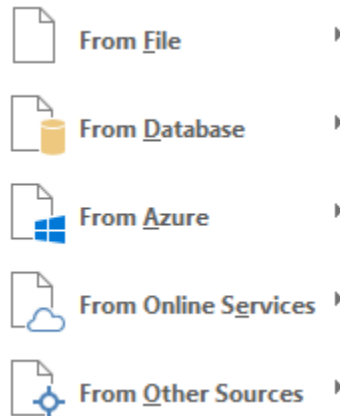


# Microsoft Excel 2016: PowerQuery

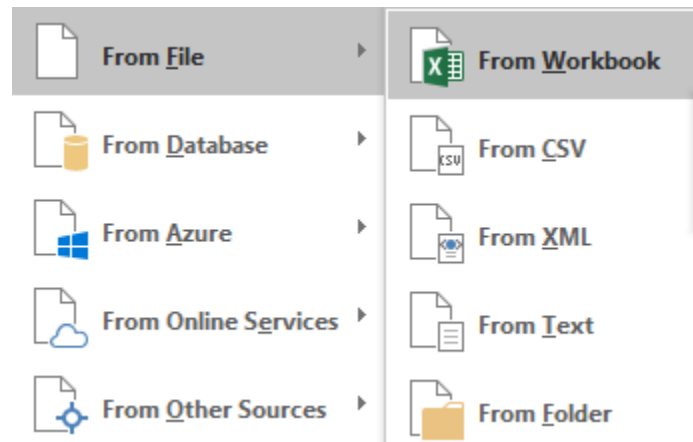
## PowerQuery

PowerQuery allows you to connect to external websites, spreadsheets, databases, and other data sources.

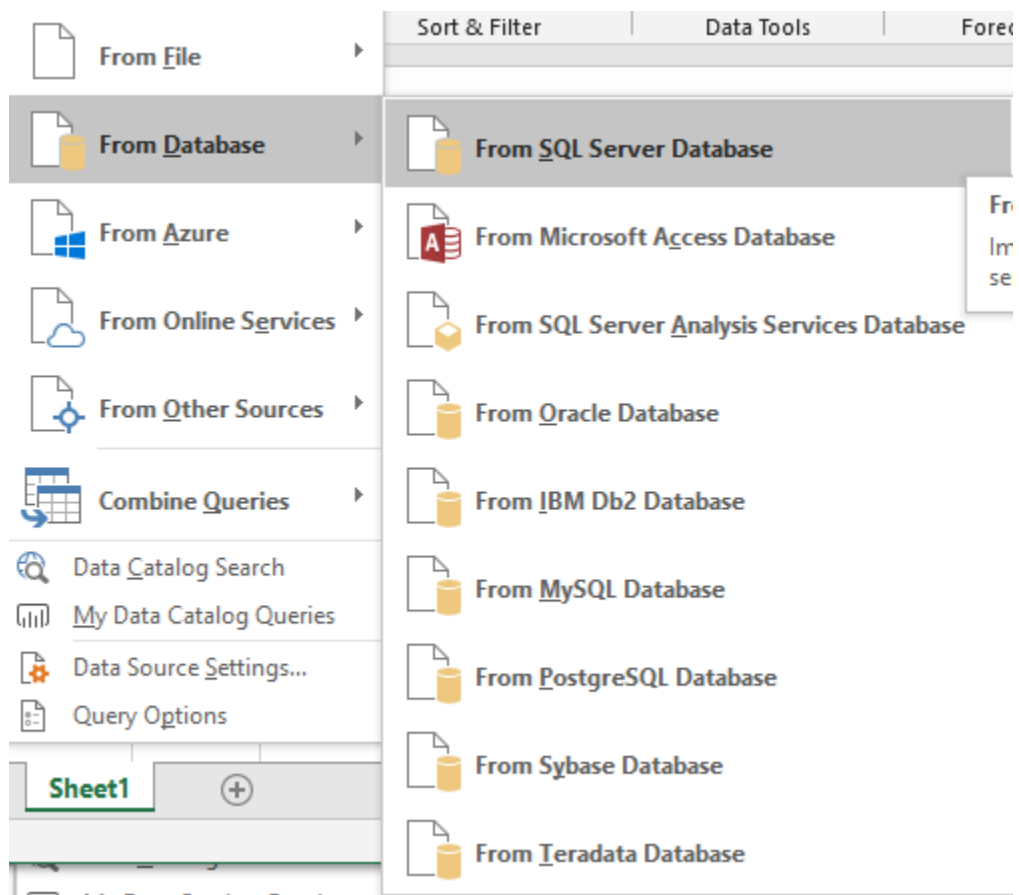
1. Open a blank Excel spreadsheet
2. To start PowerQuery, click on the Data tab.
3. On the upper left of the screen, in the section Get & Transform, click on the down arrow next to New Query. This is the PowerQuery section, although it is not currently labelled PowerQuery. The list of possible data sources will appear.



