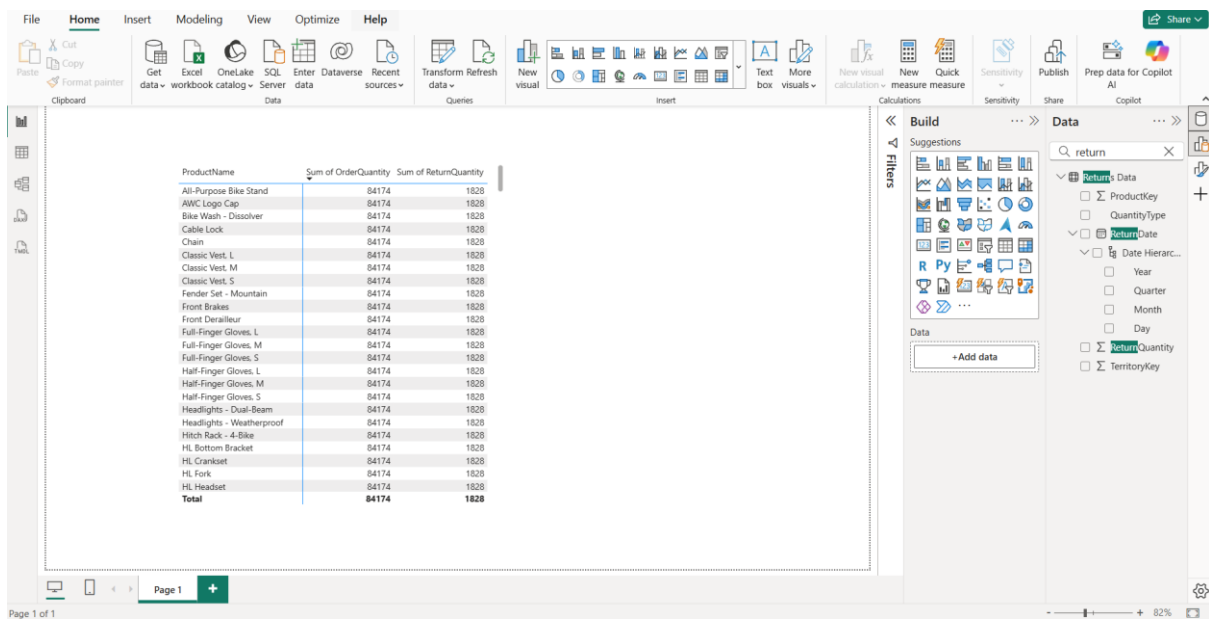
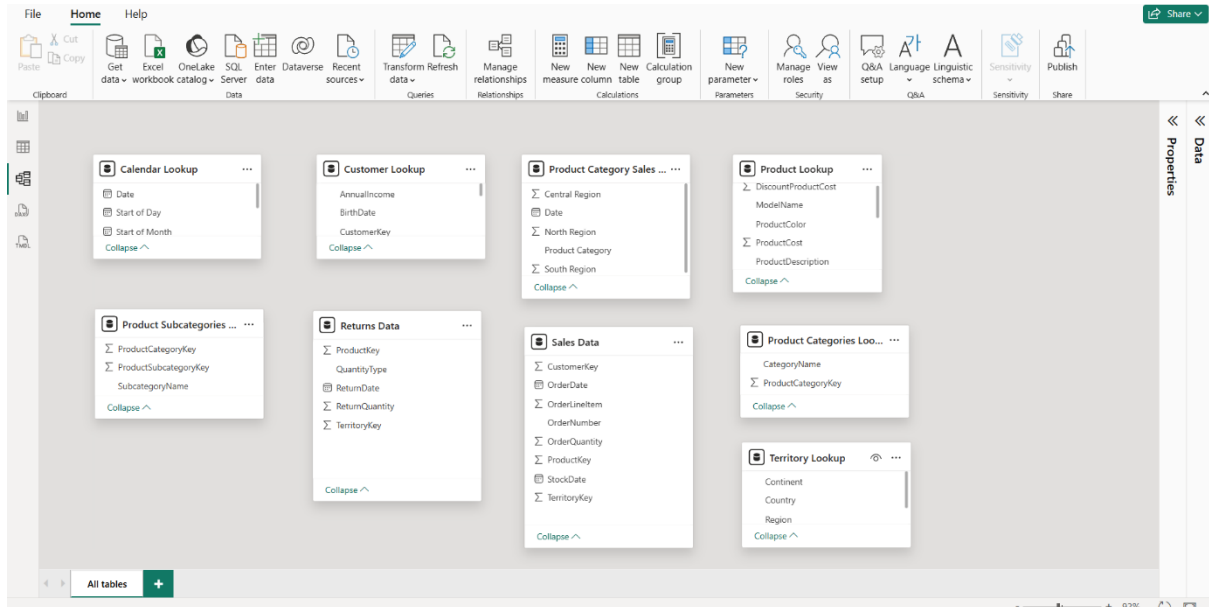
