



UNIVERSIDAD PRIVADA DE TACNA

FACULTAD DE INGENIERIA

Escuela Profesional de Ingeniería de Sistemas

**Informe de Laboratorio N.º3 Creando un Reporte
Interactivo en Power BI**

Curso: Inteligencia de Negocios

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Integrantes:

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(2015053847)

Tacna – Perú

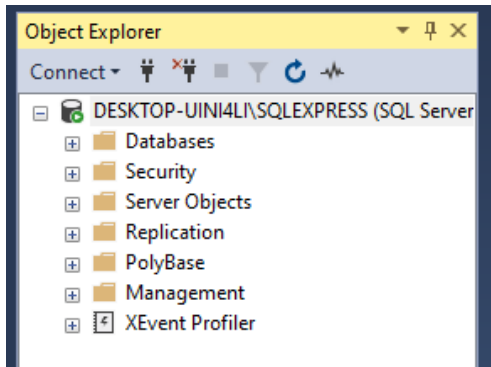
2021

CREANDO UN REPORTE INTERACTIVO EN POWER BI

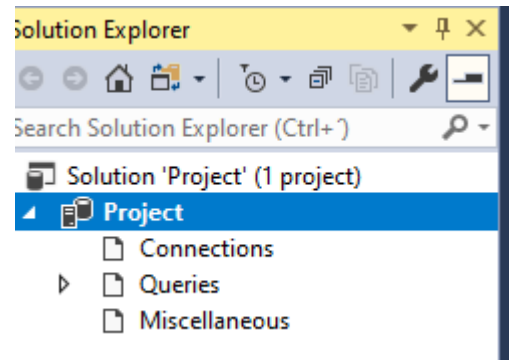
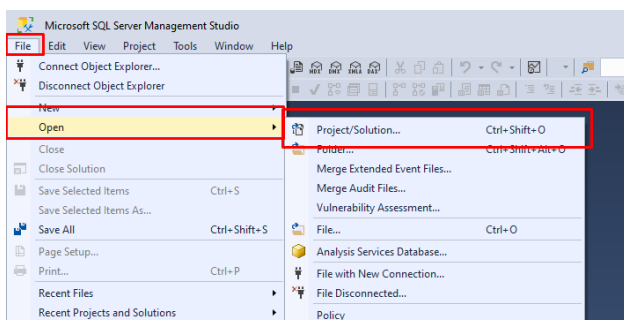
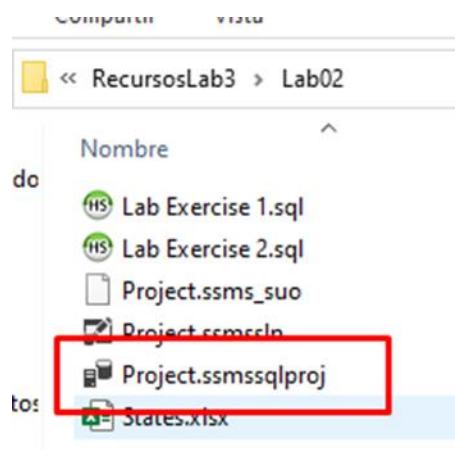
I. EJERCICIO 1: CONECTANDO A POWER BI A DATOS

TAREA 1: CONECTAR A DATOS EXISTENTES

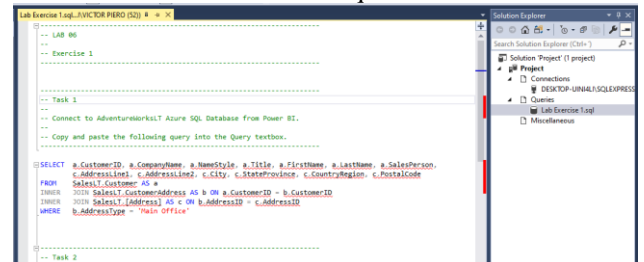
1. Abrir SQL Server Management Studio, y conectar a la instancia de base de datos (local) utilizando autenticación de Windows.



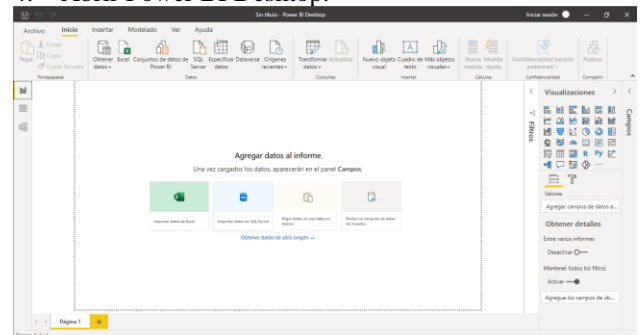
2. En el menú Archivo (File), en el submenú Abrir (Open), hacer click en Project/Solution, y buscar el archivo Project.ssmssln.



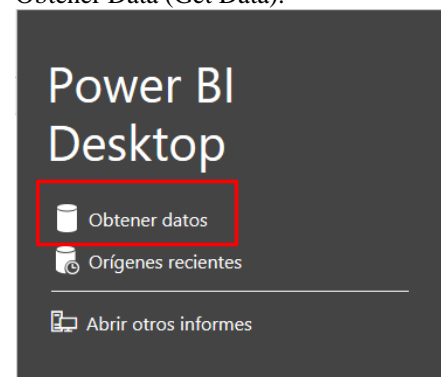
3. En el Explorador de Soluciones, expandir Consultas (Queries), y luego hacer doble click en el archivo Lab Exercise 1.sql.



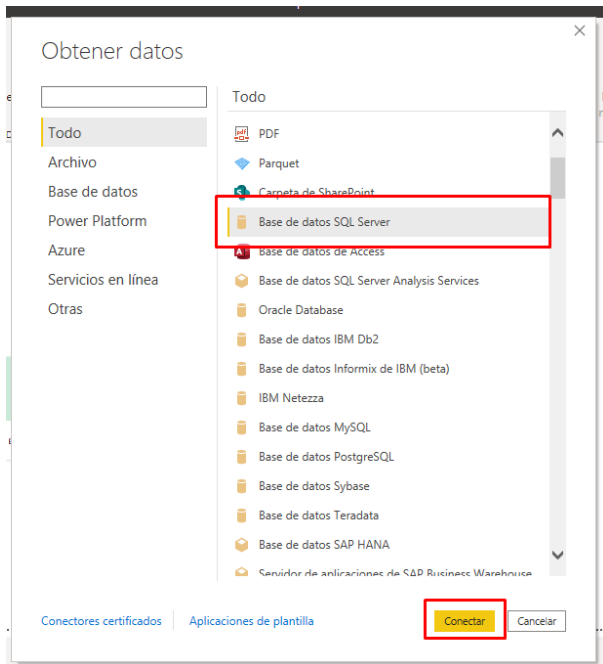
4. Abrir Power BI Desktop.



5. En la ventana Power BI Desktop, hacer click en Obtener Data (Get Data).



6. En el cuadro Obtener Datos, click base de datos Microsoft SQL, y entonces click en Conectar



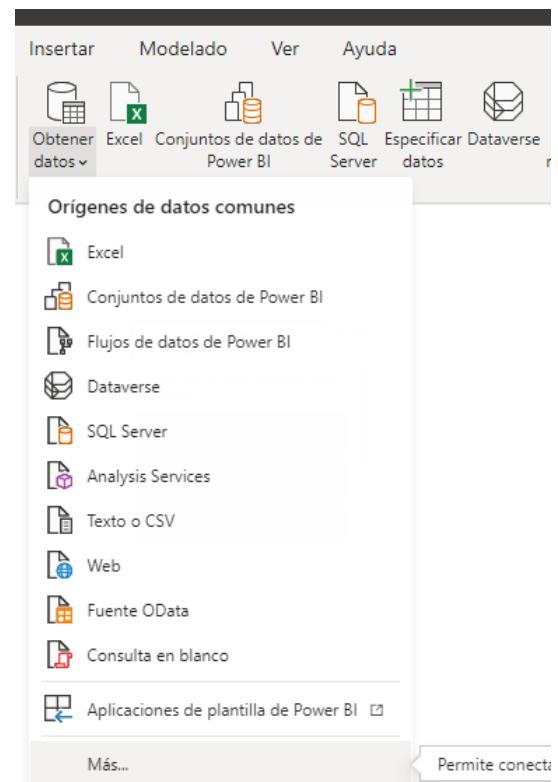
DESKTOP-UIINI4L1\SQLEXPRESS: AdventureWorksLT2016

CustomerID	CompanyName	NameStyle	Title	FirstName	LastName	SalesPerson	AddressLine1
29485	Professional Sales and Service	FALSE	Ms.	Catherine	Abel	adventure-works\jinda3	57251 Serene Blvd
29486	Riders Company	FALSE	Ms.	Kim	Abercrombie	adventure-works\jillan0	Tanger Factory
29489	Area Bike Accessories	FALSE	Ms.	Frances	Adams	adventure-works\jhu0	6900 Six Road
29490	Bicycle Accessories and Kits	FALSE	Ms.	Margaret	Smith	adventure-works\david8	Lewiston Mall
29492	Valley Bicycle Specialists	FALSE	Mr.	Jay	Adams	adventure-works\jillan0	Blue Ridge Mall
29494	Vinyl and Plastic Goods Corporation	FALSE	Mr.	Samuel	Agcaoli	adventure-works\jose1	No. 25800-130 King Street
29496	Fun Toys and Bikes	FALSE	Mr.	Robert	Ahlering	adventure-works\jhu0	6500 East Grant Road
29497	Great Bikes	FALSE	Mr.	François	Ferrier	adventure-works\david8	Eastridge Mall
29499	Valley Toy Store	FALSE	Mr.	Robert	Alberts	adventure-works\jhu0	252851 Rowan Place
29502	Major Sport Suppliers	FALSE	Mr.	Paul	Alcom	adventure-works\david1	White Mountain Mall
29503	Family's Favorite Bike Shop	FALSE	Mr.	Gregory	Alderson	adventure-works\garrett1	25981 College Street
29505	Imported and Domestic Cycles	FALSE	Ms.	Michelle	Alexander	adventure-works\jinda3	22589 West Craig Road
29506	Systematic Sales	FALSE	Mr.	Sean	Jacobson	adventure-works\jhu0	2551 East Warner Road
29508	Mountain Toy Store	FALSE	Mr.	Marvin	Allen	adventure-works\jillan0	First Colony Mall
29510	Designated Distributors	FALSE	Mr.	Cecil	Altson	adventure-works\jose1	254 Colomade Road
29511	Bold Bike Accessories	FALSE	Mr.	Oscar	Alquerto	adventure-works\jinda3	Rocky Mountain Pines Ou
29515	Serious Cycles	FALSE	Mr.	Maxwell	Amund	adventure-works\garrett1	Suite 99320 255 - 510th A
29517	Novelty Bikes	FALSE	Ms.	Ramona	Actrim	adventure-works\michael9	998 Forest Road
29521	Brightwork Company	FALSE	Mr.	Tom	Johnston	adventure-works\jhu0	Beltz Factory Outlet
29522	Resale Services	FALSE	Mr.	Thomas	Armstrong	adventure-works\jinda3	Fox Hills

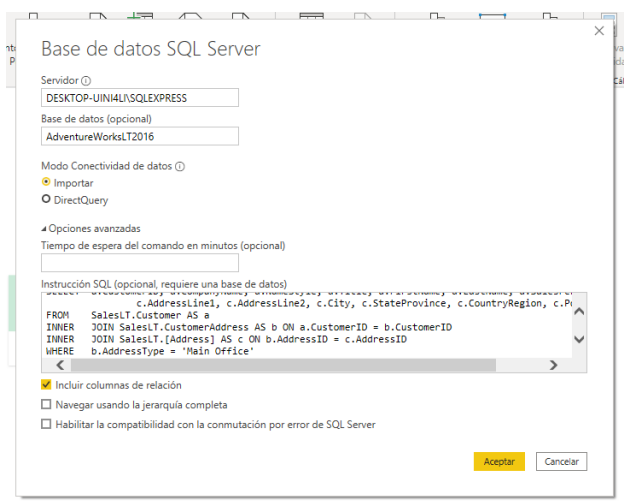
Los datos de la vista previa se han truncado debido a límites de tamaño.