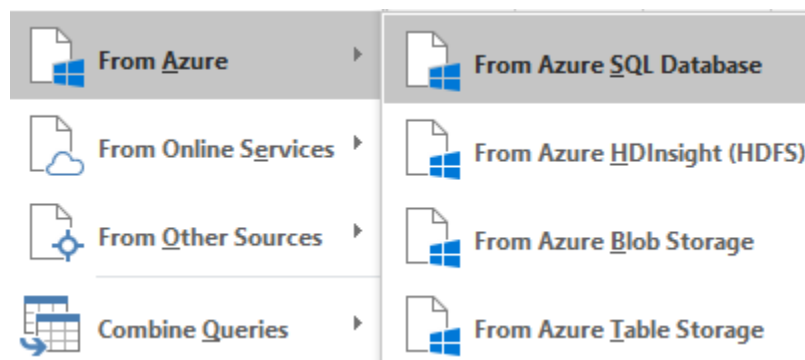
4. Put your cursor over 'From File', and a list of the options will appear.



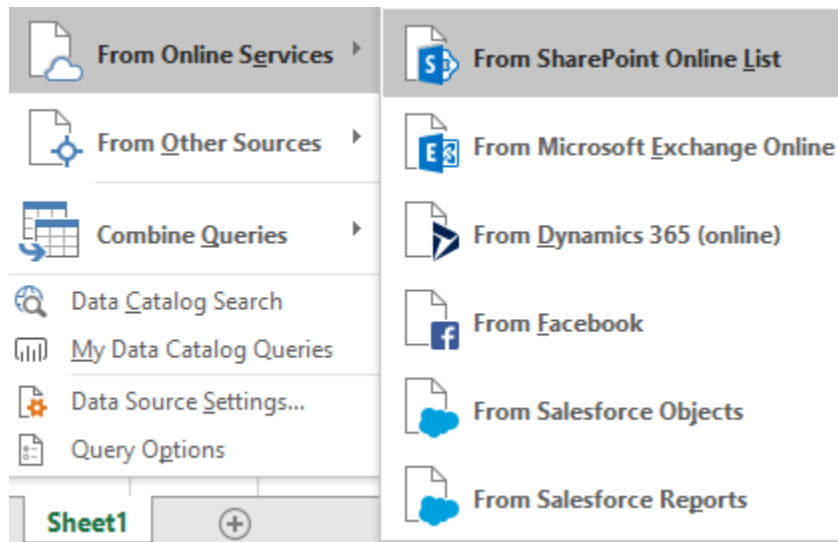
5. Next, put the cursor over From Database.



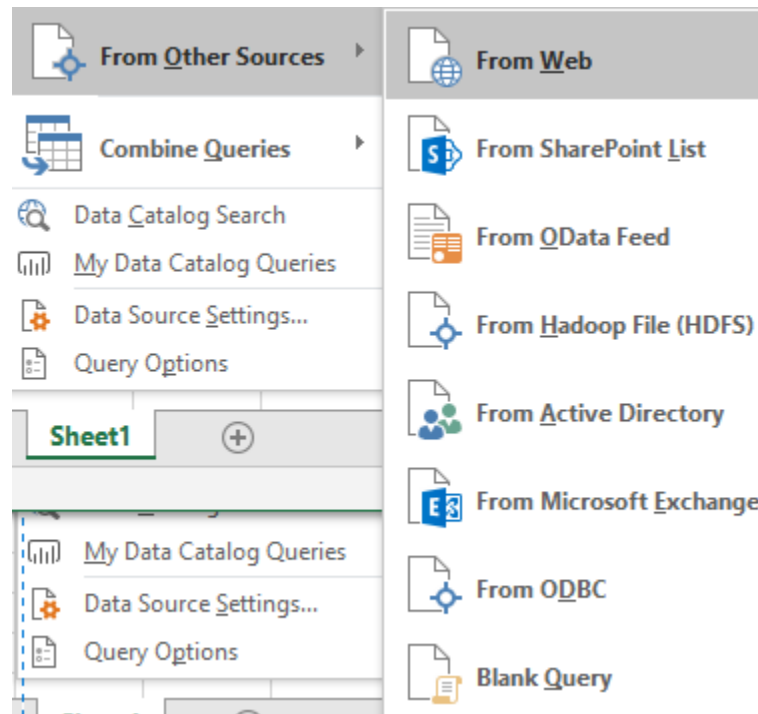
6. Now try From Azure.