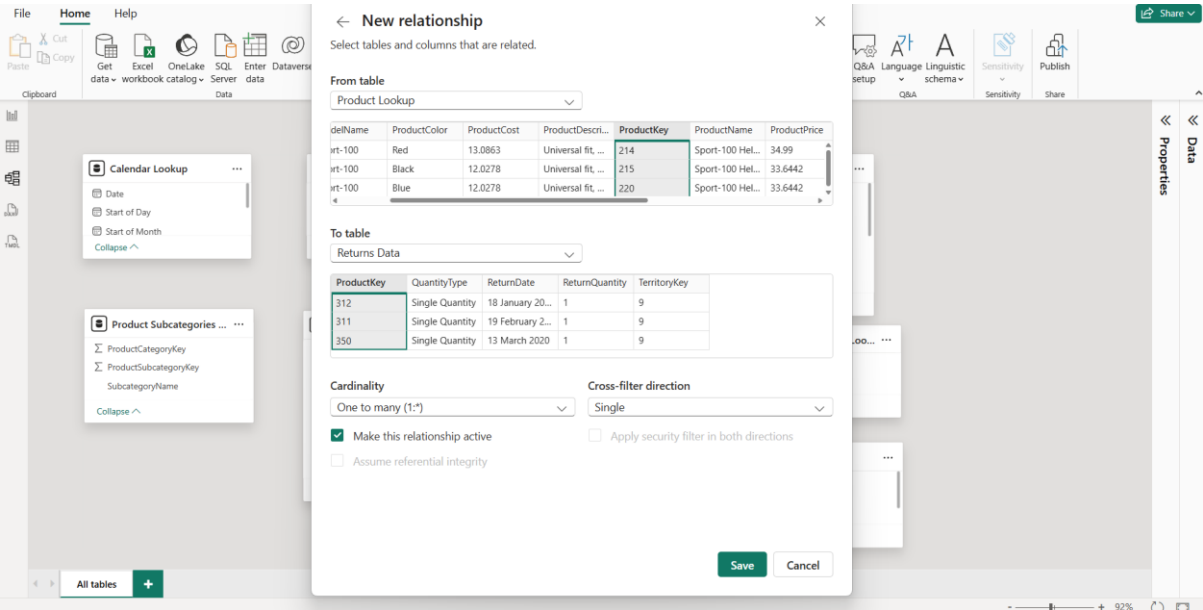
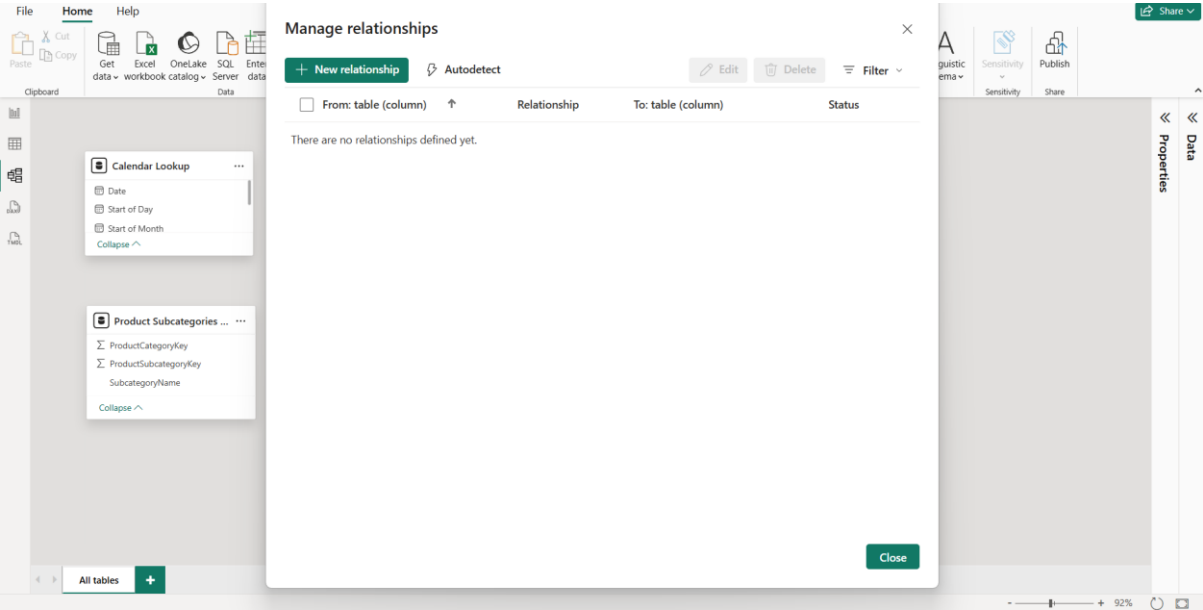