Cargar Transformar datos Cancelar

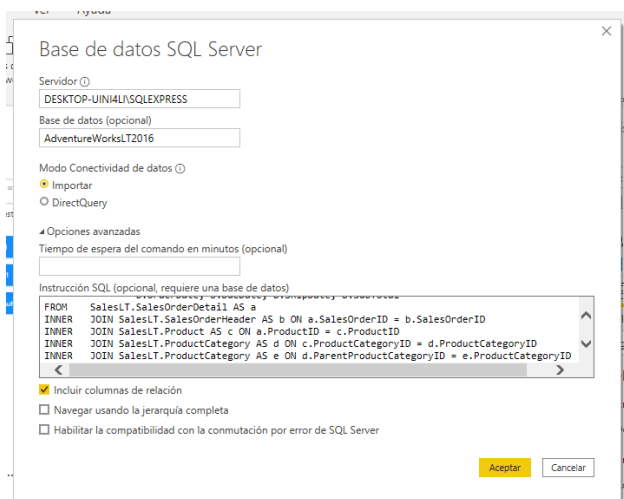
11. En Power BI Desktop, click Obtener Datos y luego click en Mas.



12. Repetir los pasos del 6 al 10, utilizando el script Task 2.



10. En la ventana de vista preliminar click en Cargar.

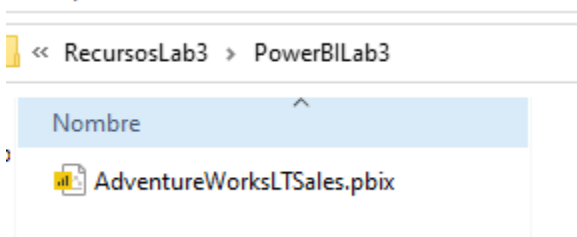
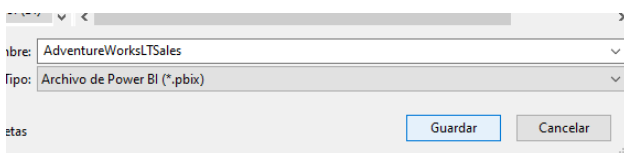


DESKTOP-UIIN4\SQLSERVEREXPRESS: AdventureWorksLT2016

CustomerID	SalesOrderID	SalesOrderDetailID	RevisionNumber	SalesOrderNumber	MainCategory	SubCategory	ProductID
29847	71774	110562	2	5071774	Components	Road Frames	836 ML R
29847	71774	110563	2	5071774	Components	Road Frames	822 ML R
30072	71776	110567	2	5071776	Components	Brakes	907 Rear
30113	71780	110616	2	5071780	Components	Mountain Frames	905 ML R
30113	71780	110617	2	5071780	Bikes	Mountain Bikes	993 Mou
30113	71780	110618	2	5071780	Bikes	Mountain Bikes	988 Mou
30113	71780	110619	2	5071780	Components	Mountain Frames	748 HL M
30113	71780	110620	2	5071780	Bikes	Mountain Bikes	990 Mou
30113	71780	110621	2	5071780	Components	Mountain Frames	926 LL M
30113	71780	110622	2	5071780	Components	Mountain Frames	743 HL M
30113	71780	110623	2	5071780	Bikes	Mountain Bikes	782 Mou
30113	71780	110624	2	5071780	Components	Mountain Frames	928 LL M
30113	71780	110625	2	5071780	Bikes	Mountain Bikes	780 Mou
30113	71780	110626	2	5071780	Components	Pedals	937 HL M
30113	71780	110627	2	5071780	Clothing	Shorts	887 Wor
30113	71780	110628	2	5071780	Bikes	Mountain Bikes	995 Mou
30113	71780	110629	2	5071780	Bikes	Mountain Bikes	989 Mou
30113	71780	110630	2	5071780	Bikes	Mountain Bikes	992 Mou
30113	71780	110631	2	5071780	Bikes	Mountain Bikes	992 Mou
30113	71780	110632	2	5071780	Bikes	Mountain Bikes	993 Mou

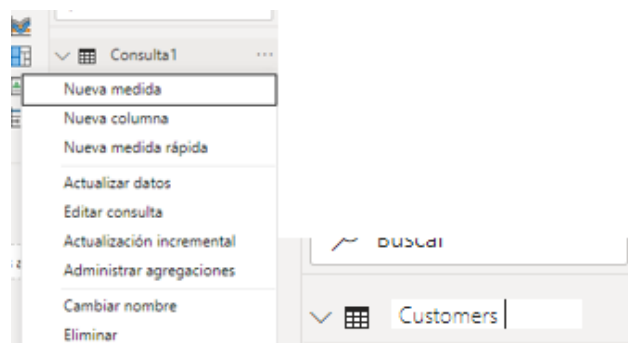
Los datos de la vista previa se han truncado debido a límites de tamaño.

13. De regreso en el reporte. Guardar el archivo como AdventureWorksLT Sales.pbix.

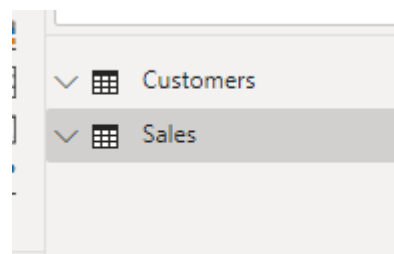


TAREA 2: GRAFICAR DATOS

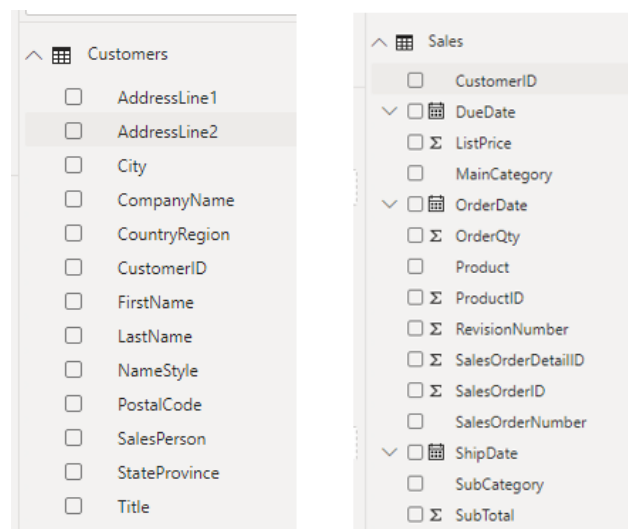
1. En el panel Campos (Fields), click derecho sobre Query1, Renombrar, tipear Customers y presionar Enter.



2. Para el Query2, hacer lo mismo del paso 1 y colocar el nombre Sales.



3. Expandir ambas tablas para ver todas las filas.



4. En la barra de navegación, click Datos (Data).

5. In the Fields pane, click the Customers table, if it is not already selected.

- Right-click the NameStyle column, and click Delete.

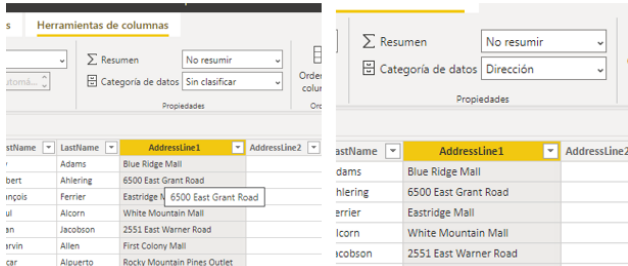
7. In the Delete Column dialog box, click Delete.

8. Repetir el paso 6 y 7 para la columna SalesPerson.

9. Right-click the CustomerID column, and then click Hide in Report View.

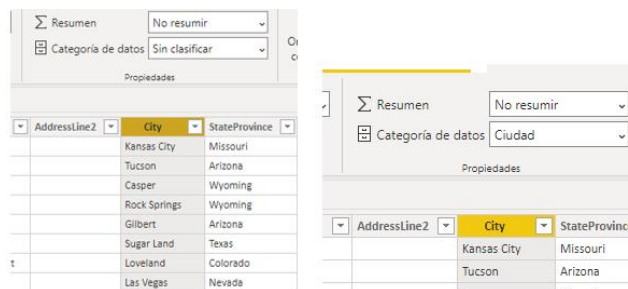
10. Click the AddressLine1 column header.

11. On the Modeling ribbon, in the Properties group, click Data Category: Uncategorized, and then click Address.



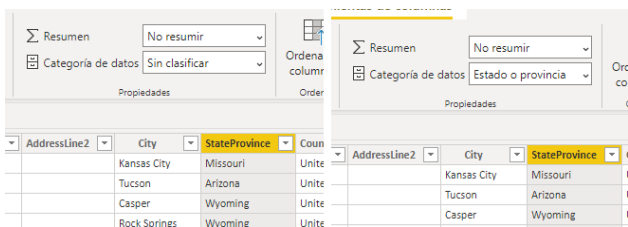
12. Click the City column header.

13. On the Modeling ribbon, in the Properties group, click Data Category: Uncategorized, and then click City.



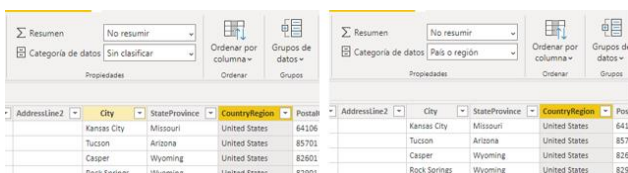
14. Click the StateProvince column header.

15. On the Modeling ribbon, in the Properties group, click Data Category: Uncategorized, and then click State or Province.



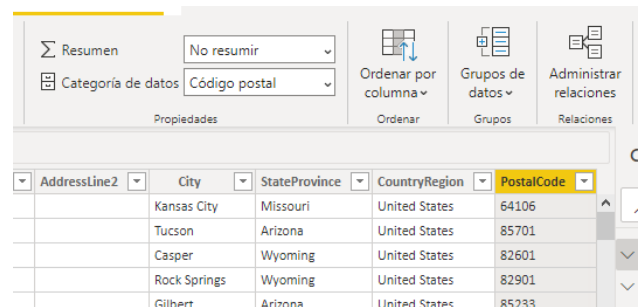
16. Click en el encabezado de columna CountryRegion.

17. On the Modeling ribbon, in the Properties group, click Data Category: Uncategorized, and then click Country/Region.



18. Click en el encabezado de columna PostalCode.

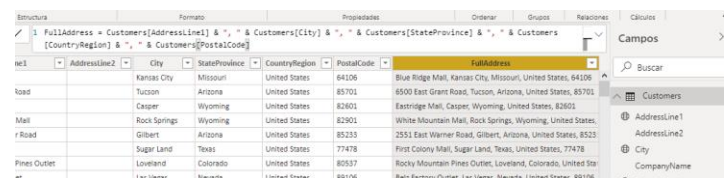
19. On the Modeling ribbon, in the Properties group, click Data Category: Uncategorized, and then click Postal Code.



