest
Is Not Earliest
Is Not Latest
Year
Quarter
Month
Week
Day
Hour
Minute
Second
Custom Filter...
Query Settings
PROPERTIES
Name
FactInternetSales
All Properties
APPLIED STEPS
Source
Navigation
35 COLUMNS, 999+ ROWS
Column profiling based on top 1000 rows
PREVIEW DOWNLOADED ON BTOPHИК





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15. How would you automate data imports using Power BI and Power Automate?

- Publish the report to Power BI Service.
- In Power Automate create a **Flow** that triggers a **Dataset Refresh** on a schedule or event.