DATA MODELLING

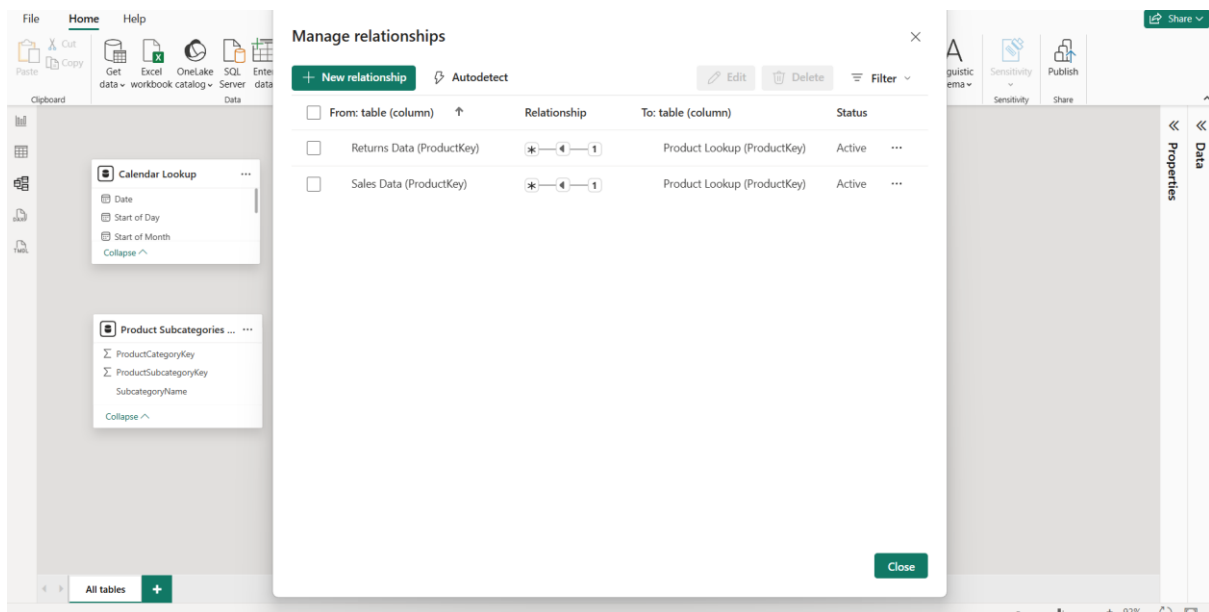
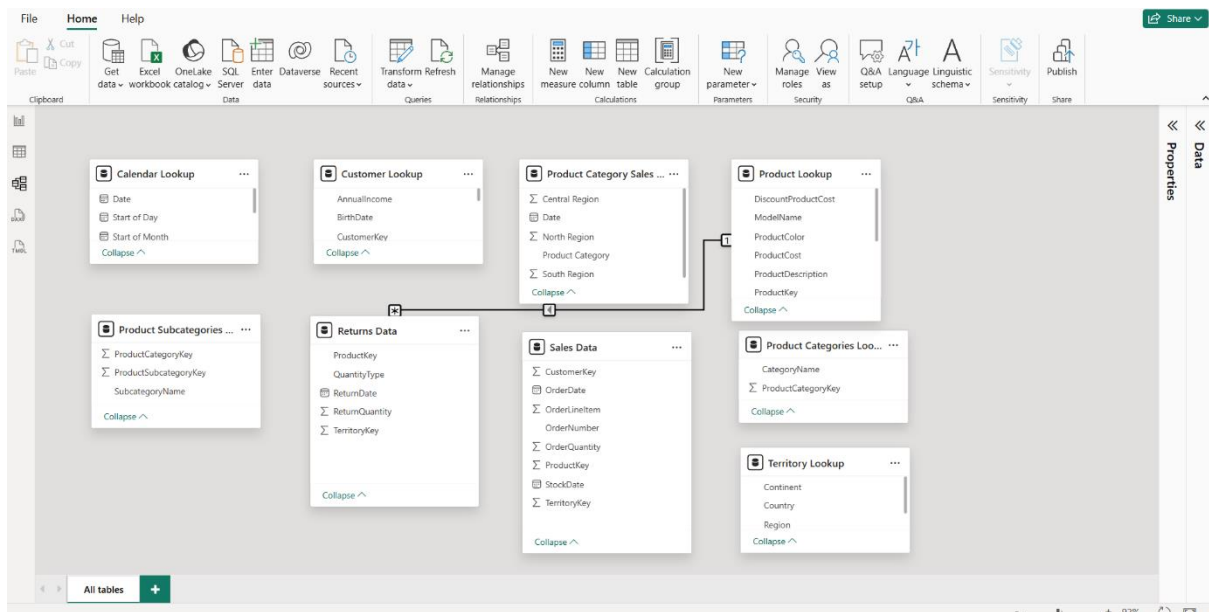
Collection of independent table, with no connections and relationships