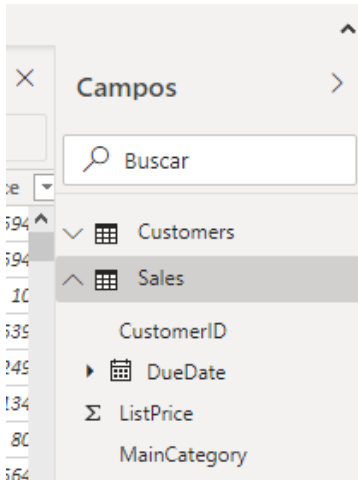
20. On the Modeling ribbon, in the Calculations group, click New Column, and then in the formula bar, type the following expression and press Enter:



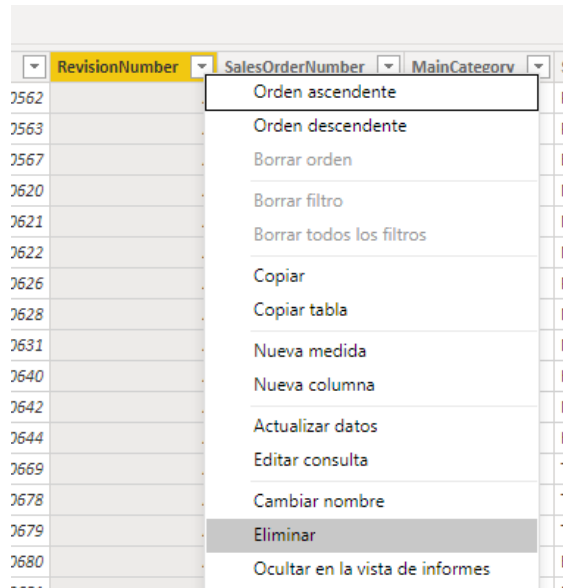
FullAddress = Customers[AddressLine1] & ", " & Customers[City] & ", " & Customers[StateProvince] & ", " & Customers[CountryRegion] & ", " & Customers[PostalCode]



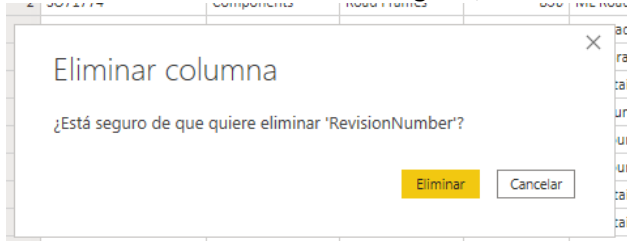
21. In the Fields pane, click Sales.



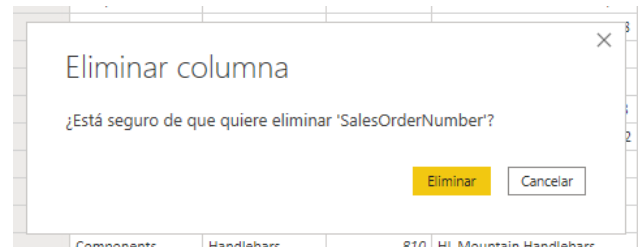
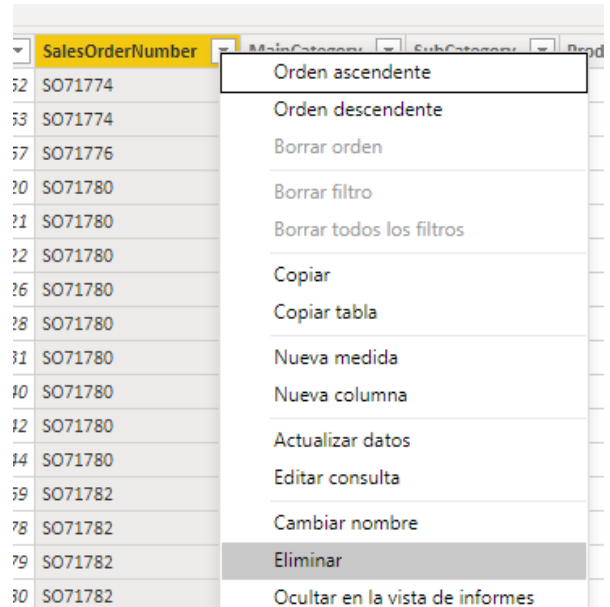
22. Right-click the RevisionNumber column, and click Delete.



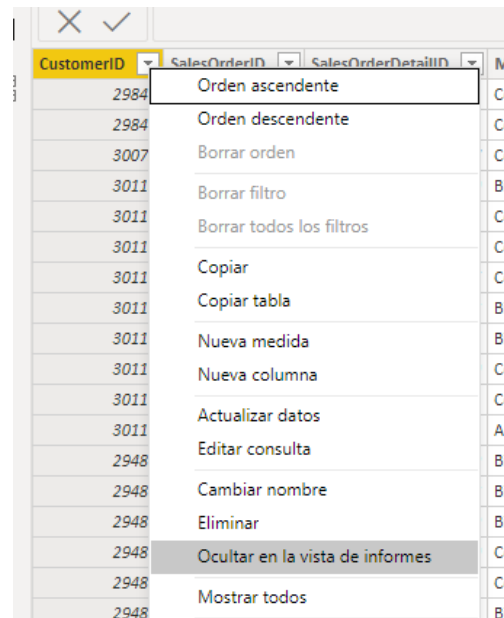
23. In the Delete Column dialog box, click Delete.



24. Realizar el paso 23 y 34 para la columna SalesOrderNumber.



25. Right-click the CustomerID column, and then click Hide in Report View.



SalesOrderID	SalesOrderDetailID	MainCategory
7	7177	
7	7177	
2	7177	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	
3	7178	

Orden ascendente

Orden descendente

Borrar orden

Borrar filtro

Borrar todos los filtros

Copiar

Copiar tabla

Nueva medida

Nueva columna

Actualizar datos

Editar consulta

Cambiar nombre

Eliminar

Ocultar en la vista de informes

Mostrar todos

SalesOrderDetailID	ProductID	Quantity	UnitPrice	Discount	LineTotal
74	11056	1	100.00	0.00	100.00
74	11056	1	100.00	0.00	100.00
76	11056	1	100.00	0.00	100.00
90	11062	1	100.00	0.00	100.00
90	11062	1	100.00	0.00	100.00
90	11062	1	100.00	0.00	100.00
90	11062	1	100.00	0.00	100.00
90	11062	1	100.00	0.00	100.00
90	11063	1	100.00	0.00	100.00
90	11064	1	100.00	0.00	100.00
90	11064	1	100.00	0.00	100.00
90	11064	1	100.00	0.00	100.00
92	11066	1	100.00	0.00	100.00
92	11067	1	100.00	0.00	100.00
92	11067	1	100.00	0.00	100.00
92	11068	1	100.00	0.00	100.00
92	11068	1	100.00	0.00	100.00

Orden ascendente

Orden descendente

Borrar orden

Borrar filtro

Borrar todos los filtros

Copiar

Copiar tabla

Nueva medida

Nueva columna

Actualizar datos

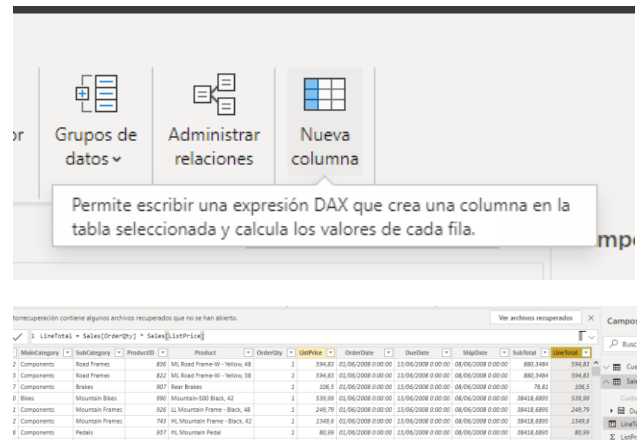
Editar consulta

Cambiar nombre

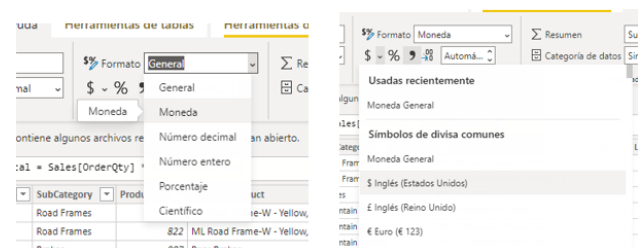
Eliminar

Ocultar en la vista de informes

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29. On the Modeling ribbon, in the Formatting group, click Format: General, point to Currency, and then click \$ English (United States).



AdventureWorksLTSales - Power BI

Herramientas de tablas Herramientas de columnas

 Marcar como tabla de fechas Calendarios	 Administrar relaciones Relaciones	 Nueva medida Cálculos	 Medida rápida Cálculos	 Nueva columna Cálculos	 Nueva tabla Cálculos
---	---	---	--	--	--

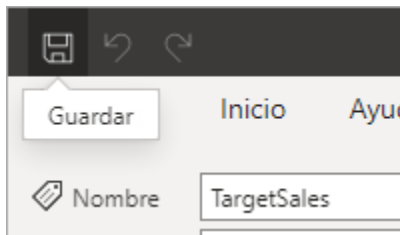
= Sales[OrderQty] * Sales[ListPrice]

SubCategory

Σ SubTotal

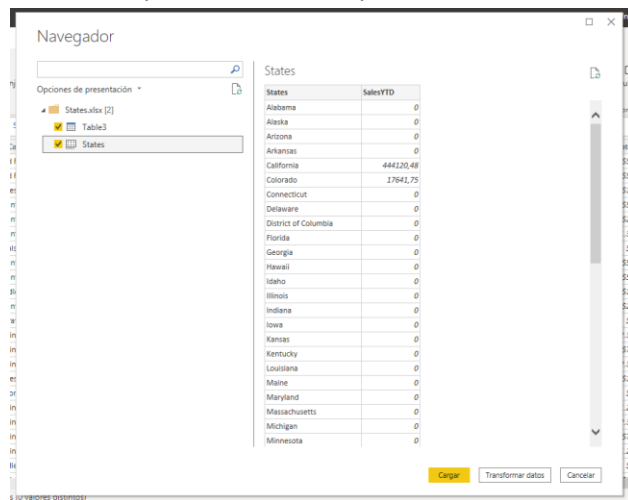
TargetSales

31. Click Save, and then leave Power BI Desktop open for the next task.



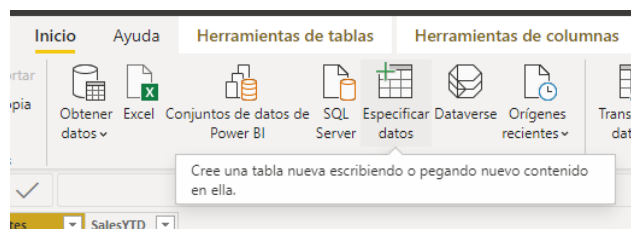
TAREA 3: COMBINAR DATA

1. In File Explorer, and then open the States.xlsx file.



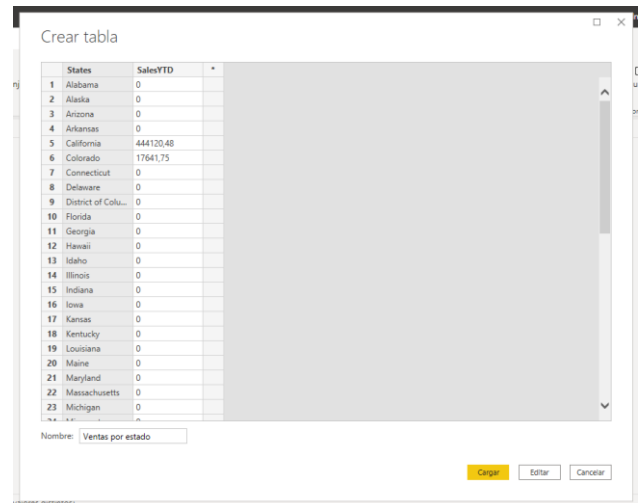
2. In the States worksheet, select all of the values in the two columns, and then press Ctrl+C.

