

Getting Started with Power BI

Read Me: This lab covers how to get up and running with Power BI. The environment is currently licensed therefore your work email address will get you authenticated.

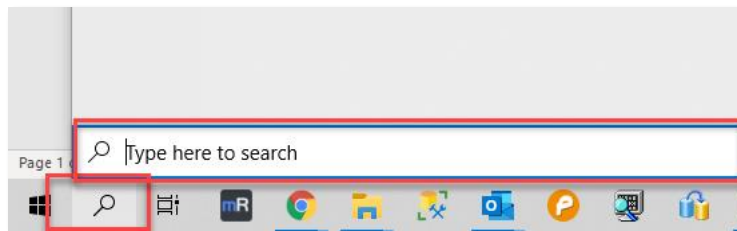
Lab Time: 30 minutes

Exercise 1: Setting up Power BI Desktop

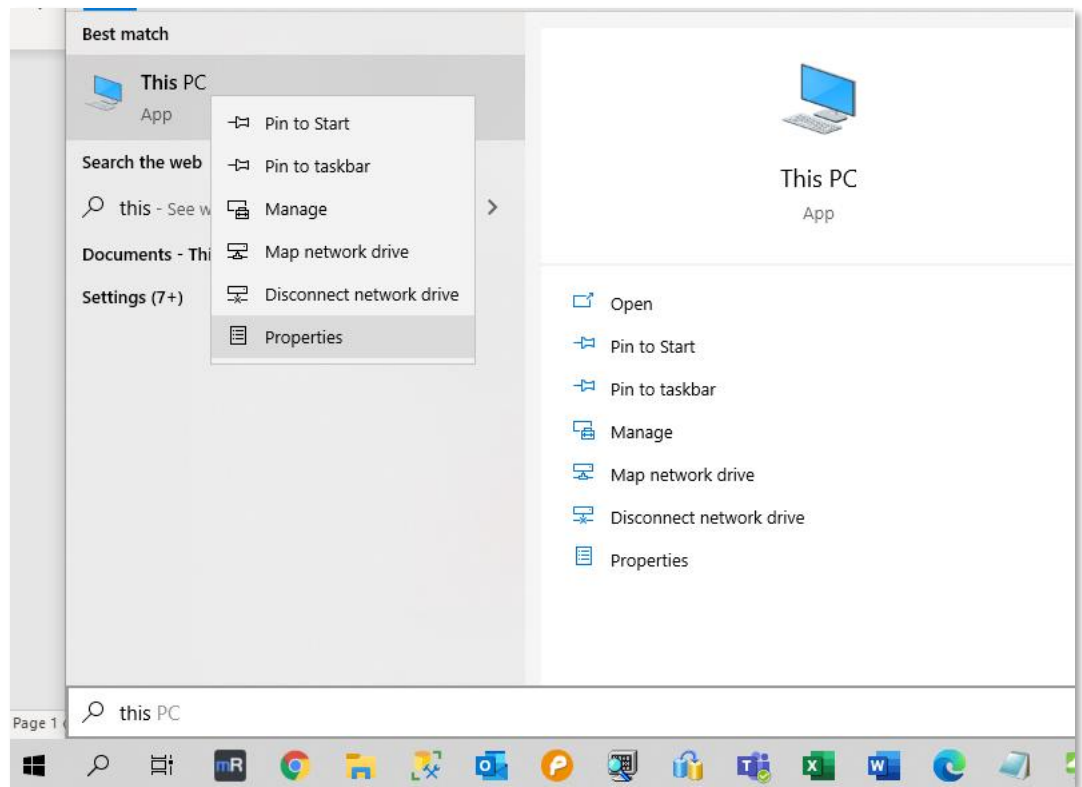
In this exercise you will create a Power BI Project that imports data from Excel

The following prerequisites and setup must be completed for a successful completion of this lab

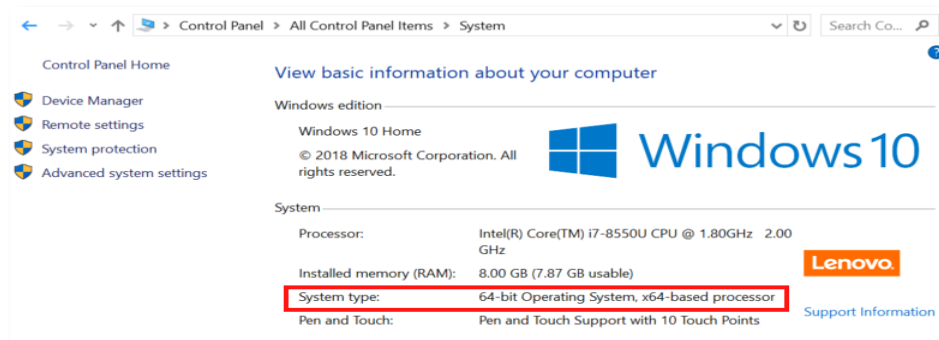
1. You must be connected to the internet
2. You must have Microsoft Office Installed
3. At minimum, a computer with 2-core and 4GB RAM
4. At minimum, internet explorer version 10 or greater, **Chrome or Edge are preferable**
5. Verify the version of your Operating System to determine if you need to install 32-bit or 64-bit applications
 - a. Open search bar on windows



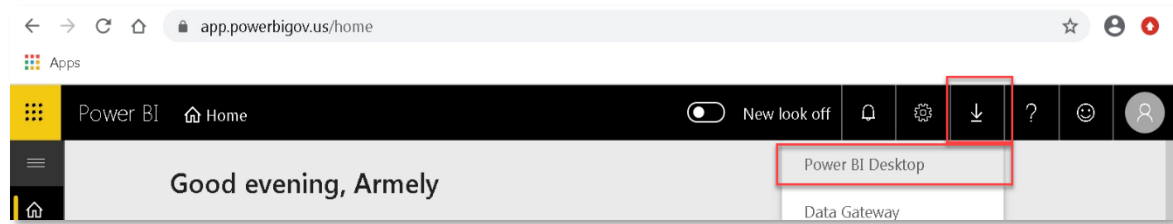
- b. Type **"This PC"** and **right click** and select **Properties**



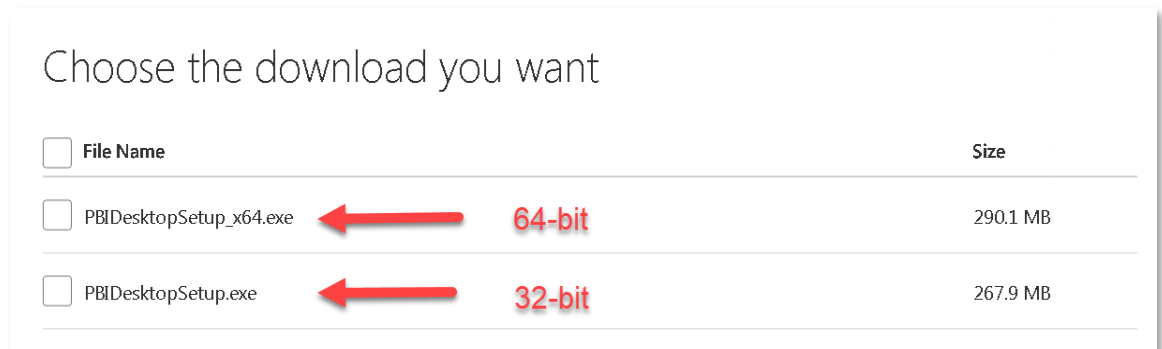
- c. You should be able to identify if the Operating System Type is 64 or 32 bit



6. **Download Course materials**
 - a. Create a folder on the C Drive of your local machine called **Training**
 - b. Copy all the content from <> to folder you created **C:\Training**
7. **Check Power BI licensing**, everyone should be able to access the link below
 - a. On your Browser open <https://app.powerbigov.us>
8. **Download and Install Power BI Desktop**
 - a. From Power BI Site opened in step 7 above, click on down arrow and select Power BI Desktop.