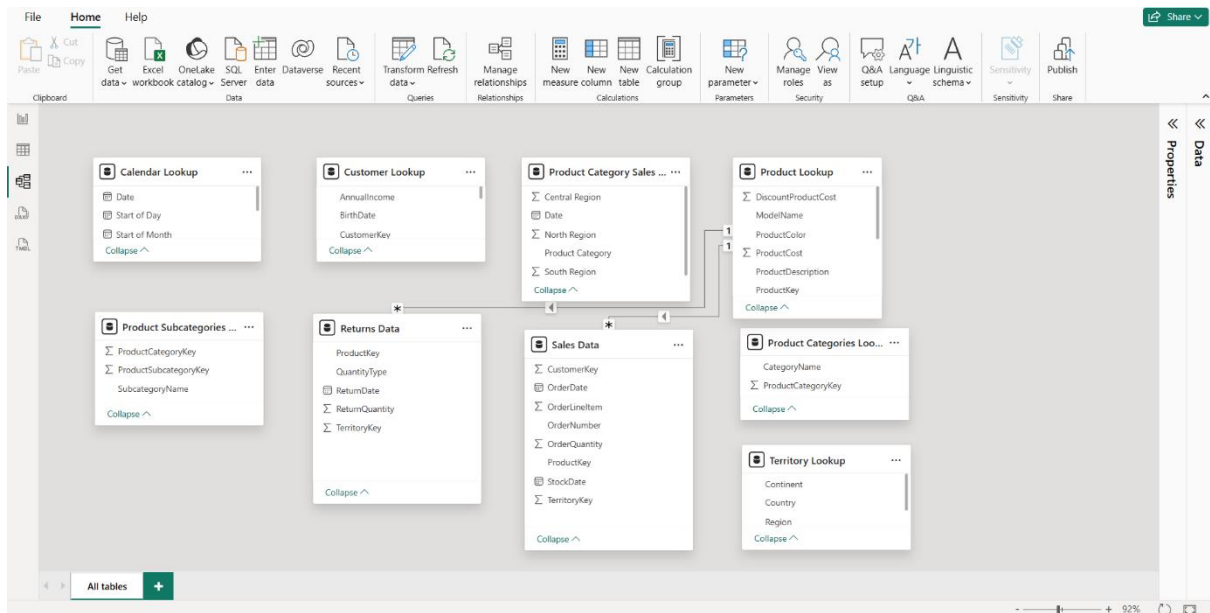


Manage Relationships



Collections of independent tables, with connections and relationships



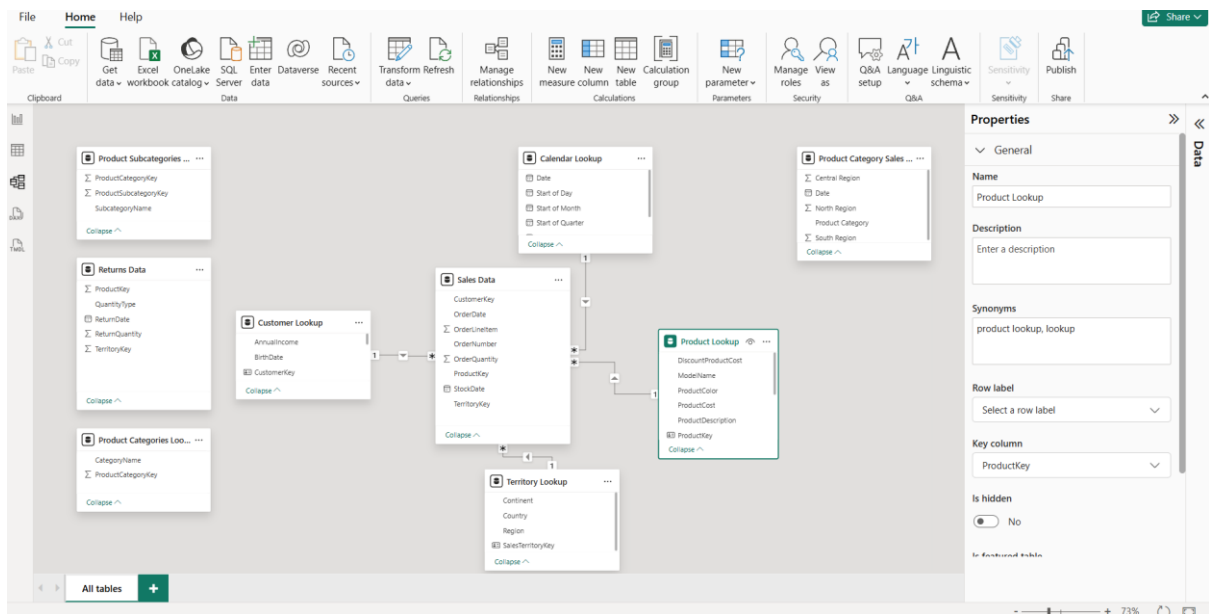


The screenshot shows the Microsoft Power BI Desktop interface with a data table. The table has three columns: ProductName, Sum of OrderQuantity, and Sum of ReturnQuantity. The data is as follows:

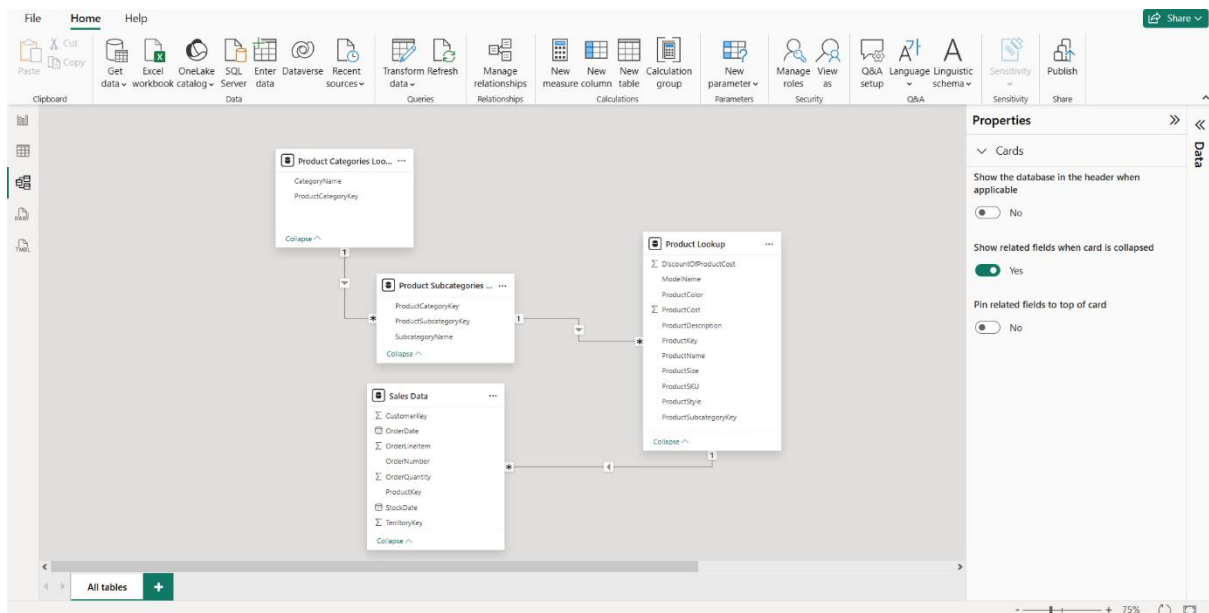
ProductName	Sum of OrderQuantity	Sum of ReturnQuantity
Water Bottle - 30 oz.	7967	155
Patch Kit/8 Patches	5898	95
Mountain Tire Tube	5678	93
Road Tire Tube	4327	67
AWC Logo Cap	4151	46
Fender Set - Mountain	3960	54
Mountain Bottle Cage	3810	77
Road Bottle Cage	3329	56
Touring Tire Tube	2740	45
MTL Mountain Tire	2119	28
Sport-100 Helmet, Red	2099	70
Sport-100 Helmet, Blue	1995	66
Sport-100 Helmet, Black	1940	52
LL Road Tire	1904	43
MTL Road Tire	1723	26
Touring Tire	1723	21
Bike Wash - Dissolver	1706	25
LL Mountain Tire	1560	39
HL Mountain Tire	1305	49
Half-Finger Gloves, M	918	16
Half-Finger Gloves, S	886	15
Half-Finger Gloves, L	840	18
HL Road Tire	795	28
Hydration Pack - 70 oz.	695	25
Total	84174	1828