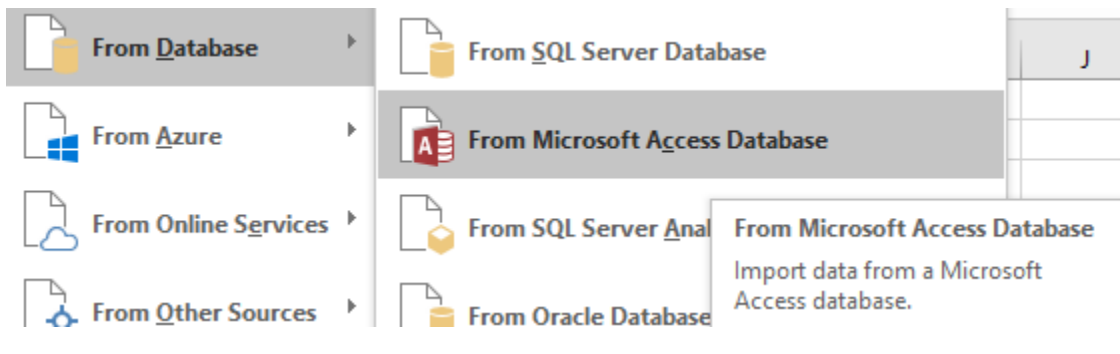
7. Try From Online Services



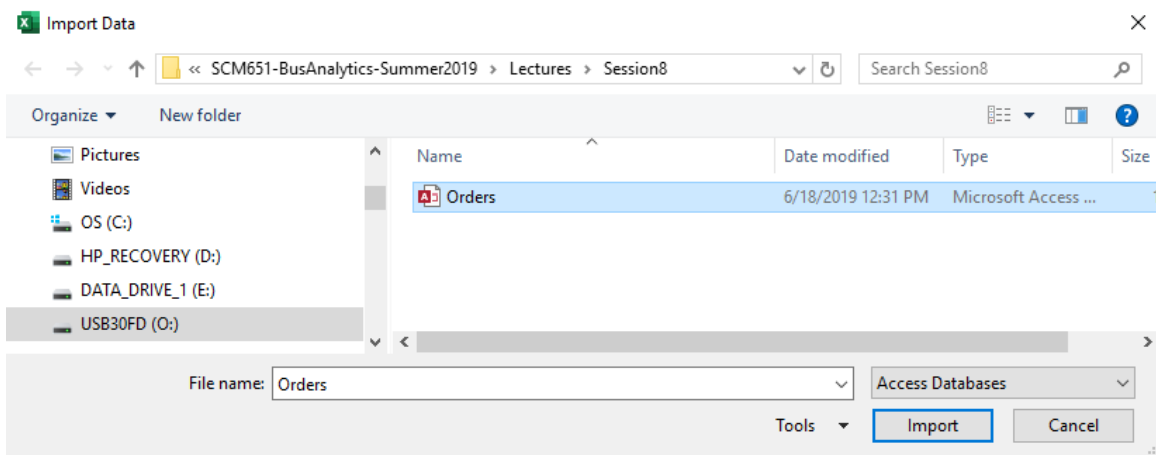
8. Finally, click on From Other Sources



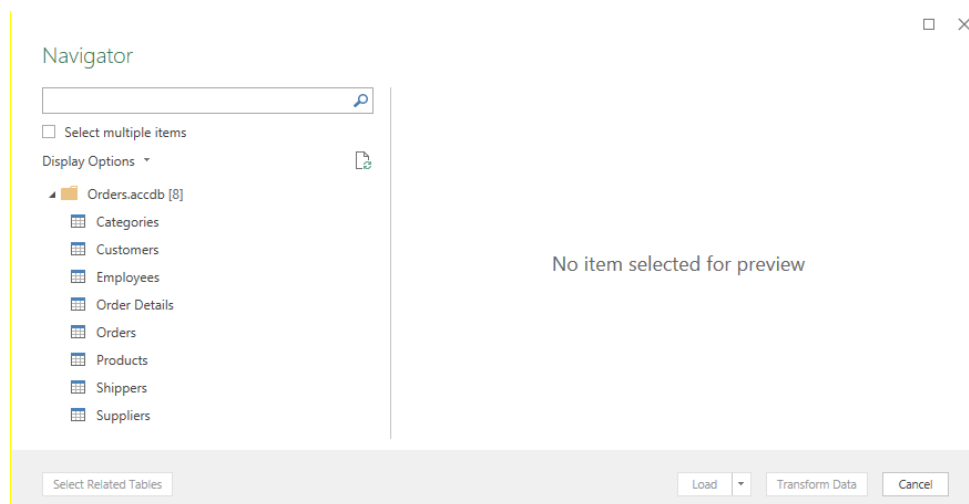
9. Let's now connect to our data. Click New Query, From Microsoft Access Database