- b. This will navigate to download page for Power BI
- c. If you have **windows 10** use Microsoft App Store to download and install the application
- d. Determine the version you need to install 64 or 32-bit, download and install



- e. Go through the install wizard to completion.
 - f. If you already have Power BI Desktop installed, make sure you have the **latest version** downloaded
9. On your **mobile device**, download and install Power BI App
- a. Apple – download from Apple Store
 - b. Android – download from Google Play Store

Exercise 2: Accessing Data

In this exercise you will create a Power BI Project that imports data from Excel.

1. Using Microsoft Excel inspect the Excel workbook named Sales. This will be the working file for this lab.
 - a. The file is located at the path below

C:\armely\Course-courses\01_PowerBI_Introduction\Lab\sales.xlsx

- b. Open the file and review the file

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	A	B	C	D	E	F	G	H
1	State	City	Date	Product	Category	Units Sold	Revenue	Market
2	Indiana	Gary	5/13/2018	hex	General Purpose	1429	95 982	Government
3	Colorado	Aurora	6/25/2019	optix	AI	762	24 740	Mid Market
4	Ohio	Cincinnati	3/11/2019	anasa	General Purpose	1847	19 574	Government
5	Vermont	South Burlington	11/13/2015	nurisha	Utility	1239	21 416	Government
6	Idaho	Idaho Falls	10/31/2015	rafiki	General Purpose	418	90 398	Government
7	Massachusetts	Worcester	2/25/2019	hex	AI	339	51 615	Mid Market
8	Tennessee	Clarksville	7/28/2018	rafiki	General Purpose	2029	70 878	Enterprise
9	Alaska	Ketchikan	12/18/2013	kito	Utility	1586	65 527	Government
10	Iowa	Iowa City	2/5/2017	azizi	AI	572	67 106	Small Business
11	Minnesota	Saint Paul	8/3/2017	hex	AI	1582	37 966	Government
12	Washington	Vancouver	2/15/2019	kito	Utility	408	79 188	Enterprise

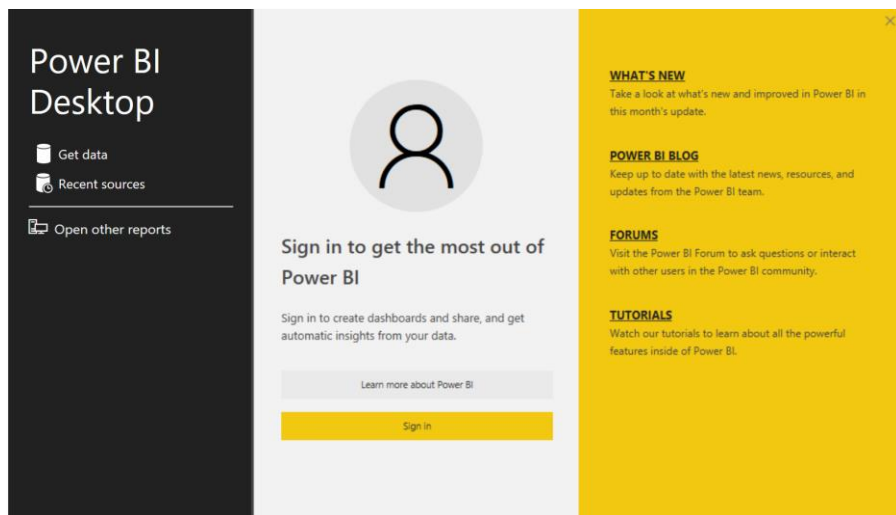
c. Exit the file without making changes

2.

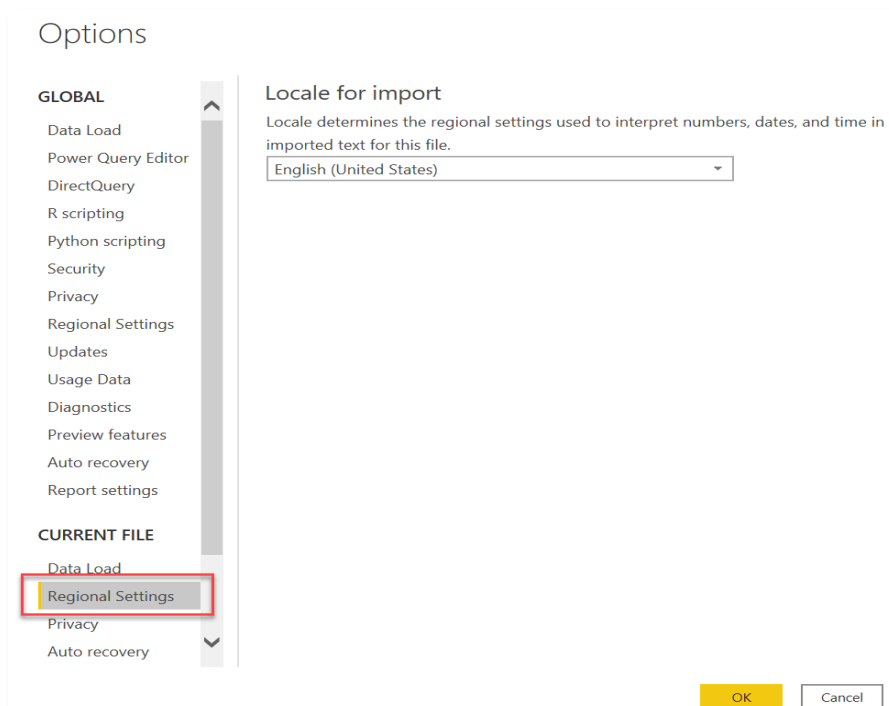
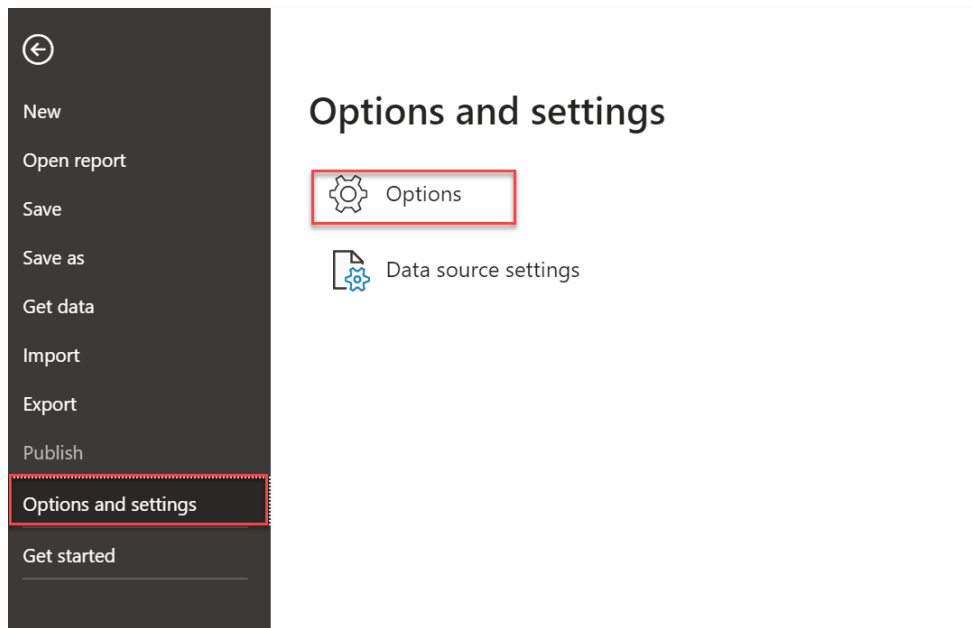
Exercise 3: Getting Started with Power BI Desktop