3. In Power BI Desktop, on the Home ribbon, click Enter Data.

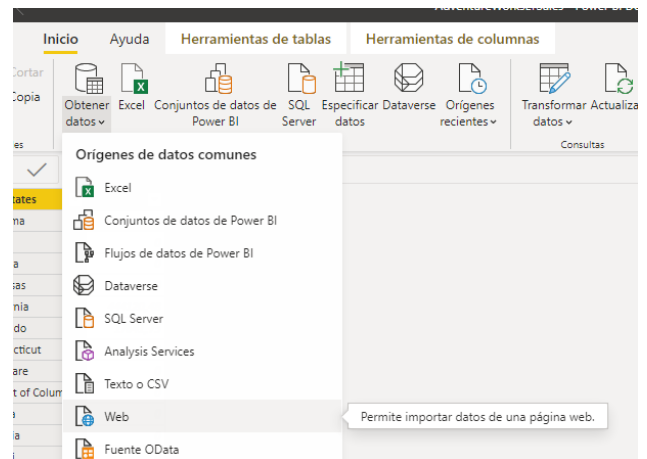


4. In the Create Table dialog box, click in the table, and then press Ctrl+V. Power BI detects that the first row is a column header.

5. In the Name box, type Sales by State, and then click Load.

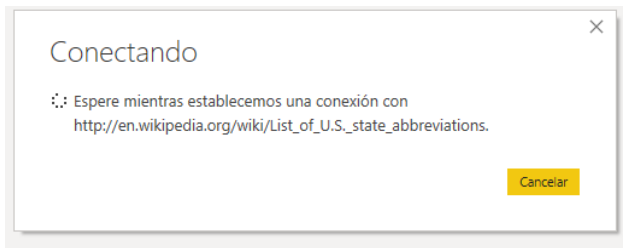


6. On the Home ribbon, click Get Data, and then click Web.

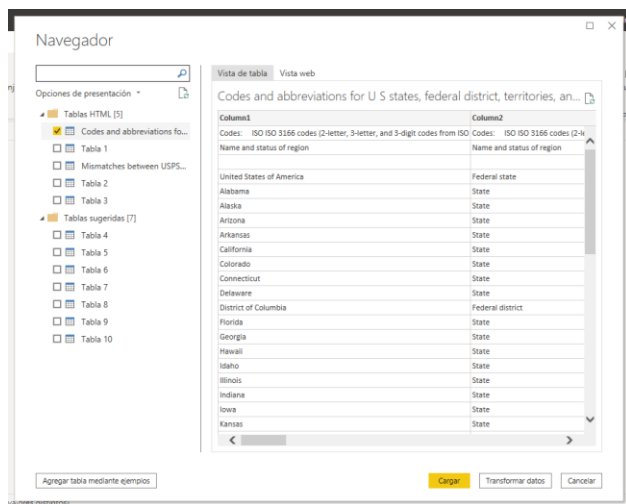


7. In the From Web dialog box, in the URL box, type http://en.wikipedia.org/wiki/List_of_U.S._state_abbreviations, and then click OK.

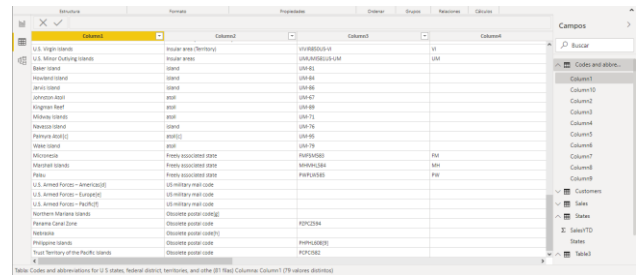
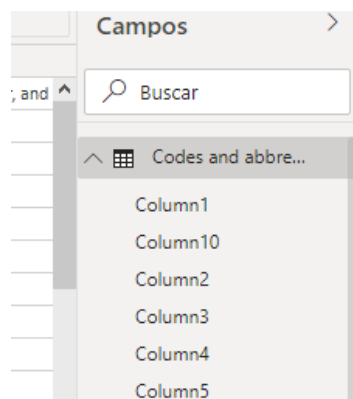




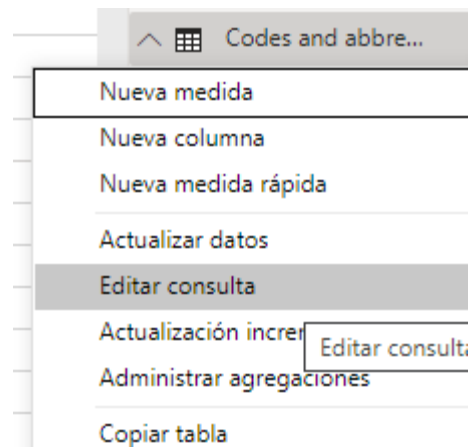
8. In the Navigator dialog box, select Codes and abbreviations for U.S. states, territories and other regions, and then click Load.



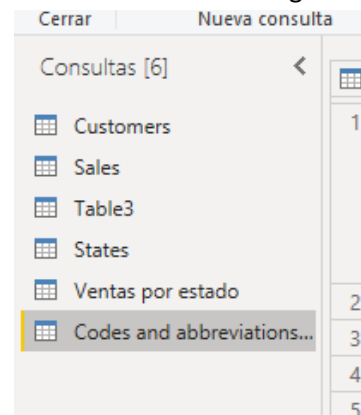
9. In the Fields pane, click Codes and abbreviations for U.S. states, territories and other regions to display the data. The table has 26 rows at the bottom that are not needed.



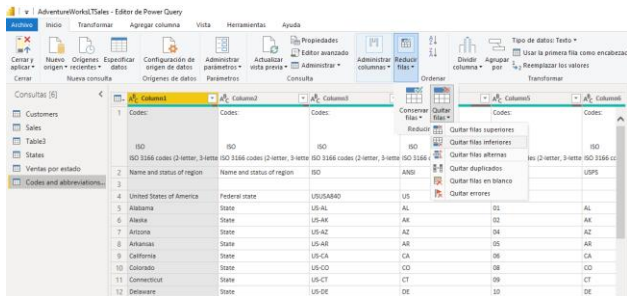
10. On the Home ribbon, in the External Data group, click Edit Queries, then click Edit Queries.



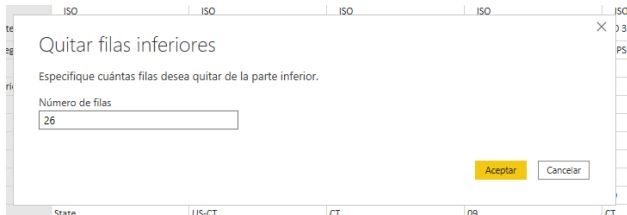
11. In Query Editor, in the Queries pane, click Codes and abbreviations for U.S. states, territories and other regions.



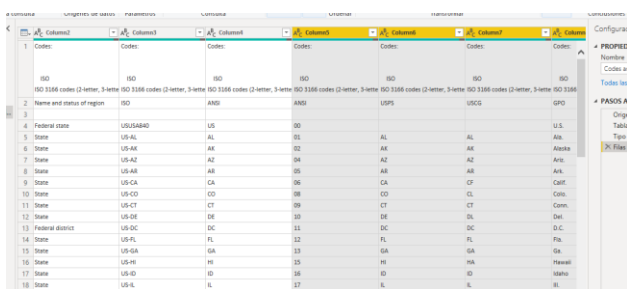
12. On the Home ribbon, click Reduce Rows, click Remove Rows, and then click Remove Bottom Rows.



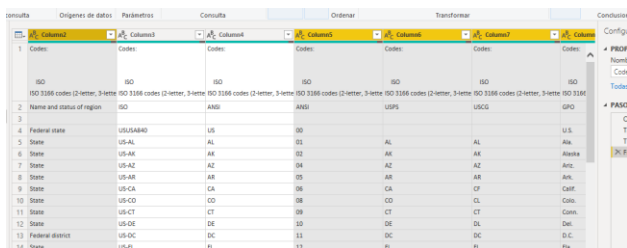
13. In the Remove Bottom Rows dialog box, in the Number of rows box, type 26, and then click OK.



14. Click the ANSI2 column header, and then hold down the Ctrl key while selecting all of the columns to the right. This selects multiple rows.



15. Still holding down Ctrl, click the Name and status of region2 and Header columns to include this in the selection.

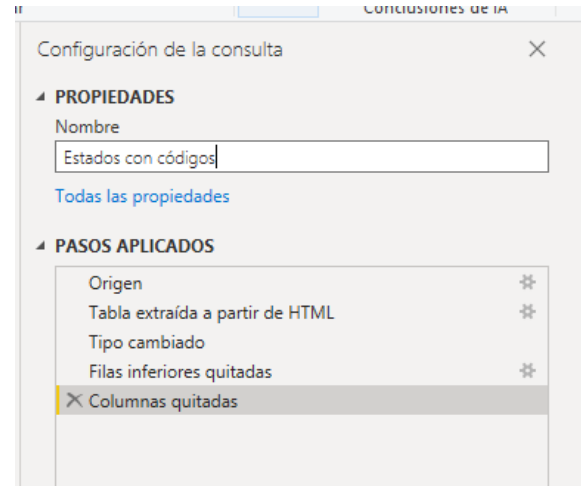


16. On the Home ribbon, click Manage Columns, click Remove Columns, and then click Remove Columns.

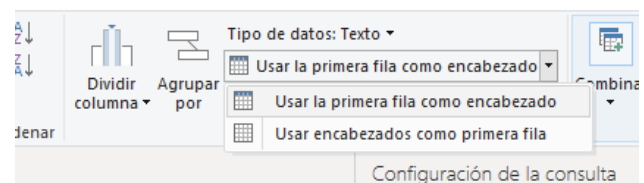
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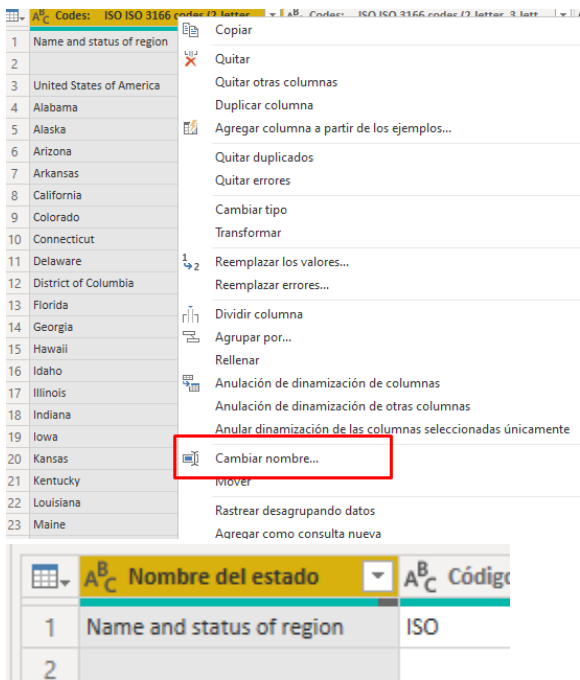
17. In the Query Settings pane, under Properties, in the Name box, type States with Codes, and then press Enter.