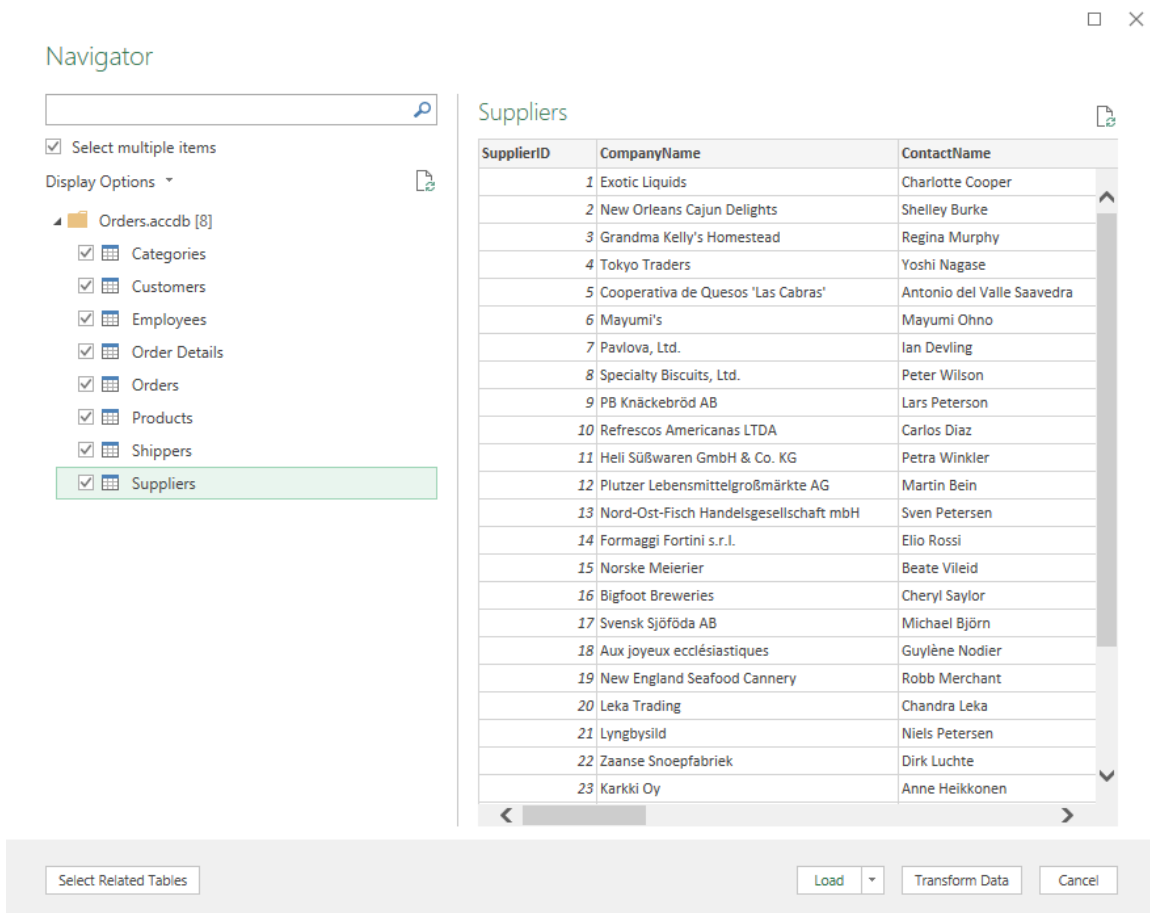
10. Find the downloaded file Orders.accdb. Click on the file name, then Import.