In this exercise, you will get the basics of Power BI Desktop, how to acquire it and its functionalities.

1. After the install Power BI Desktop launches the Power BI Welcome screen as shown below. Exit the screen by Clicking on (X) button on the upper right corner to close this window.



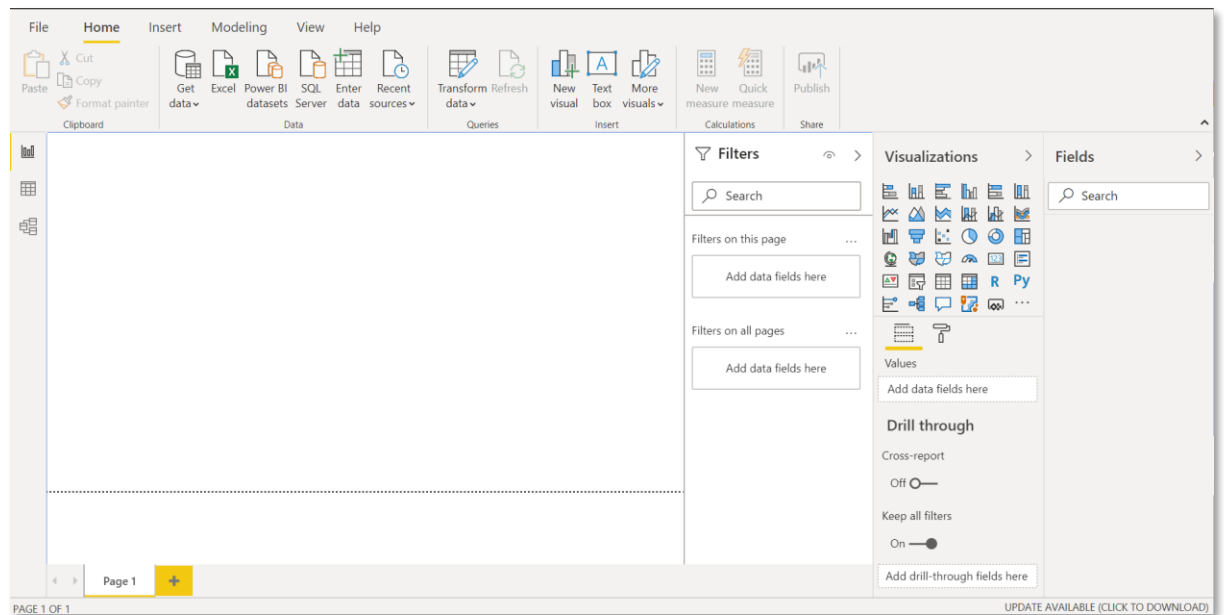
2. Configure locale to US English



3. You should have your Power BI Desktop running at this point, should appear as the image below.

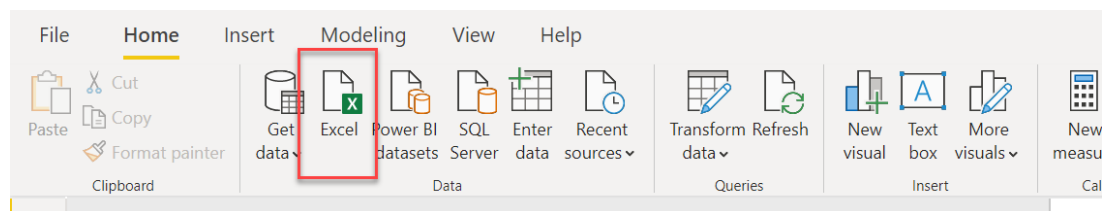
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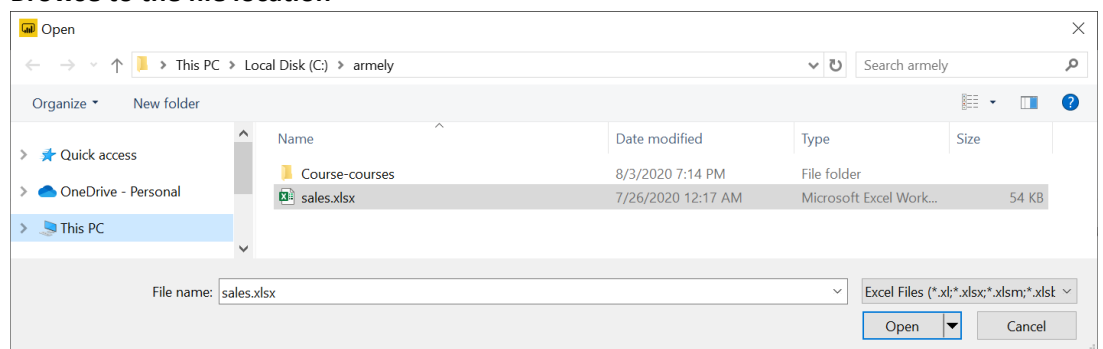


4. Import Data

a. Excel use the Excel Button on the home tab ribbon



b. Browse to the file location



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Navigator

Display Options ▾

- sales.xlsx [6]
 - data
 - Table2
 - Table3
 - ☒ Manufacturer
 - ☒ Representative
 - ☒ Sales