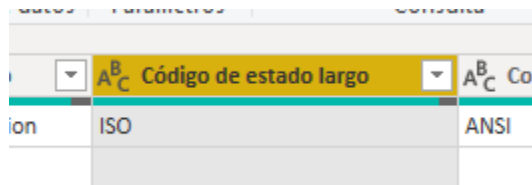
18. On the Home ribbon, in the Transform group, click Use First Row as Headers.



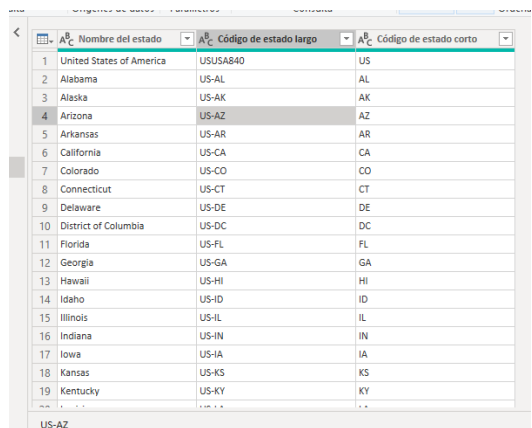
19. Right-click the United States of America column header, click Rename, type State Name, and then press Enter.



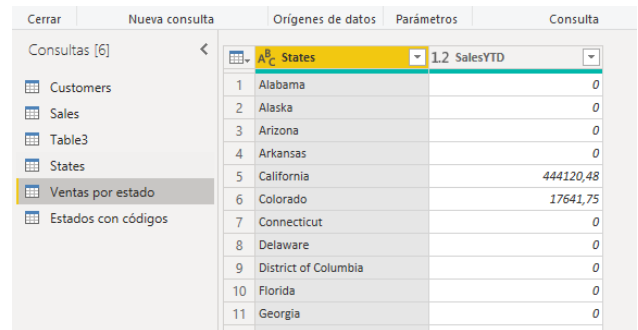
20. Right-click the US USA 840 column header, click Rename, type State Code Long, and then press Enter.



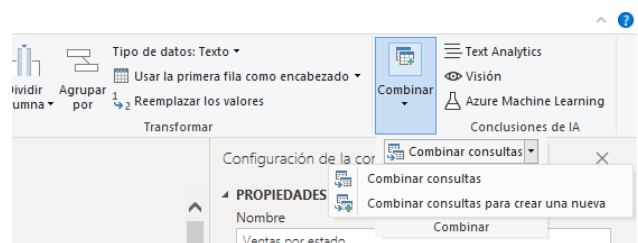
21. Right-click the US column header, click Rename, type State Code Short, and then press Enter.



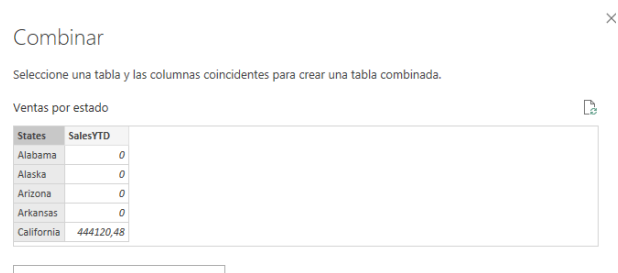
22. In the Queries pane, click Sales by State.



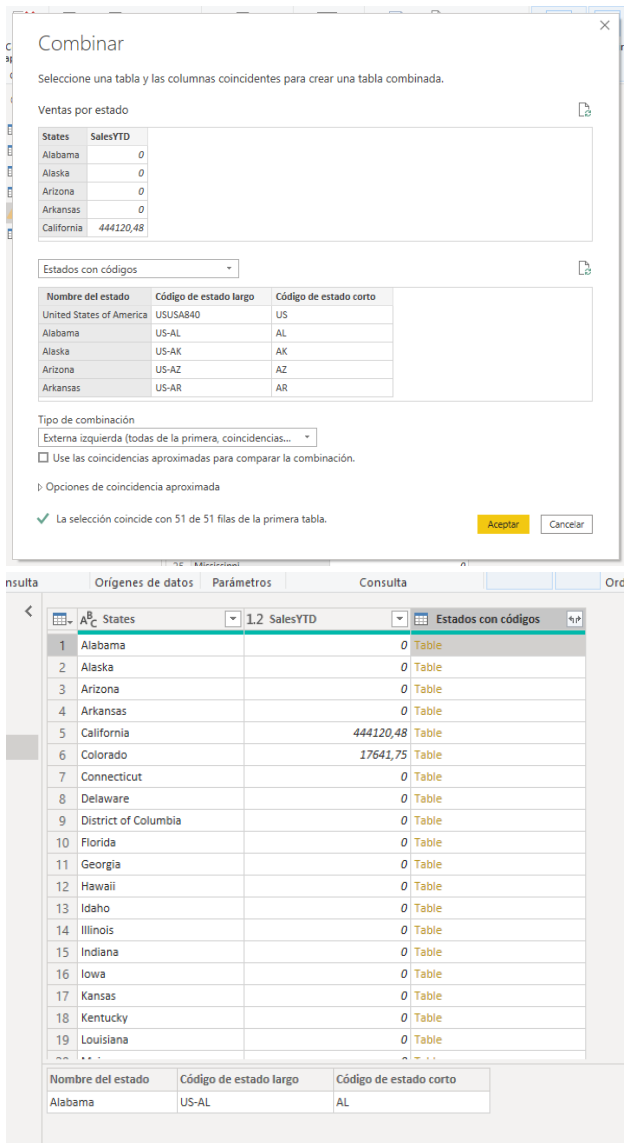
23. On the Home ribbon, click Combine, and then click Merge Queries.



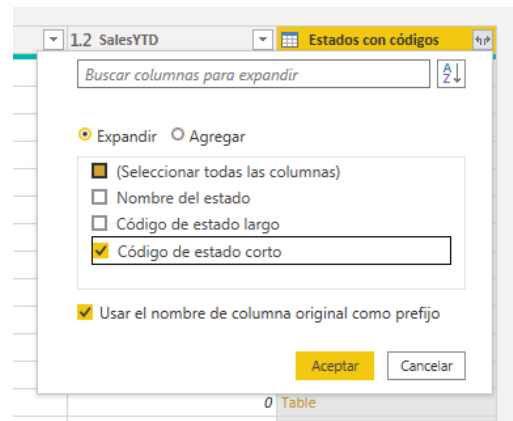
24. In the Merge dialog box, in the Sales by State table, click the States column.



25. In the list, click States with Codes, click the State Name column, and then click OK. The new column is added to the table and contains the merged States with Codes table.



26. In the column header, click the Expand icon, clear (Select All Columns), select State Code Short, and then click OK. The column now shows just the state codes.

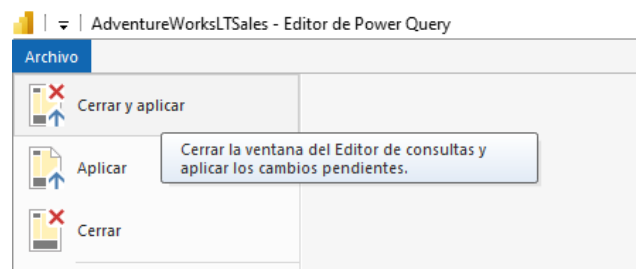


1	Alabama	0	AL
2	Alaska	0	AK
3	Arizona	0	AZ
4	Arkansas	0	AR
5	California	444120,48	CA
6	Colorado	17641,75	CO
7	Connecticut	0	CT
8	Delaware	0	DE
9	District of Columbia	0	DC
10	Florida	0	FL

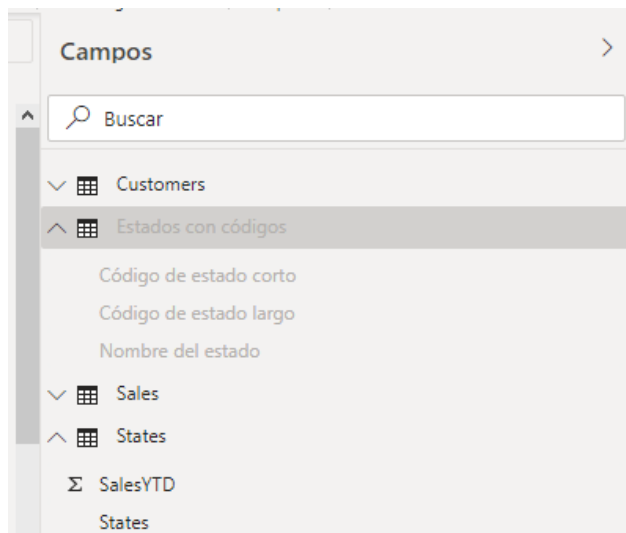
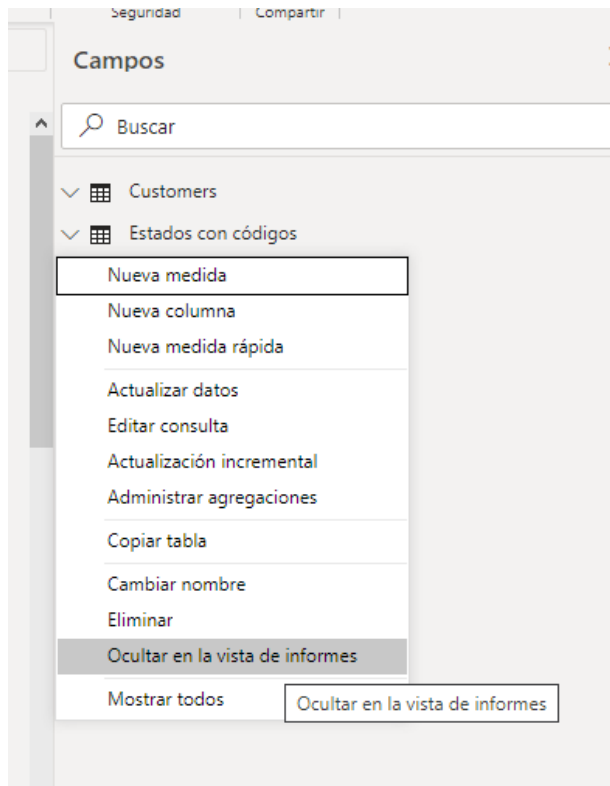
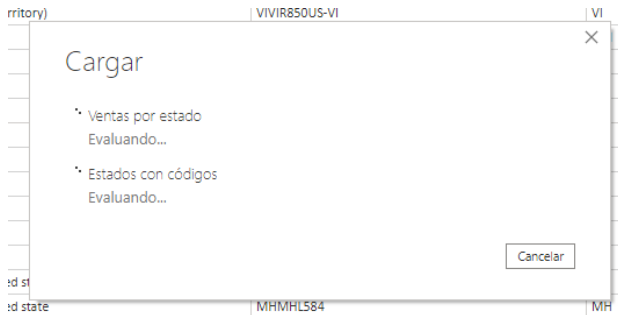
27. Right-click the column, click Rename, type State Code, and then press Enter.

1	Alabama	0	AL
2	Alaska	0	AK
3	Arizona	0	AZ
4	Arkansas	0	AR
5	California	444120,48	CA
6	Colorado	17641,75	CO
7	Connecticut	0	CT
8	Delaware	0	DE
9	District of Columbia	0	DC

28. On the File menu, click Close & Apply.



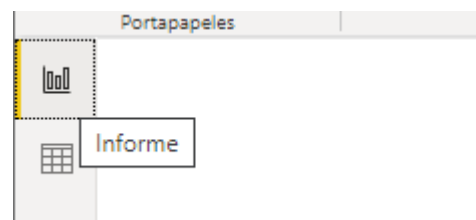
29. In the Fields pane, right-click States with Codes, and then click Hide in Report View.