11. To connect to all tables, first check the box Select multiple items



12. Next, check the box in front of each table name, then click Load



Navigator

Select multiple items

Display Options ▾

Orders.accdb [8]

- ☒ Categories
- ☒ Customers
- ☒ Employees
- ☒ Order Details
- ☒ Orders
- ☒ Products
- ☒ Shippers
- ☒ Suppliers

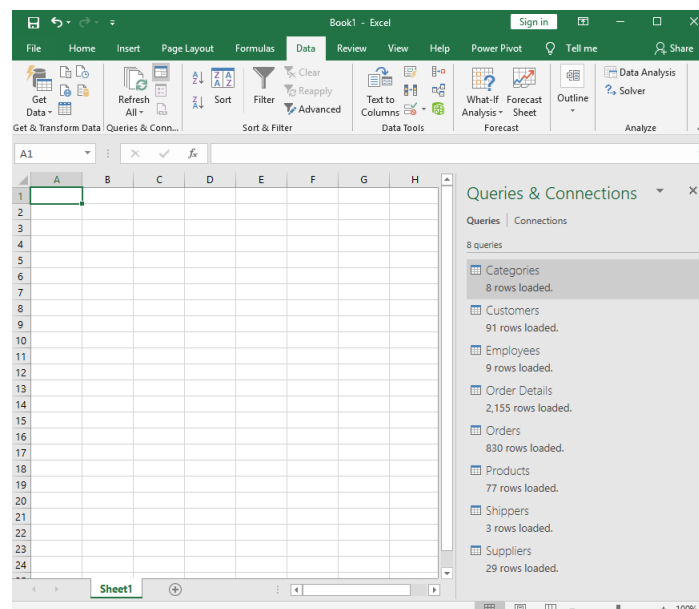
Suppliers

SupplierID	CompanyName	ContactName
1	Exotic Liquids	Charlotte Cooper
2	New Orleans Cajun Delights	Shelley Burke
3	Grandma Kelly's Homestead	Regina Murphy
4	Tokyo Traders	Yoshi Nagase
5	Cooperativa de Quesos 'Las Cabras'	Antonio del Valle Saavedra
6	Mayumi's	Mayumi Ohno
7	Pavlova, Ltd.	Ian Devling
8	Specialty Biscuits, Ltd.	Peter Wilson
9	PB Knäckebröd AB	Lars Peterson
10	Refrescos Americanas LTDA	Carlos Diaz
11	Heli Süßwaren GmbH & Co. KG	Petra Winkler
12	Plutzer Lebensmittelgroßmärkte AG	Martin Bein
13	Nord-Ost-Fisch Handelsgesellschaft mbH	Sven Petersen
14	Formaggi Fortini s.r.l.	Elio Rossi
15	Norske Meierier	Beate Vileid
16	Bigfoot Breweries	Cheryl Saylor
17	Svensk Sjöföda AB	Michael Björn
18	Aux joyeux ecclésiastiques	Guyène Nodier
19	New England Seafood Cannery	Robb Merchant
20	Leka Trading	Chandra Leka
21	Lyngbysild	Niels Petersen
22	Zaanse Snoepfabriek	Dirk Luchte
23	Karkki Oy	Anne Heikkinen

Select Related Tables

Load ▾ Transform Data Cancel

13. All of the table connections via Power Query will be listed on the right.



Book1 - Excel

File Home Insert Page Layout Formulas Data Review View Help Power Pivot Tell me Share

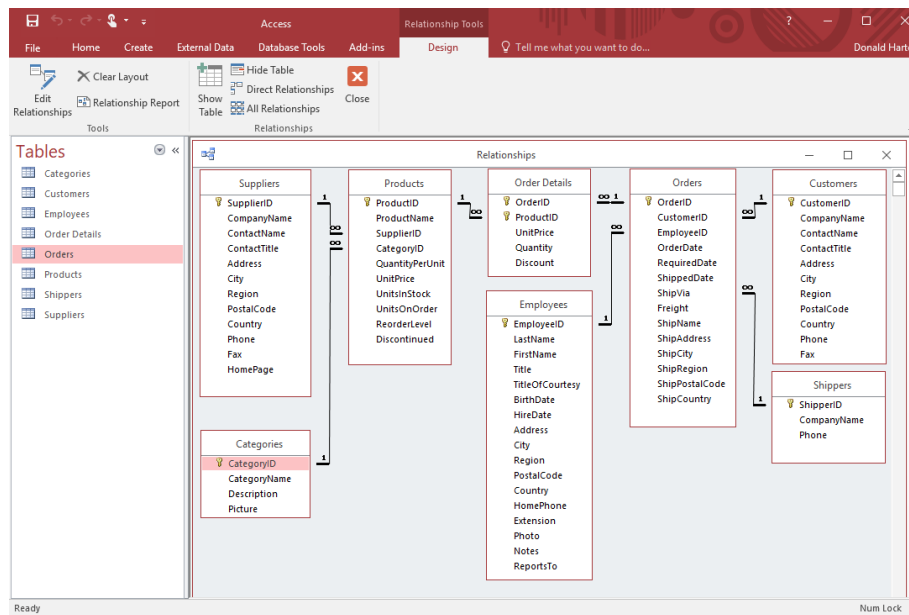
Get Data Refresh Sort Filter Advanced Filter Reapply Data Tools What-If Analysis Forecast Outline Solver