The bottom status bar shows 'Page 1 of 1' and a zoom level of 82%.

Star Schema



Snow Flake



Active Relationship

The screenshot shows the Power BI Desktop interface with the 'Relationships' view selected. A relationship is established between the 'Calendar Lookup' table (Date column) and the 'Sales Data' table (StockDate column). The relationship is active, and the cardinality is 'Many to one (*:1)'. The 'Cross-filter direction' is set to 'Single'. The 'Properties' pane on the right shows the relationship details.

Relationship Properties:

- Table: Sales Data, Column: StockDate
- Cardinality: Many to one (*:1)
- Table: Calendar Lookup, Column: Date
- Make this relationship active: ☒ No
- Cross-filter direction: Single
- Apply security filter in both directions: ☐ No

The screenshot shows the 'Edit relationship' dialog box in Power BI Desktop. The dialog box allows selecting tables and columns for the relationship. The 'From table' is 'Sales Data' and the 'To table' is 'Calendar Lookup'. The 'Date' column is selected in the 'To table'. The 'Cardinality' is 'Many to one (*:1)' and the 'Cross-filter direction' is 'Single'. The 'Make this relationship active' checkbox is checked.

Edit relationship dialog box:

- From table: Sales Data
- To table: Calendar Lookup
- Date (selected column)
- Cardinality: Many to one (*:1)
- Cross-filter direction: Single
- Make this relationship active: ☒
- Assume referential integrity: ☐

CustomerKey	OrderDate	OrderLineItem	OrderNumber	OrderQuantity	ProductKey	StockDate
12570	05 July 2020	1	SO46718	1	360	03 June
12341	07 July 2020	1	SO46736	1	360	22 April
12356	12 July 2020	1	SO46776	1	360	05 May

Inactive Relationship

The screenshot shows the Power BI Desktop interface with a data model. The 'Calendar Lookup' table has a 'Date' column, and the 'Sales Data' table has a 'StockDate' column. A relationship is shown between these two columns, but it is inactive. The 'Properties' pane on the right shows the relationship settings:

- Relationship: Sales Data (Table) to StockDate (Column)
- Cardinality: Many to one (*:1)
- Table: Calendar Lookup (Table) to Date (Column)
- Make this relationship active: ☐ No
- Cross-filter direction: Single
- Apply security filter in both directions: ☐ No

Buttons for 'Apply changes' and 'Open relationship editor' are visible at the bottom of the Properties pane.