Sales

State	City	Date	Product	Category
Indiana	Gary	5/13/2018	hex	General Purpose
Colorado	Aurora	6/25/2019	optix	AI
Ohio	Cincinnati	3/11/2019	anasa	General Purpose
Vermont	South Burlington	11/13/2015	nurisha	Utility
Idaho	Idaho Falls	10/31/2015	rafiki	General Purpose
Massachusetts	Worcester	2/25/2019	hex	AI
Tennessee	Clarksville	7/28/2018	rafiki	General Purpose
Alaska	Ketchikan	12/18/2013	kito	Utility
Iowa	Iowa City	2/5/2017	azizi	AI
Minnesota	Saint Paul	8/3/2017	hex	AI
Washington	Vancouver	2/15/2019	kito	Utility
Colorado	Fort Collins	8/7/2019	rafiki	General Purpose
Michigan	Sterling Heights	1/13/2016	hex	AI
Delaware	Pike Creek	4/24/2013	nurisha	Utility
Missouri	Springfield	10/10/2017	hex	AI
California	Los Angeles	6/16/2015	nurisha	Utility
Iowa	Des Moines	7/11/2018	kito	Utility
Utah	Sandy	9/23/2016	kito	Utility
Minnesota	Minneapolis	1/28/2017	kito	Utility
Pennsylvania	Philadelphia	2/15/2017	hex	AI
Idaho	Pocatello	4/13/2018	anasa	General Purpose
Utah	Sandy	6/29/2013	hex	AI

Load Transform Data Cancel

c. Now you should be able to see 3 imported tables.

File Home Insert Modeling View Help

Clipboard: Paste, Cut, Copy, Format painter

Data: Get data, Excel, Power BI datasets, SQL Server, Enter data, Recent sources

Queries: Transform Refresh data, New visual, Text box, More visuals

Calculations: New measure, Quick measure measure

Share: Publish

Filters: Search, Filters on this page, Add data fields here, Filters on all pages, Add data fields here

Visualizations: Search, Visualizations, Values, Add data fields here, Drill through, Cross-report, Off, Keep all filters, On, Add drill-through fields here

Fields: Search, Manufacturer, Reps, Sales

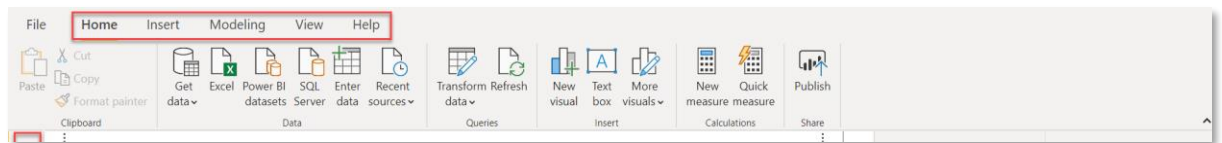
Exercise 4: Exploring Power BI Desktop

In this exercise, you will get familiar with Power BI distinct sections.

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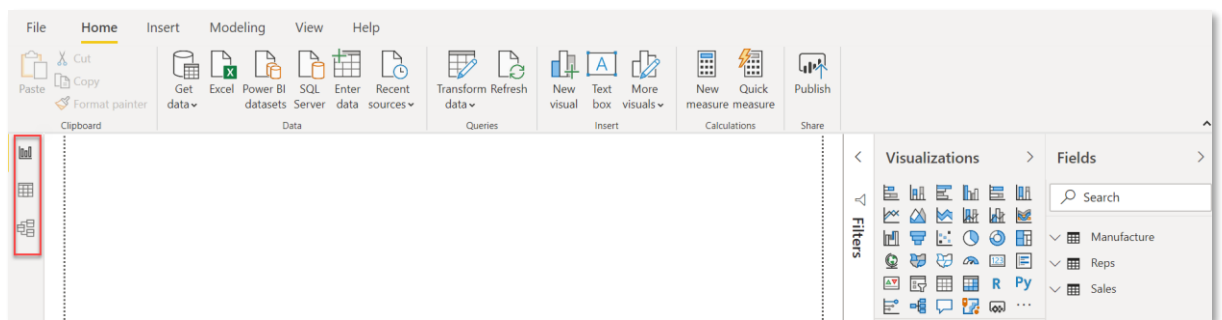
Let's get familiar with Power BI layout

1. At the top of the screen



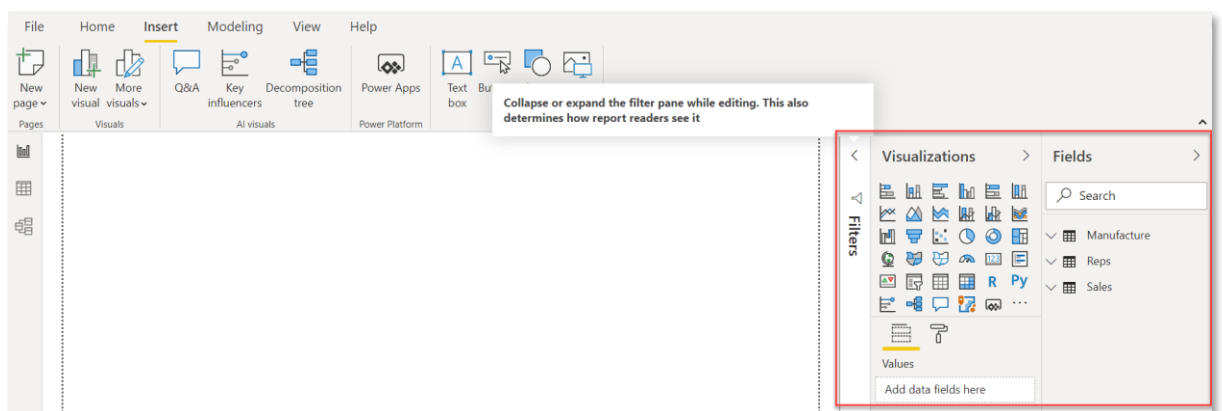
- Home** - most common operations are located here, like data import, transformation and calculations
- Insert** – enables formatting and integration for QA and other Power Platform features.
- Modeling** – enables users to perform additional data modeling functions and add custom and calculated columns.
- View** – enables users to format the page
- Help** – offers self-help options.