Queries & Connections

8 queries

- Categories 8 rows loaded.
- Customers 91 rows loaded.
- Employees 9 rows loaded.
- Order Details 2,155 rows loaded.
- Orders 830 rows loaded.
- Products 77 rows loaded.
- Shippers 3 rows loaded.
- Suppliers 29 rows loaded.

14. Save your PowerQuery worksheet as clicking on File, Save As, PowerQuery (you can name it anything that you want).
15. Recall the relationships that we had in Access with these tables.



16. Click on the Data tab, in the Data Tools section click on Relationships. The Manage Relationships screen will appear. Check that the relationships match the diagram above.
17. Click close when you've confirmed that all relationships are there.

Manage Relationships

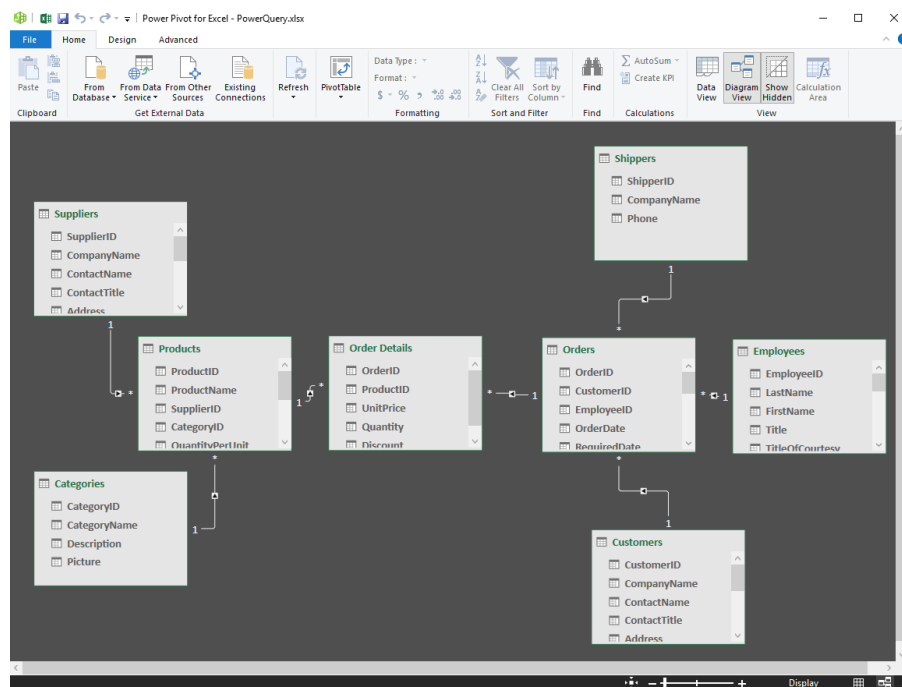
Status	Table ▲	Related Lookup Table
Active	Order Details (OrderID)	Orders (OrderID)
Active	Order Details (ProductID)	Products (ProductID)
Active	Order Details (CustomerID)	Customers (CustomerID)
Active	Orders (EmployeeID)	Employees (EmployeeID)
Active	Orders (ShipVia)	Shippers (ShipperID)
Active	Products (CategoryID)	Categories (CategoryID)
Active	Products (SupplierID)	Suppliers (SupplierID)

Buttons: New..., Auto-Detect..., Edit..., Activate, Deactivate, Delete, Close

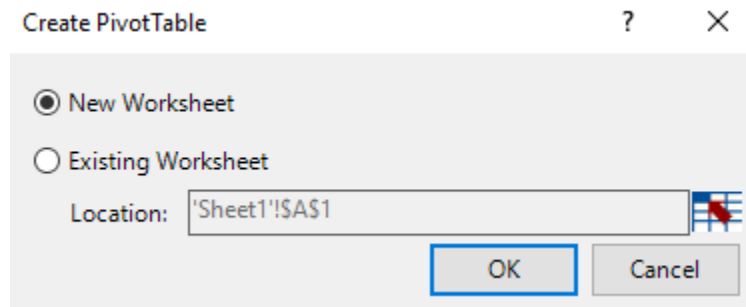
18. To see the relationships in a different view, click on the Data tab, then in the Data Tools section, click on Manage Data Model