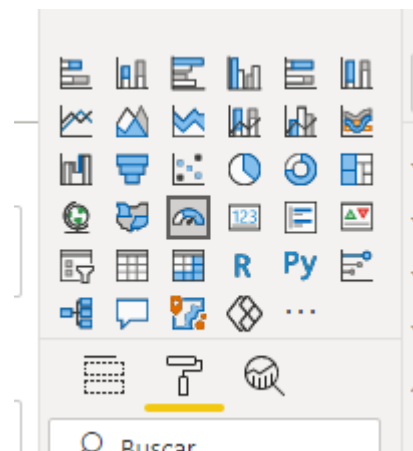
II. EJERCICIO 2: CONSTRUYENDO REPORTES EN POWER BI

TAREA 1: CREAR UN GRÁFICO

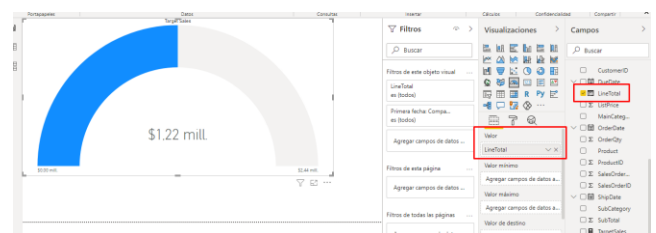
1. En Power BI Desktop, en la barra derecha de navegación, hacer click en Reporte (Report).



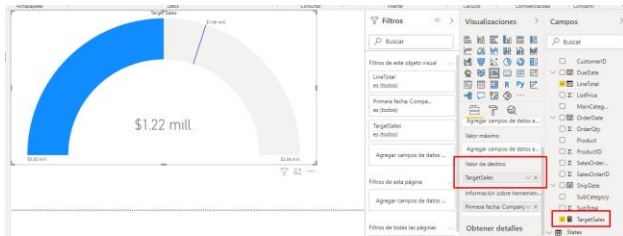
2. En el panel de Visualizaciones (Visualizations), hacer click en Gauge.



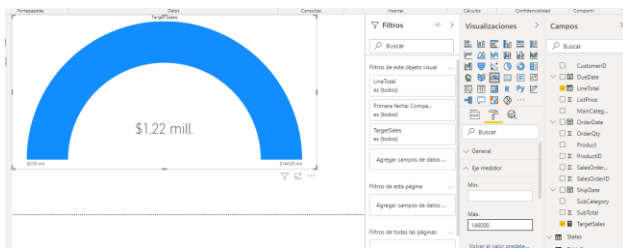
3. Arrastrar el campo LineTotal de la table Sales a la propiedad Valor (Value) del objeto gauge.



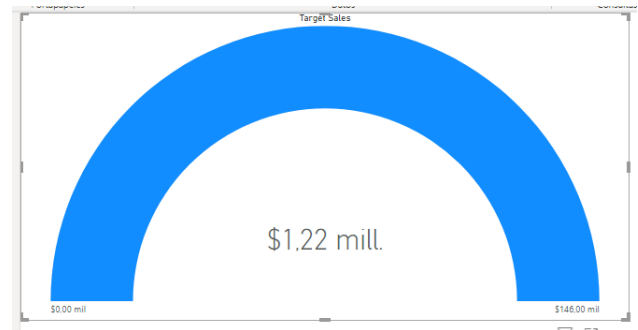
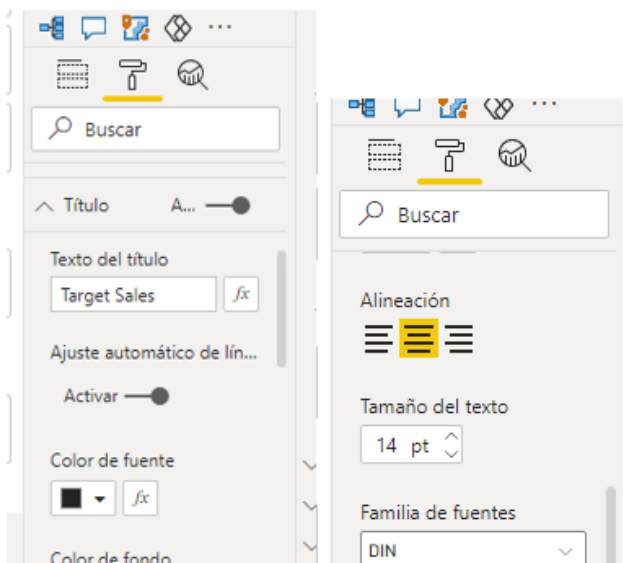
4. Arrastrar la medida TargetSales de la table Sales a la propiedad Valor destino (Target value) del objeto gauge.



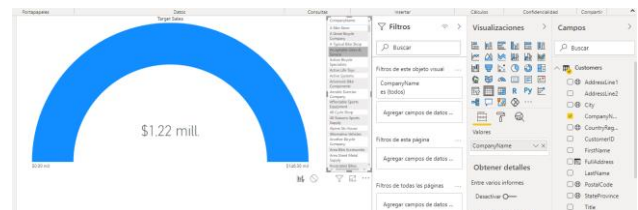
5. Hacer click Format, expandir Gauge axis, and then in the Max box, type 146000.



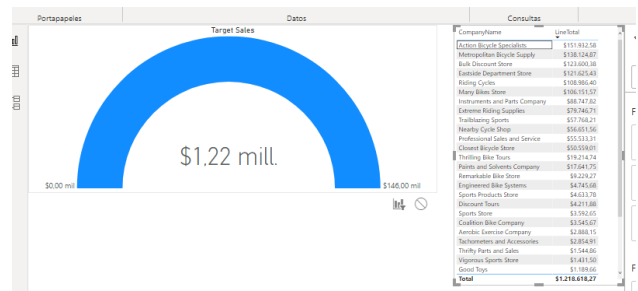
6. Expandir Título (Title), en el cuadro Texto de Título (Title Text), tipear Meta de Ventas (Target Sales), y luego hacer click en Center.



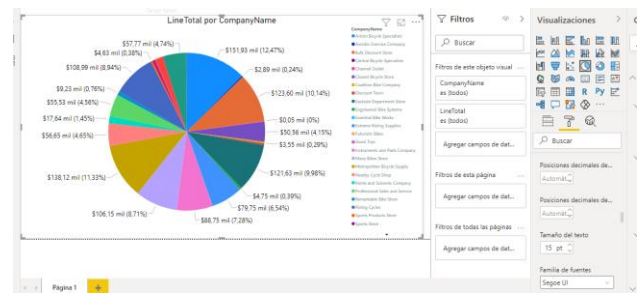
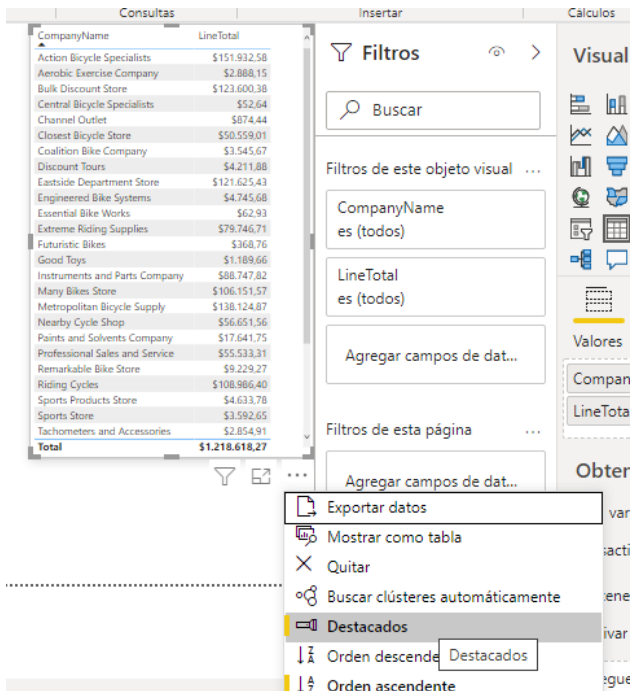
7. Click the report canvas, and then drag the CompanyName field from the Customers table onto the report. Power BI automatically creates a table.



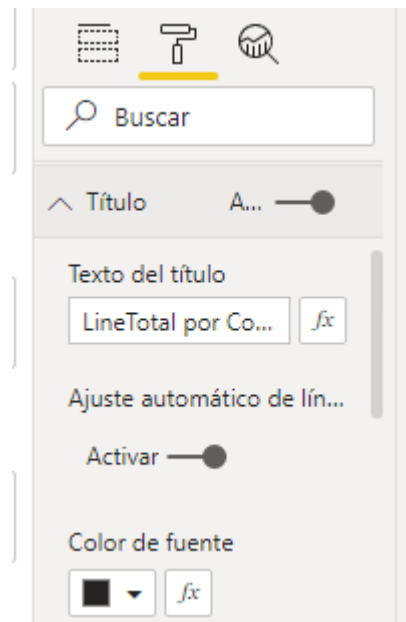
8. Arrastar the LineTotal field from the Sales table onto the report.



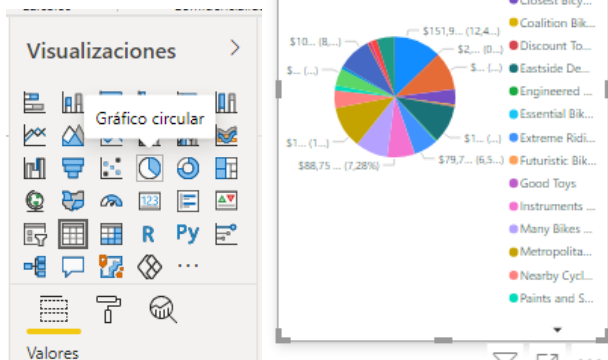
9. Make sure that the table has focus, and then in the Visualizations pane, click Pie chart.



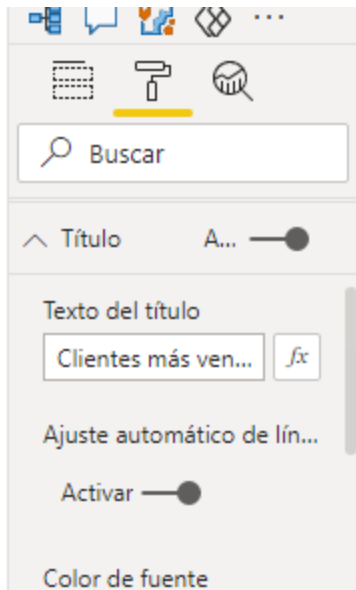
11. With the focus still on the pie chart, click Format, and then expand Title.



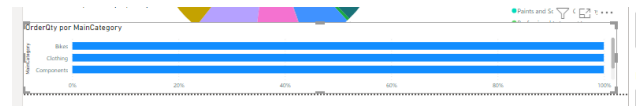
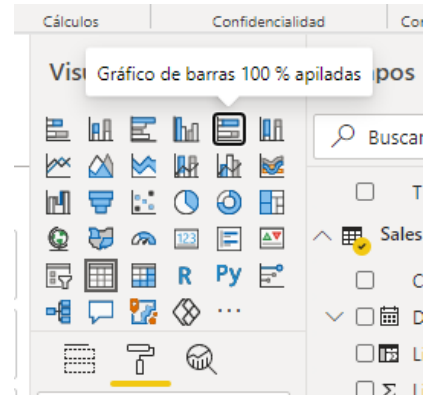
12. In the Title Text box, type Top Selling Customers, and then click Center.