2. On the left side, there are three icons



- Report** – Where we create the reports
- Data** - Allows you to see the data
- Model** - Where we create relationships between tables

3. Filters, Visualizations, Fields



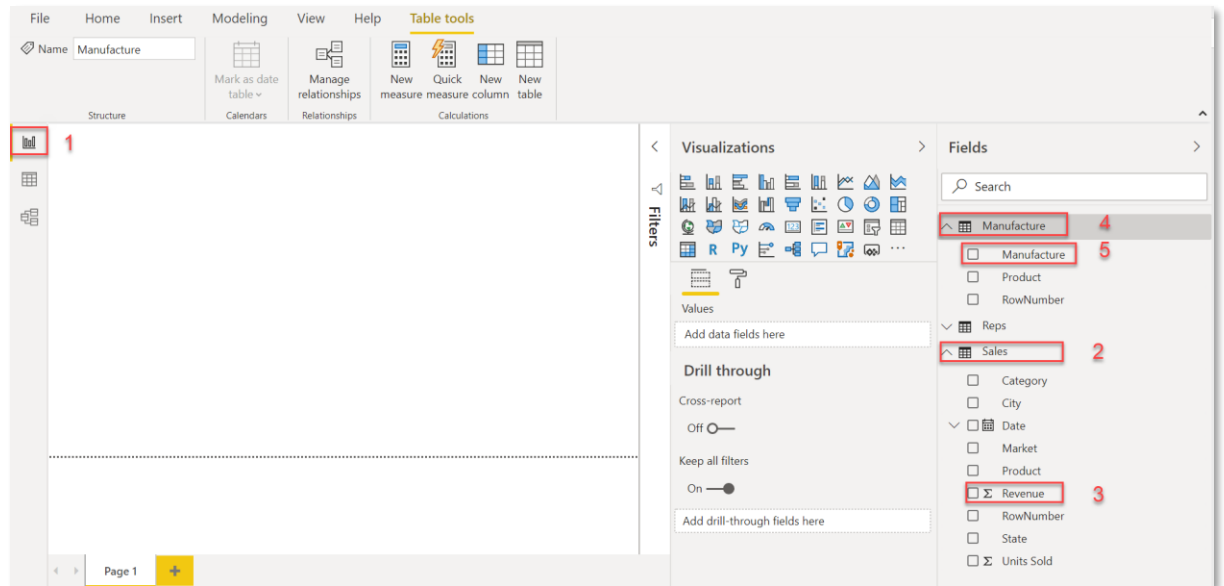
- Filters** – allows users to filter the data displayed
- Visualizations** – allows users to select the type of visual to use for the report, add values to the visual, add columns to axes. Also enables visual formatting using the rolling brush.

- c. **Fields** – shows the list of tables and their columns, they are collapsed by default. Use the \vee to expand the table

Exercise 5: Exploring data

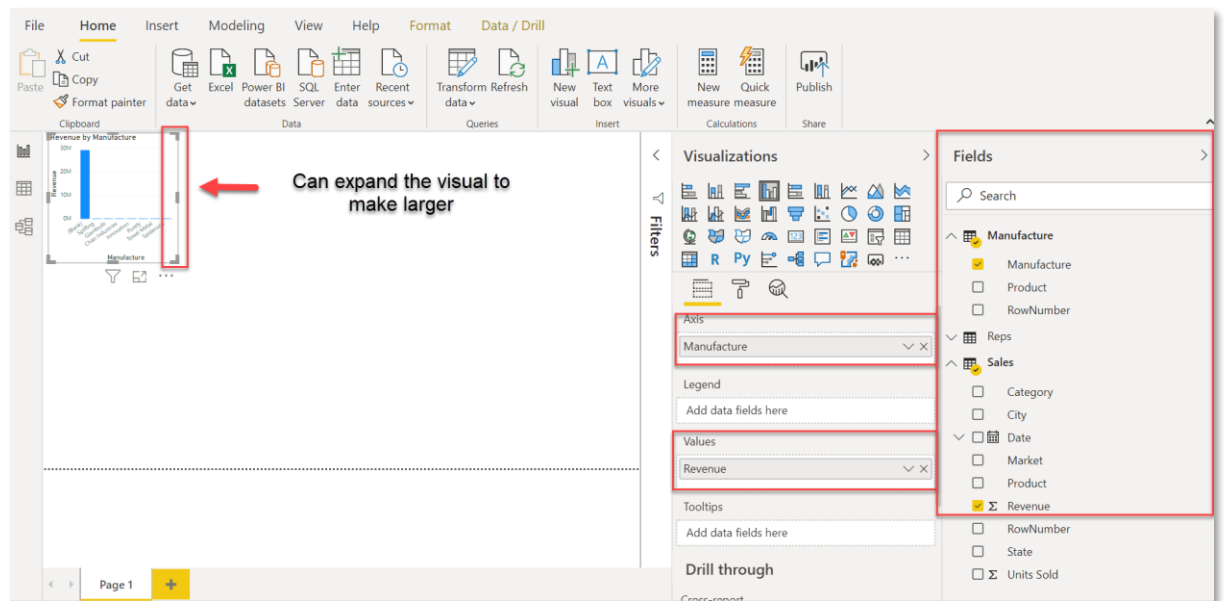
In this exercise, you will explore data imported from Excel

1. We will build the first report using data loaded from Excel.



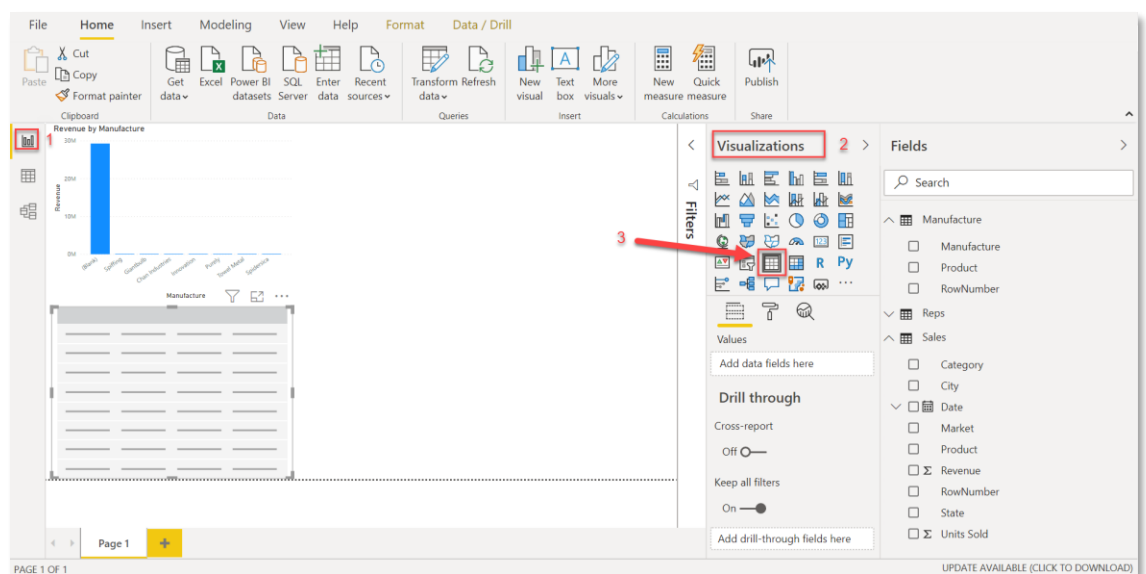
- a. Click the Report Icon on the left-hand side to open a blank canvas
- b. Expand Sales Table on the right-hand side
- c. Put a check-mark next to Revenue
- d. Expand Manufactures
- e. Check Manufacturer
- f. A visual is generated on the canvas