The screenshot shows the 'Edit relationship' dialog box open over the same data model. The dialog box allows you to select the tables and columns to be related. The 'From table' is 'Sales Data' and the 'To table' is 'Calendar Lookup'. The 'Date' column in the 'Calendar Lookup' table is selected. The 'Cardinality' is set to 'Many to one (*:1)' and the 'Cross-filter direction' is set to 'Single'. The 'Make this relationship active' checkbox is checked.

Edit relationship
Select tables and columns that are related.

From table: Sales Data

CustomerKey	OrderDate	OrderLineItem	OrderNumber	OrderQuantity	ProductKey	StockDate
12570	05 July 2020	1	SO46718	1	360	03 June
12341	07 July 2020	1	SO46736	1	360	22 April
12356	12 July 2020	1	SO46776	1	360	05 May

To table: Calendar Lookup

Date

01 January 20...
02 January 20...
03 January 20...

Cardinality: Many to one (*:1)

Cross-filter direction: Single

☒ Make this relationship active

☐ Assume referential integrity

☐ Apply security filter in both directions

Save Cancel

The screenshot displays the Microsoft Power BI Desktop interface, showing a data model with several tables and their relationships. The tables are:

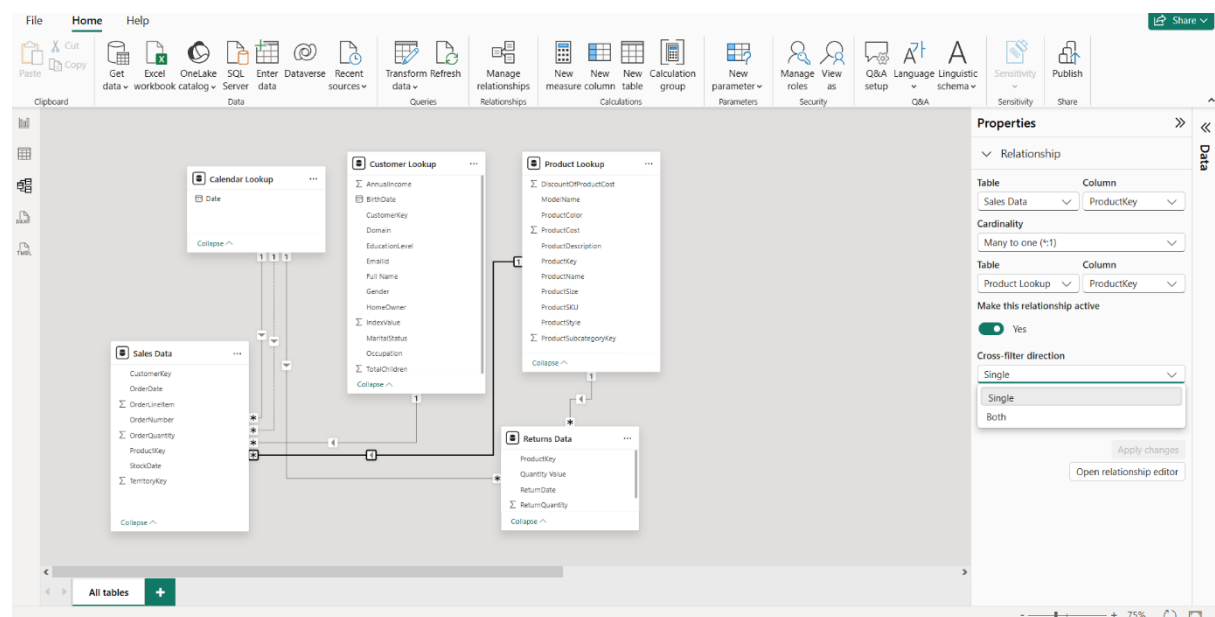
- Sales Data**: Contains columns like CustomerKey, OrderDate, OrderItem, OrderNumber, OrderQuantity, ProductKey, StockDate, and TerritoryKey.
- Calendar Lookup**: Contains a Date column.
- Customer Lookup**: Contains columns like AnnualIncome, BirthDate, CustomerKey, Domain, EducationLevel, Email, FullName, Gender, HomeOwner, IndexValue, MaritalStatus, Occupation, and TotalChildren.
- Product Lookup**: Contains columns like DiscountOffProductCost, ModeName, ProductColor, ProductCost, ProductDescription, ProductKey, ProductName, ProductSize, ProductSKU, ProductStyle, and ProductSubcategoryKey.
- Returns Data**: Contains columns like ProductKey, QuantityValue, ReturnDate, and ReturnQuantity.