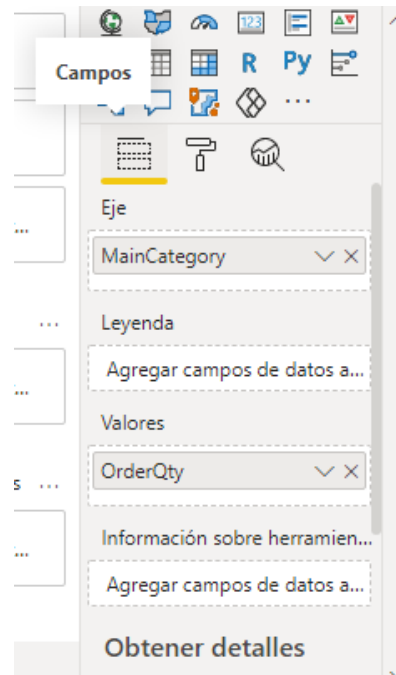
10. Expand the chart to make all of the company names visible by using the resizer handles on the edge of the chart.



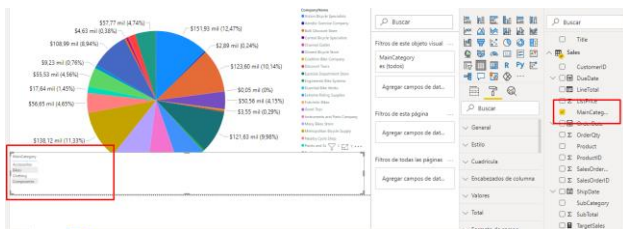
15. In the Visualizations pane, click Stacked bar chart.



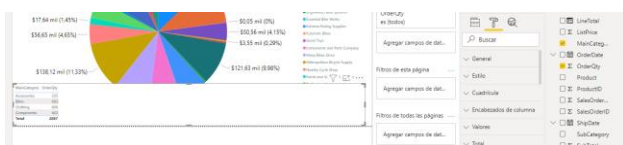
16. In the Visualizations pane, click Fields.



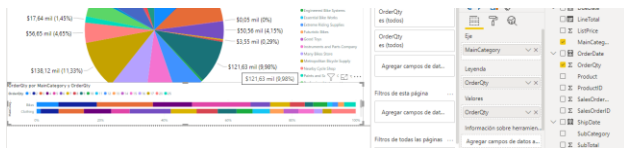
13. Arrastar el campo MainCategory de la tabla Sales table onto the report canvas. Power BI creates a table.



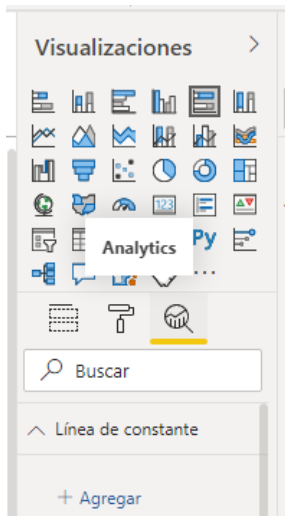
14. Arrastar el campo OrderQty dentro de la tabla.



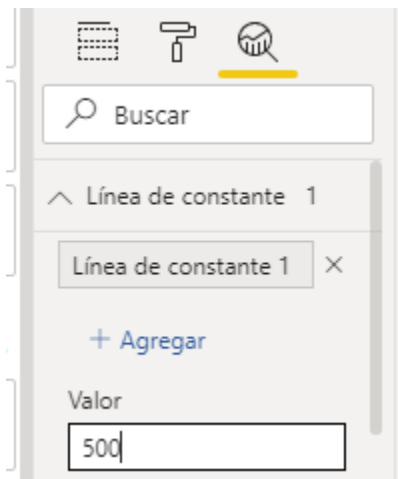
17. Drag the OrderQty field onto the Color saturation property. Notice that the colors change.



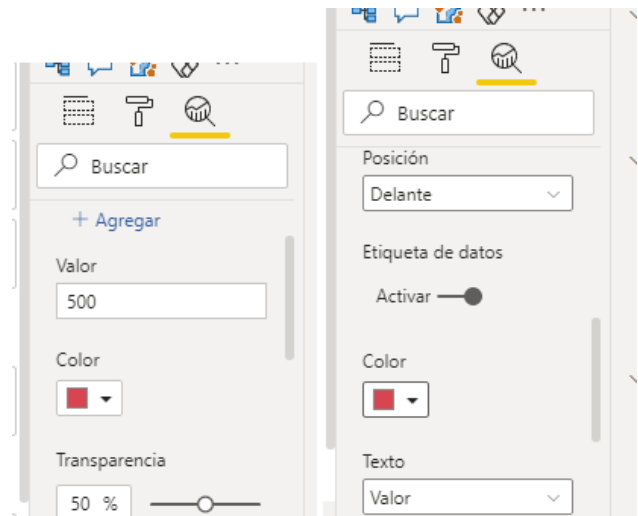
18. In the Visualizations pane, click Analytics, expand Constant Line, and then click Add.



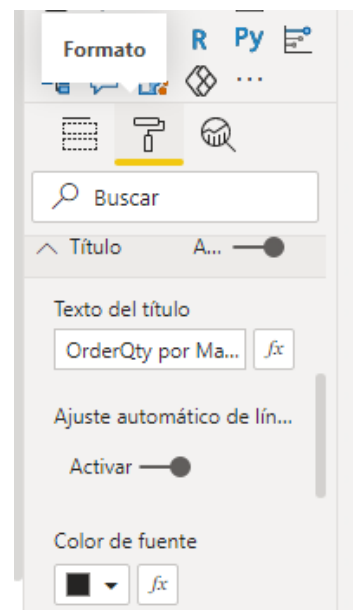
19. In the Value box, type 500.



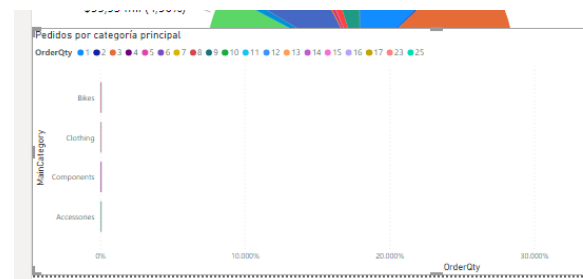
20. Change Color to red, toggle Data label to On, and then change the color to red.



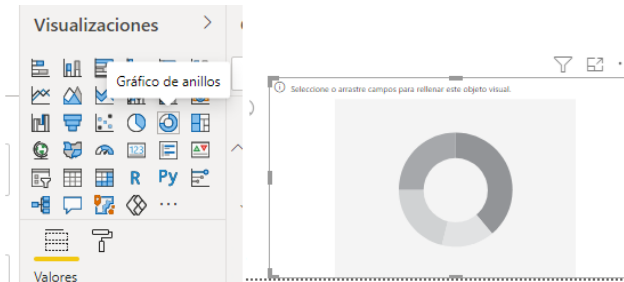
21. In the Visualizations pane, click Format, and expand Title.



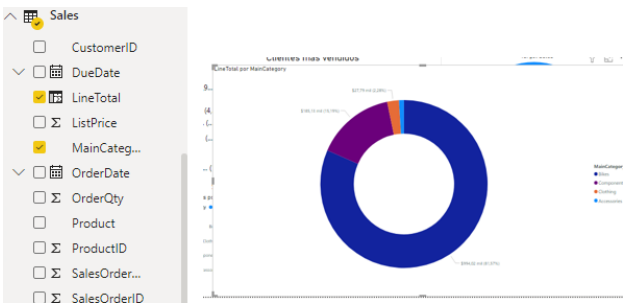
22. In the Title Text box, type Orders by Main Category, and then click Center.



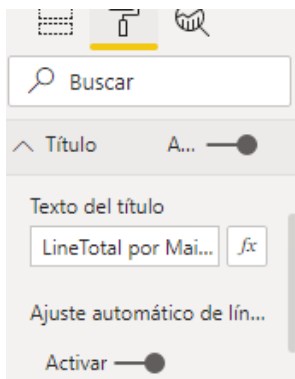
23. Click the report canvas to give it focus, and then in the Visualizations pane, click Donut chart.



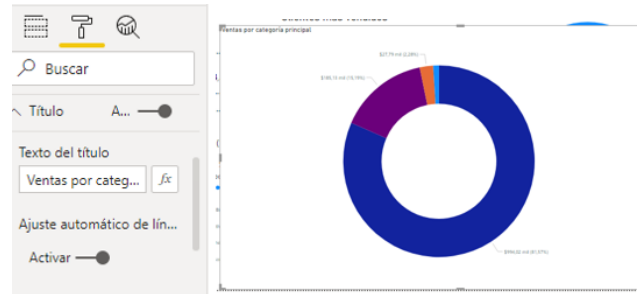
24. In the Sales table, select MainCategory and LineTotal.



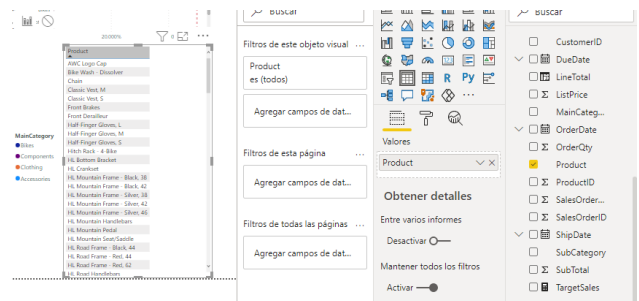
25. In the Visualizations pane, click Format, and then expand Title.



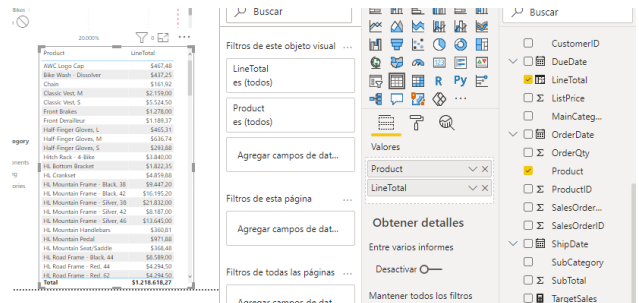
26. In the Title Text box, type Sales by Main Category, and then click Center.



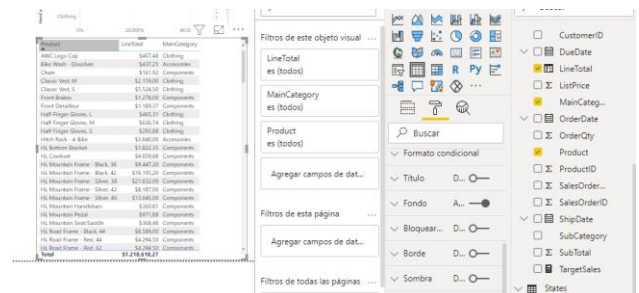
27. Drag the Product field from the Sales table onto the report canvas. Power BI creates a table.