	CategoryID	CategoryName	Description	Picture	Add Column
1	1	Beverages	Soft drinks, c...	Binary Data	
2	2	Condiments	Sweet and sa...	Binary Data	
3	3	Confections	Desserts, can...	Binary Data	
4	4	Dairy Products	Cheeses	Binary Data	
5	5	Grains/Cereals	Breads, crack...	Binary Data	
6	6	Meat/Poultry	Prepared me...	Binary Data	
7	7	Produce	Dried fruit an...	Binary Data	
8	8	Seafood	Seaweed and...	Binary Data	

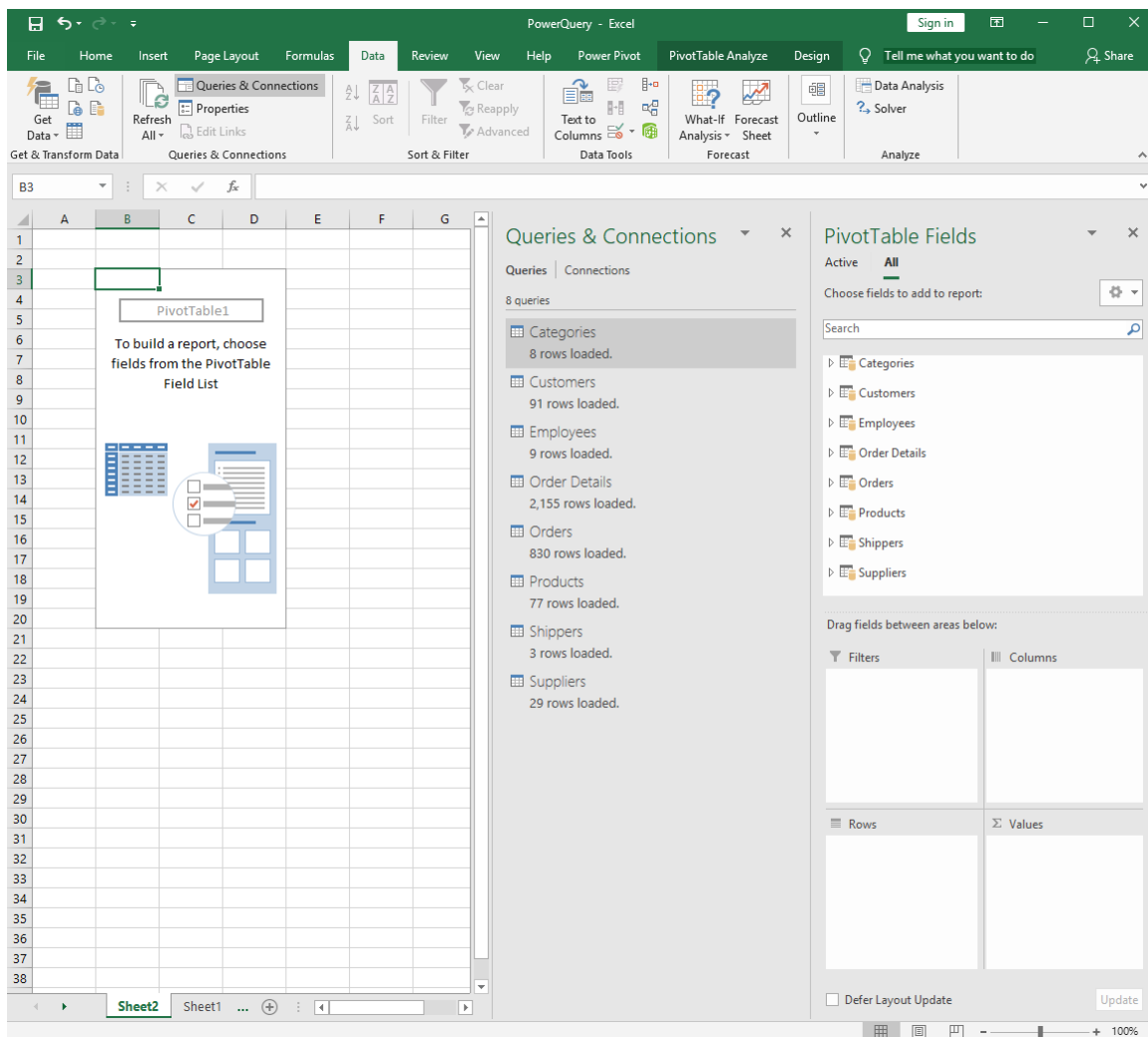
19. Now click on Diagram View (upper right corner of screen); this shows the relationship diagram for our two tables.