The relationships are as follows:

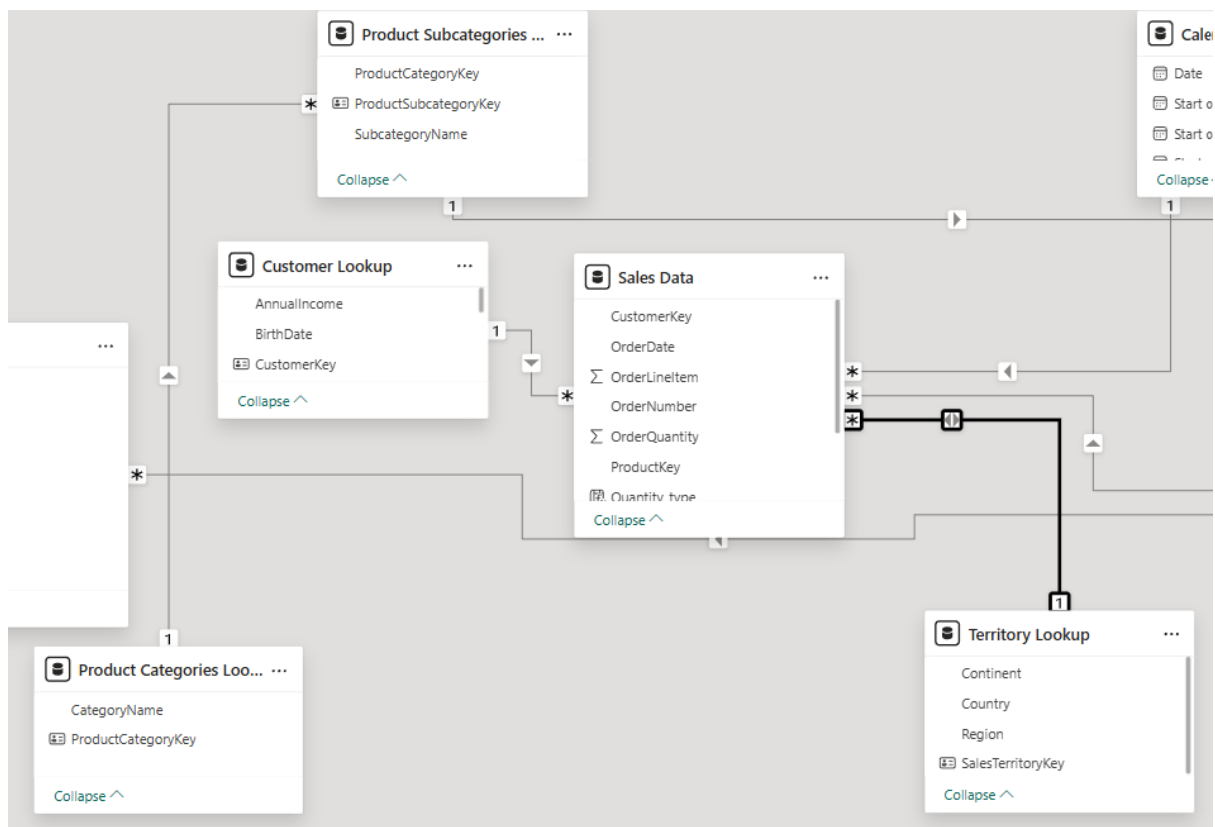
- Sales Data** is related to **Calendar Lookup** via the **Date** column. The relationship is many-to-one (1:1).
- Customer Lookup** is related to **Product Lookup** via the **ProductKey** column. The relationship is many-to-one (1:1).
- Returns Data** is related to **Product Lookup** via the **ProductKey** column. The relationship is many-to-one (1:1).

The right-hand pane shows the **Properties** window for the **Relationship** between **Sales Data** and **Calendar Lookup**. The **Table** is **Sales Data** and the **Column** is **StockDate**. The **Cardinality** is **Many to one (1:1)**. The **Table** is **Calendar Lookup** and the **Column** is **Date**. The **Make this relationship active** checkbox is checked. The **Cross-filter direction** is **Single**. The **Apply security filter in both directions** checkbox is unchecked. The **Apply changes** and **Open relationship editor** buttons are visible.

Single Directional Filter



Bi-Directional Filter



MODEL LAYOUT