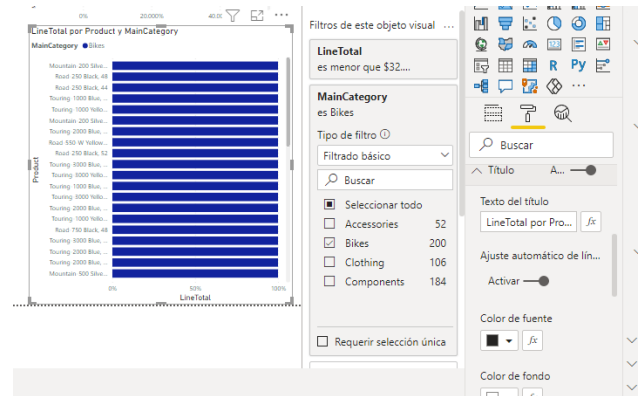
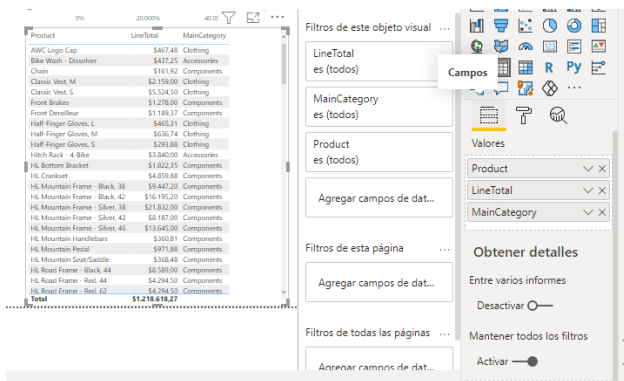
28. Drag the LineTotal field from the Sales table onto the products table chart.



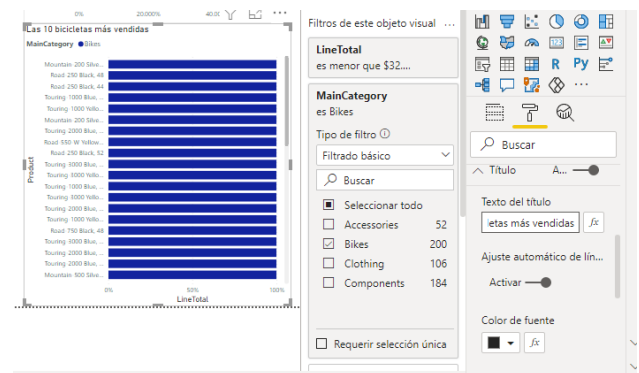
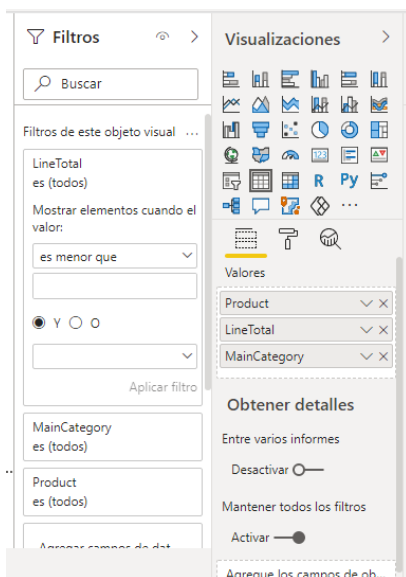
29. In the Sales table, select the MainCategory field.



30. In the Visualizations pane, click Fields.



31. In the Filters pane, expand LineTotal(All).



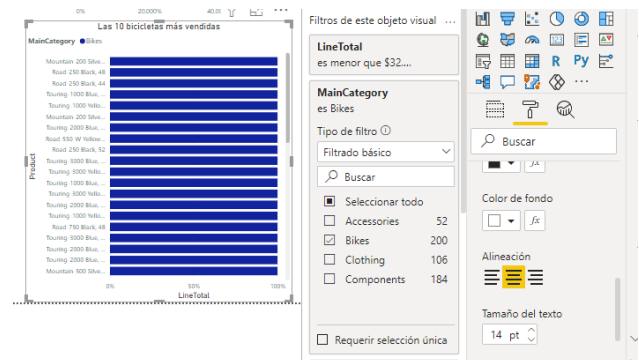
32. In the Show items when the value list, select is greater than, and then in the box below, type 32000.

33. Hacer click en Aplicar filtro (Apply filter).

34. Expand MainCategory(All), and then select Bikes.

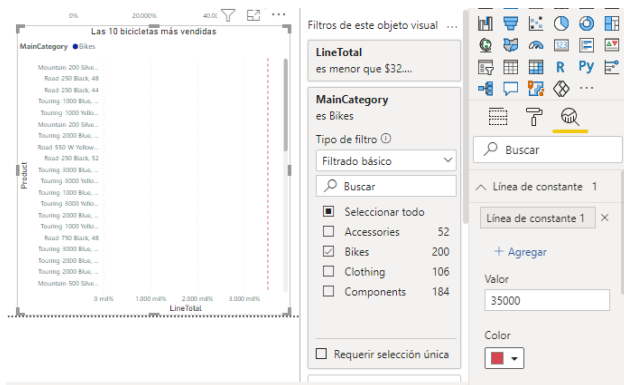
35. In the Visualizations pane, click Stacked column chart.

36. In the Visualizations pane, click Format, and then expand Title.

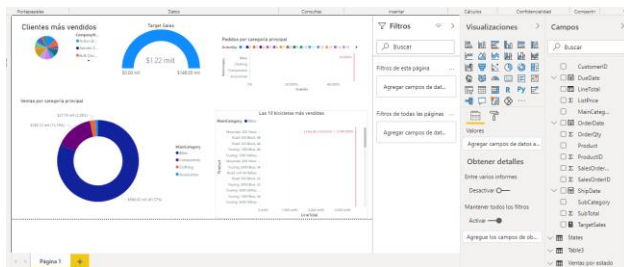


38. In the Visualizations pane, click Analytics, expand Constant Line, and then click Add.

39. In the Value box, type 35000, and then set Color to red.



40. Toggle Data label to On, and then set Color to red.
41. Expand the chart to fill the remaining space on the report canvas. If necessary, move your visuals around to make them fit.

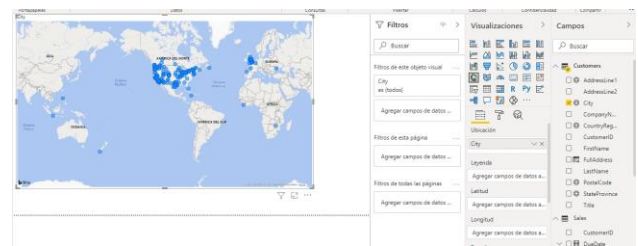


42. Click Save.

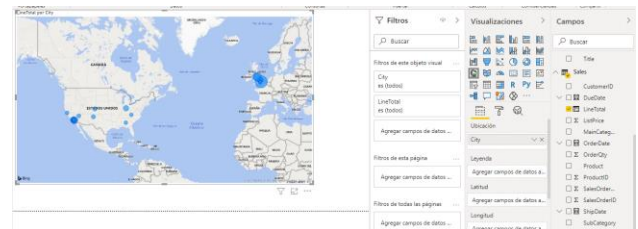


TAREA 2: CREAR UNA VISUALIZACIÓN DE MAPA

1. At the bottom of the report, click the + icon to add a new page.
2. In the Fields pane, in the Customers table, select the City field. Power BI adds a map to the report.



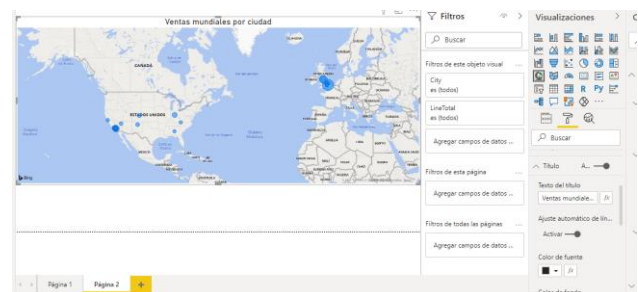
3. In the Fields pane, in the Sales table, select the LineTotal field.



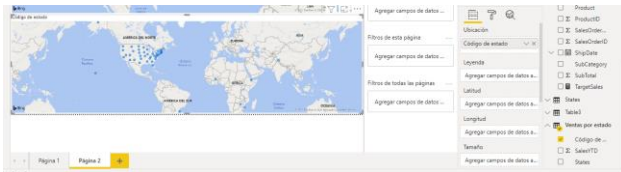
4. Using the grabber tool on the right side of the chart, resize the map to show all of the bubbles.



5. Notice that the bubbles are proportionally sized to represent the data.
6. In the Visualizations pane, click Format, and then expand Title.
7. In the Title Text box, type World Sales by City, and then click Center.



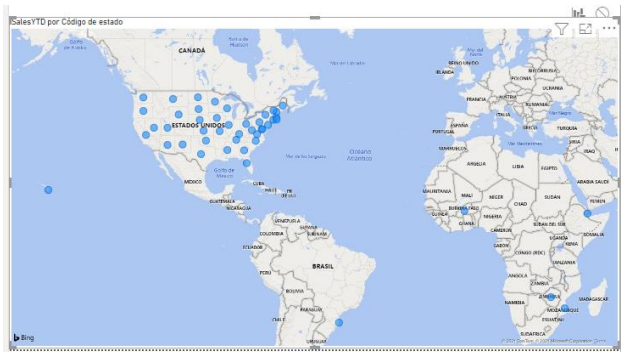
8. Click the report canvas, and then in the Sales by State table, select the State Code column. Power BI automatically adds a map.



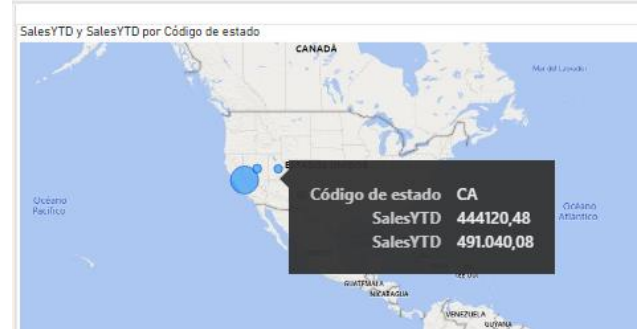
9. In the Sales by State table, select the SalesYTD column.



10. In the Visualizations pane, click Filled Map. Using the grabber tool on the right side and at the bottom of the chart, resize the map to show all the states.

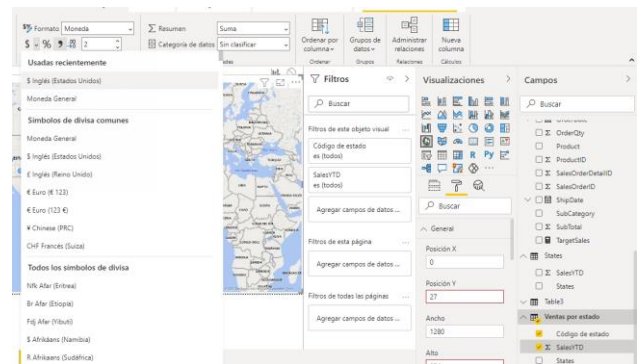


11. Notice that the sales cluster in one area.
12. Position the cursor on California(CA) to see the sales figure. The value has not been formatted as currency.



13. In the Sales by State table, click the SalesYTD column.

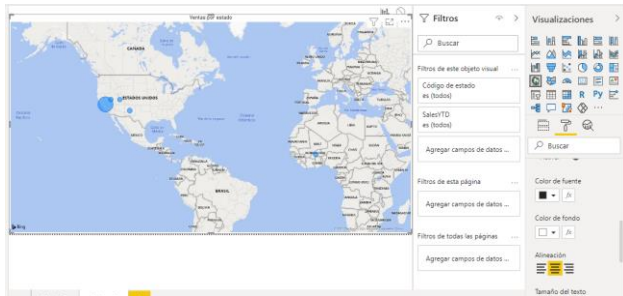
14. On the Modeling ribbon, select Format:General, click Currency, and then select \$ English (United States).



15. Position the cursor on California (CA) on the map, and notice that the value has been formatted.



16. In the Visualizations pane, click Format, and then expand Title.
17. In the Title Text box, type Sales by State, and then click Center.



18. Click Save, and then leave the report open for the next exercise. Results: After this exercise, you should have created a report that has chart visuals and is ready to publish to the Power BI service.