20. At the top of the diagram view of the data model, click on Pivot Table, then Pivot Table, then on the screen below, click OK.

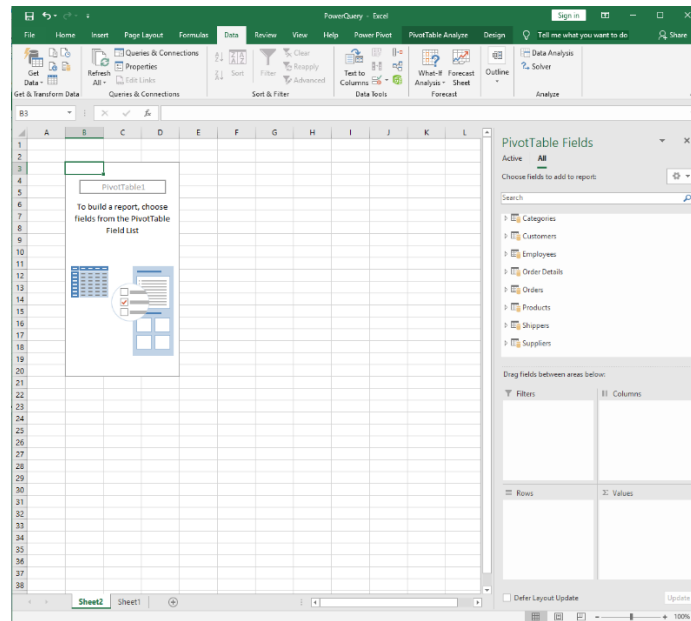


21. You will see a Pivot Table, with the data tables to the right. The two tables with relationships created have the dark bar at the top of the table.

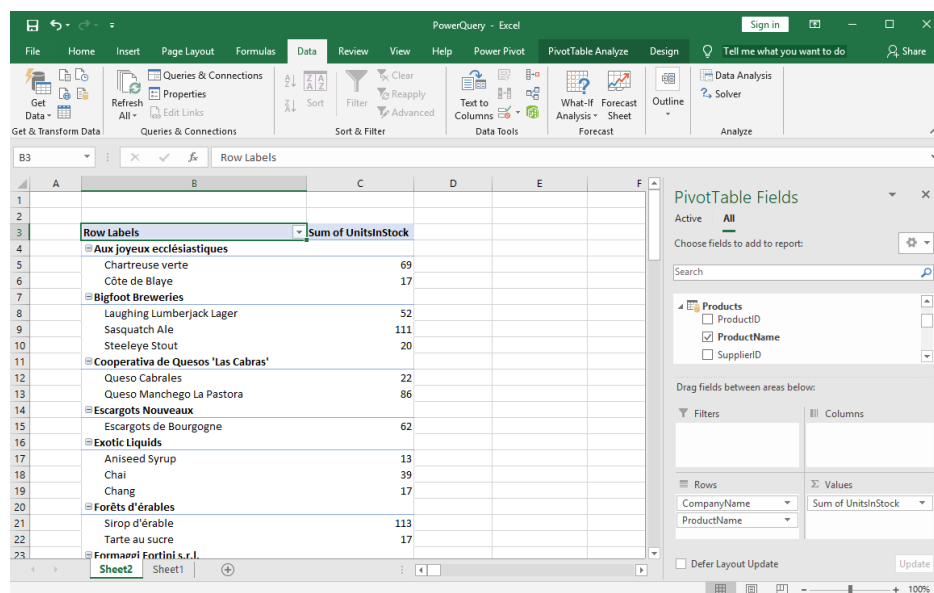




22. The Queries & Connections section in the middle takes up space. Click on the X to the right of Queries & Connections to close this view



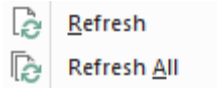
23. Next, create a pivot table using Company Name, Product Name, Units in Stock for Values
24. Click on the arrow to the left of Suppliers, then drag CompanyName to Rows
25. Click on the arrow to the left of Products, then click ProductName to Rows, but below CompanyName
26. Drag Units in Stock in Products to Values



## Refreshing Data

What happens if your database is updated? You don't need to re-import the data, just use the refresh option. (Refresh works in both Power Query and Power Pivot)

1. Click on the Data tab
2. At the top left of the screen is Refresh button.
3. Click on the down arrow below the refresh button.



4. Click on Refresh. PowerQuery goes to the database, retrieves the data, and updates your table.