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2. Fixing data issues

- a. On the same canvas, on the visualization section select table visual

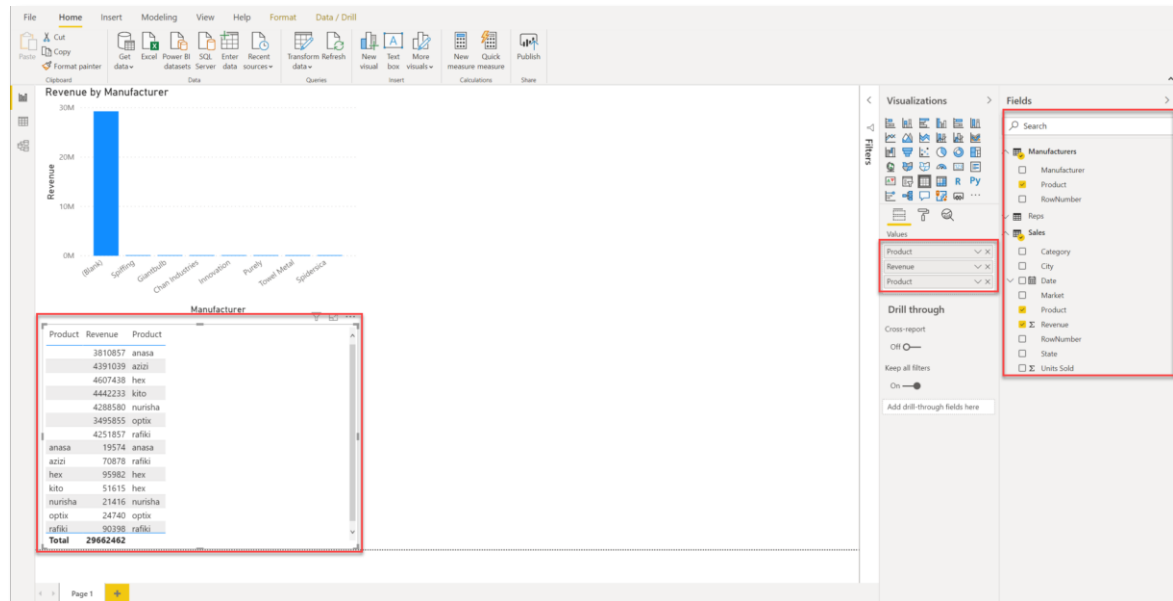


- b. With table visual selected, check the following fields
- i. Products – in Manufacturer table
 - ii. Revenue – in Sales table
 - iii. Products – in Sales table

Report should look as below

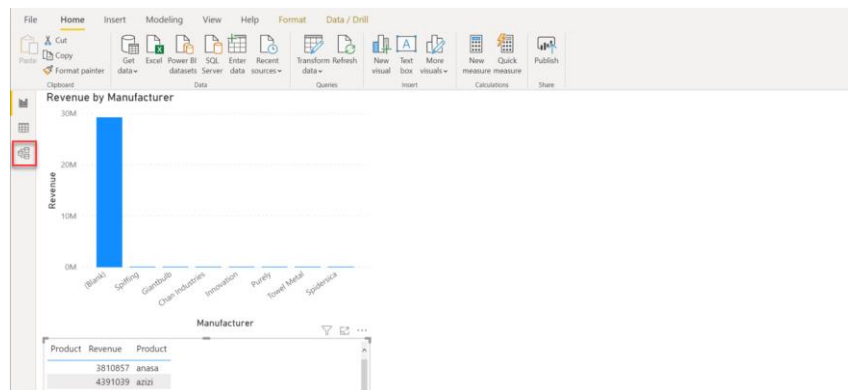
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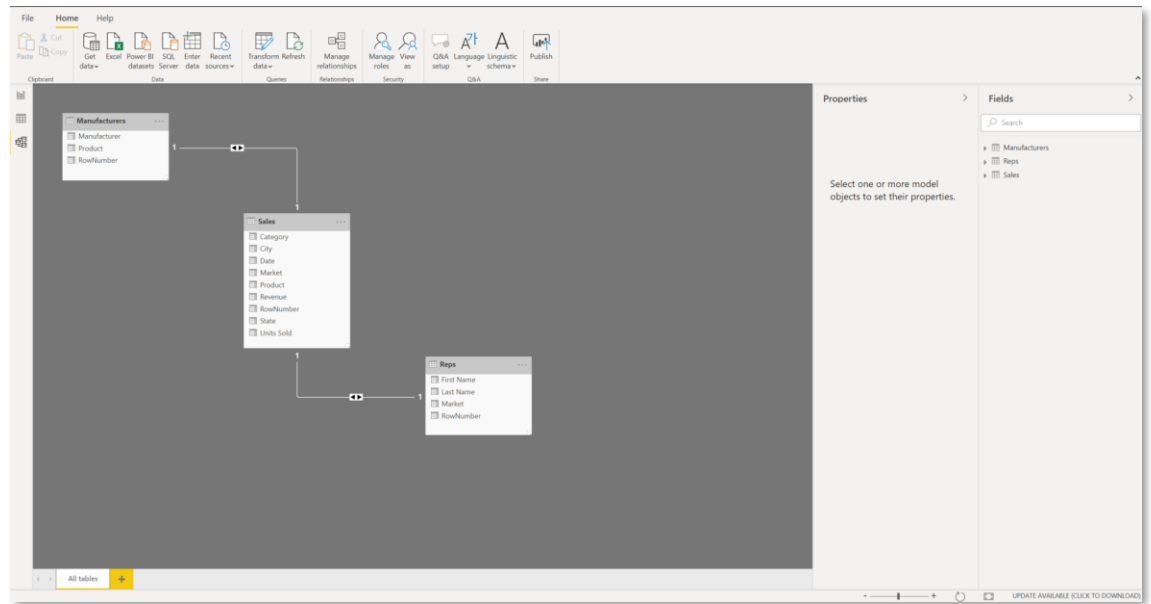
Data issue alert - It seems like some of product names don't tie between the two table even though they have the same names. This is due to relationship mismatch

3. Fixing data relationship
 - a. Click on the Model Icon on the left-hand side

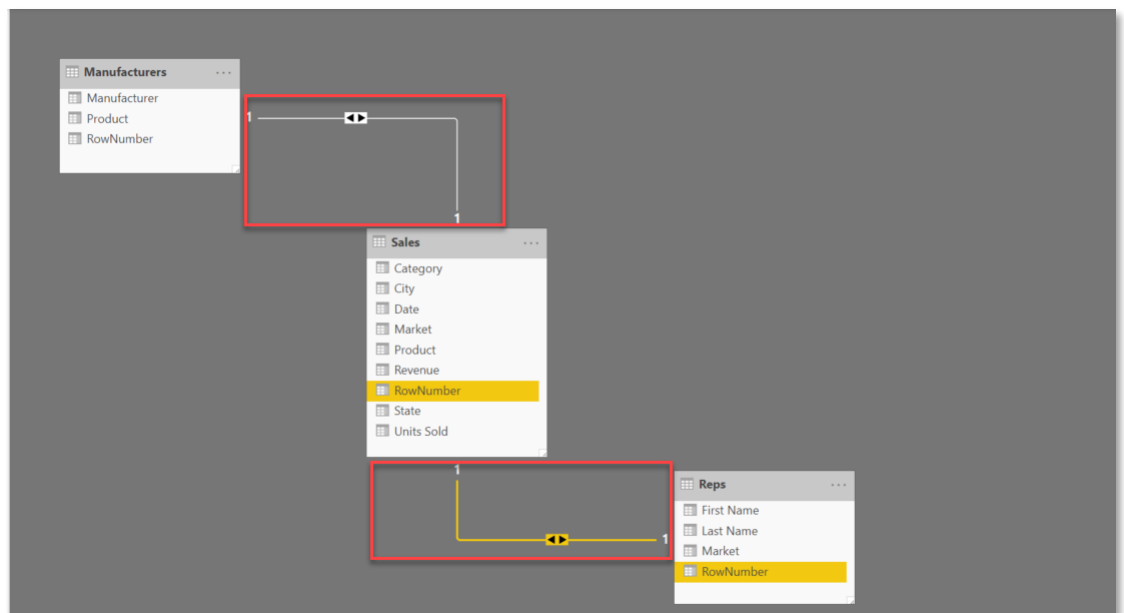


- b. Opens the relationship screen

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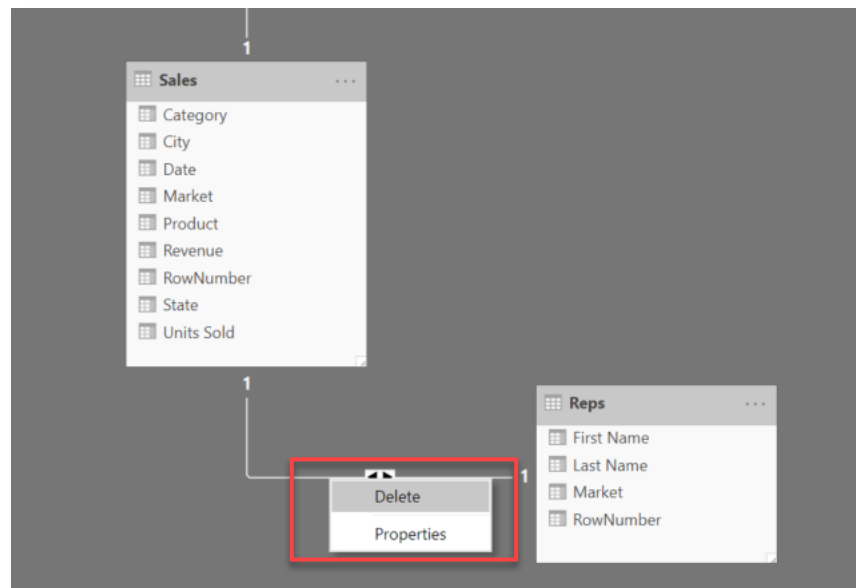


- c. Click on the line joining the two table to see the relationship defined

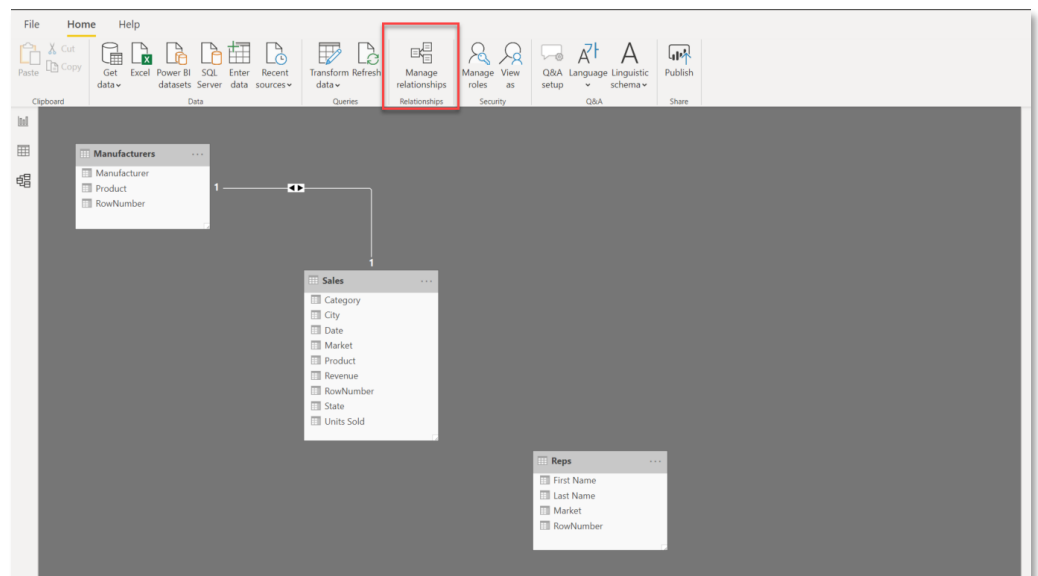


- d. Delete the relationships

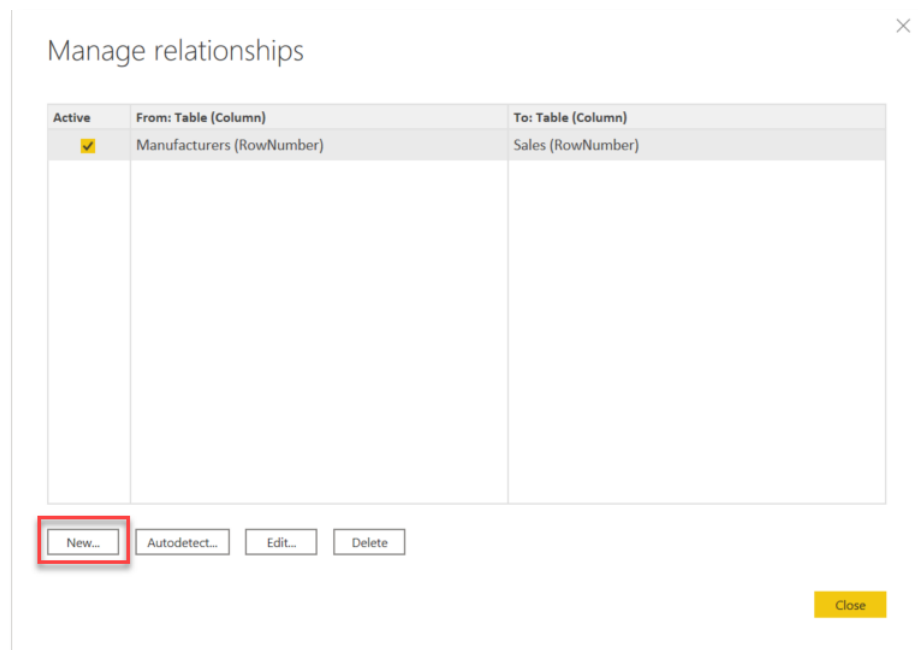
- i. Right click on the line and select delete



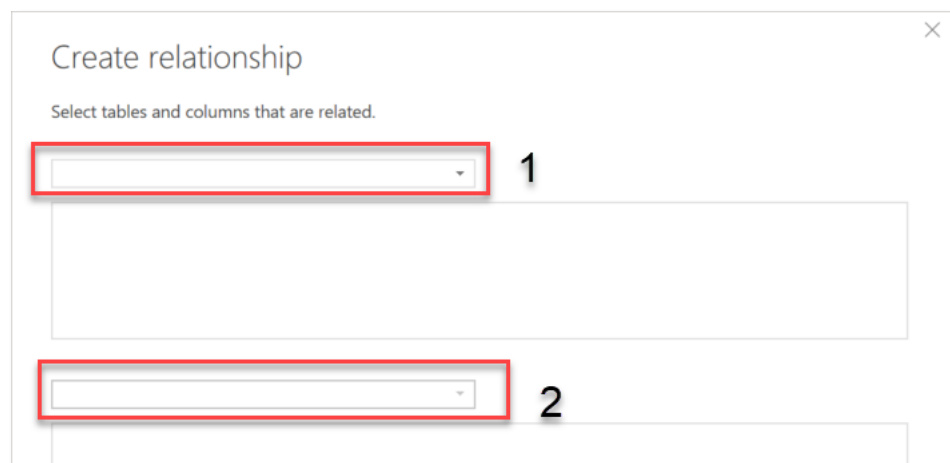
- ii. **Important** - Once the relationship is deleted, we can now create the right relationship by clicking on Manage Relationship Icon in the ribbon



- iii. This opens a dialog box as shown below, click **New**



- iv. Click the dropdowns highlighted below and select Rep and Sales



v. Create a relationship on the **Market Columns**

Create relationship

Select tables and columns that are related.

Reps

RowNumber	First Name	Last Name	Market
1	Ami	Reeves	Government
2	Priscilla	Williams	Mid Market
3	Ryan	Forster	Enterprise

Sales

City	Date	Product	Category	Units Sold	Revenue	Market
Worcester	Monday, February 25, 2019	hex	AI	339	51615	Mid Market
Saint Paul	Thursday, August 3, 2017	hex	AI	1582	37966	Government
Sterling Heights	Wednesday, January 13, 2016	hex	AI	1775	27068	Small Business

Cardinality: One to many (1:*)

Cross filter direction: Single

☒ Make this relationship active

☐ Assume referential integrity

☐ Apply security filter in both directions

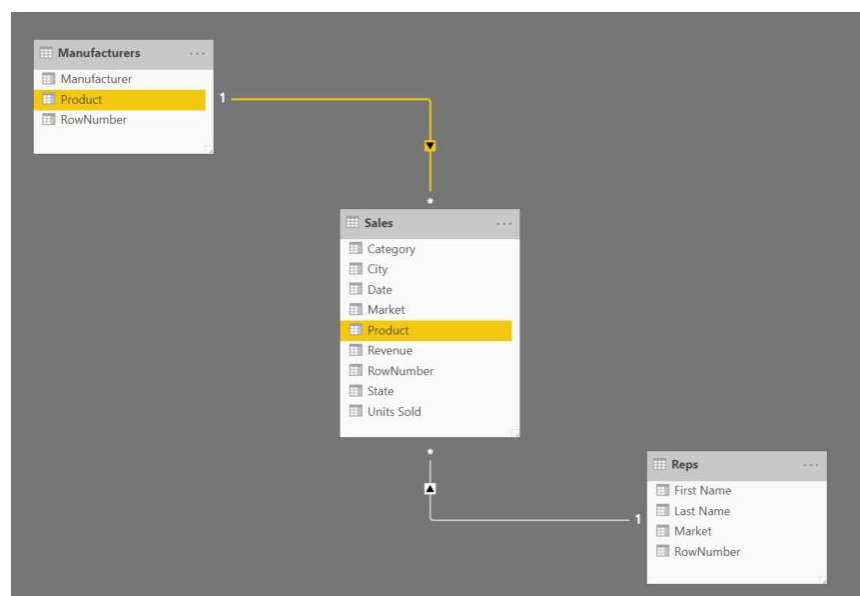
relationships are defined here

OK Cancel

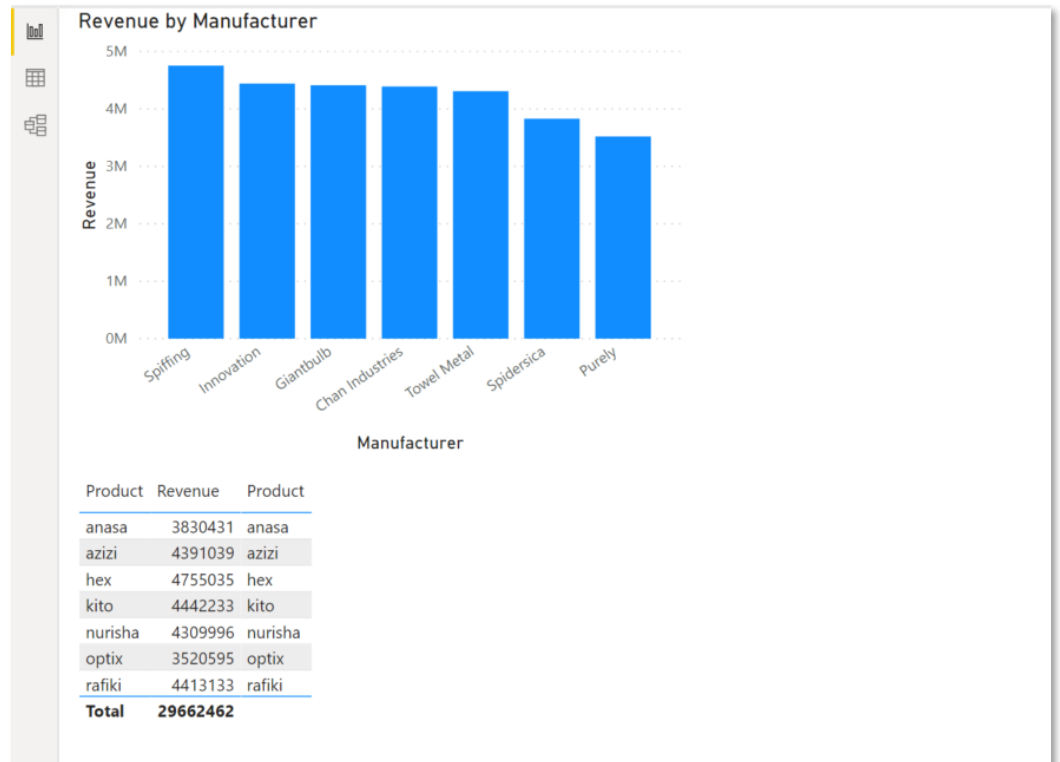
vi. Click Ok to exit, a new relationship has been created between Reps and Sales table.

vii. **Important** – Repeat this process for the Manufactures and Sales and tie them together using Products Column.

viii. End result for relationships should be as follow



- ix. Once these steps are completed, navigate back to Reports by clicking the report icon. Our visualization should look different that it was previously.



You have completed this lab for Introduction to Power BI Desktop