

Power BI - Project

Authors: Bartosz Olechnowicz

Research object

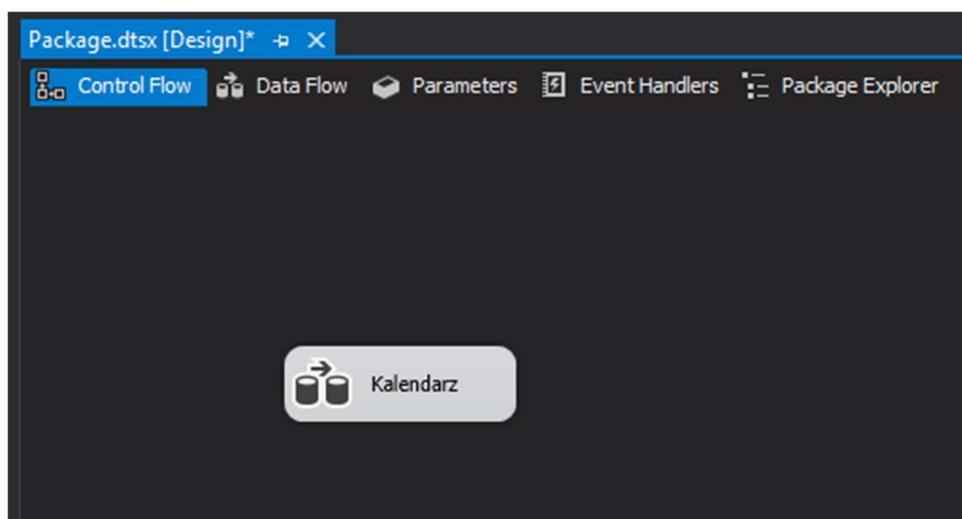
The object of research in the project was the profits generated by the online store in 2015-2018, the analysis of the most frequently purchased products and their prices.

Import of data from the "Calendar" file to the SQL database

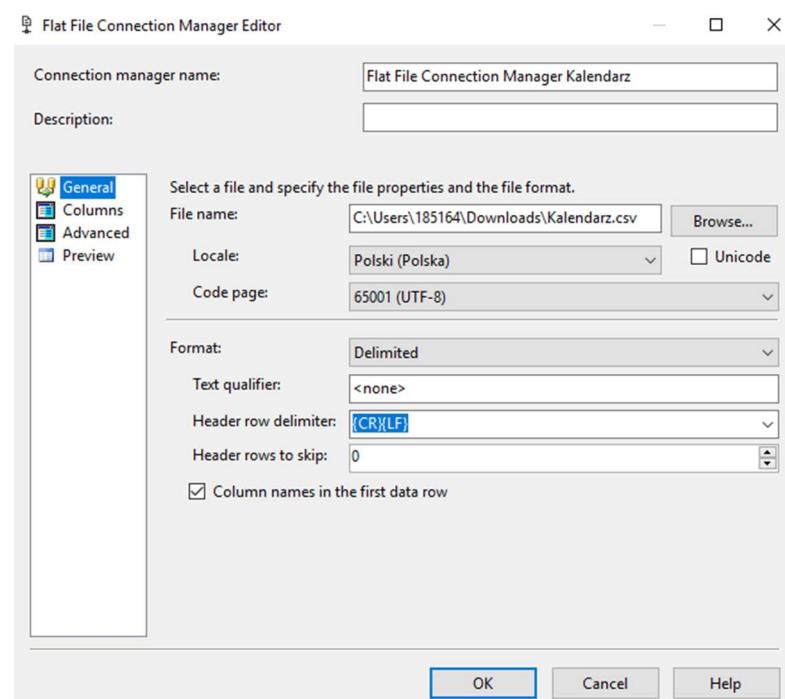
First, Excel generated a calendar by typing a date in the first cell and dragging it down. This created a column called "Date" containing dates from 2015 to 2018:

Date
01.01.2015
02.01.2015
03.01.2015
04.01.2015
05.01.2015
06.01.2015
07.01.2015
08.01.2015
09.01.2015
10.01.2015
11.01.2015

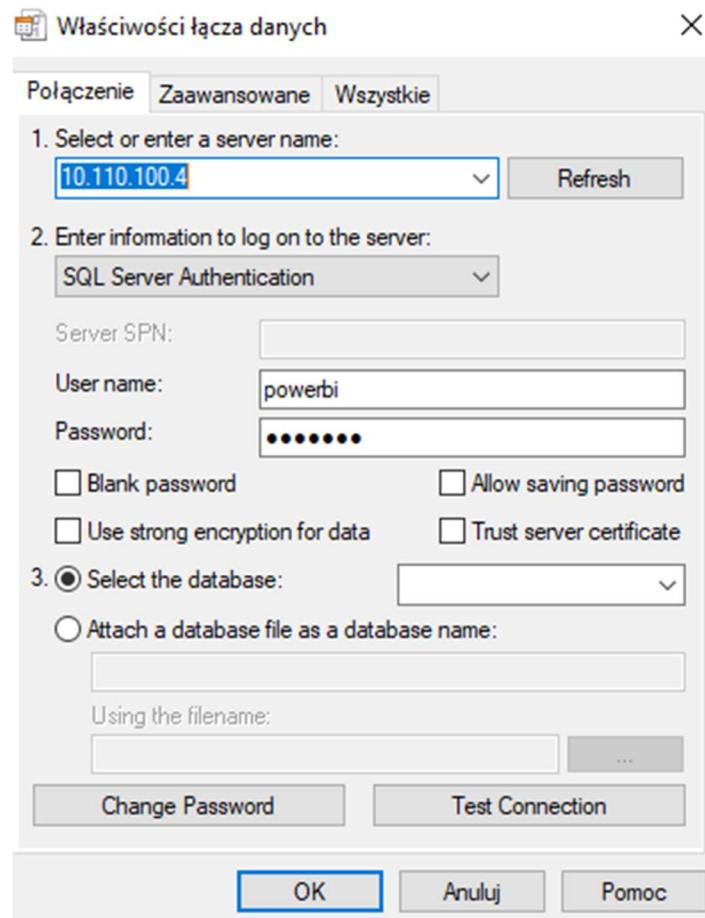
A new project has been created in Visual Studio. During its creation, the "Integration Services Project" option was selected. The next step was to drag the "Data Flow Task" to the project in Visual Studio and rename it to "Calendar", as you can see in the screenshot below:



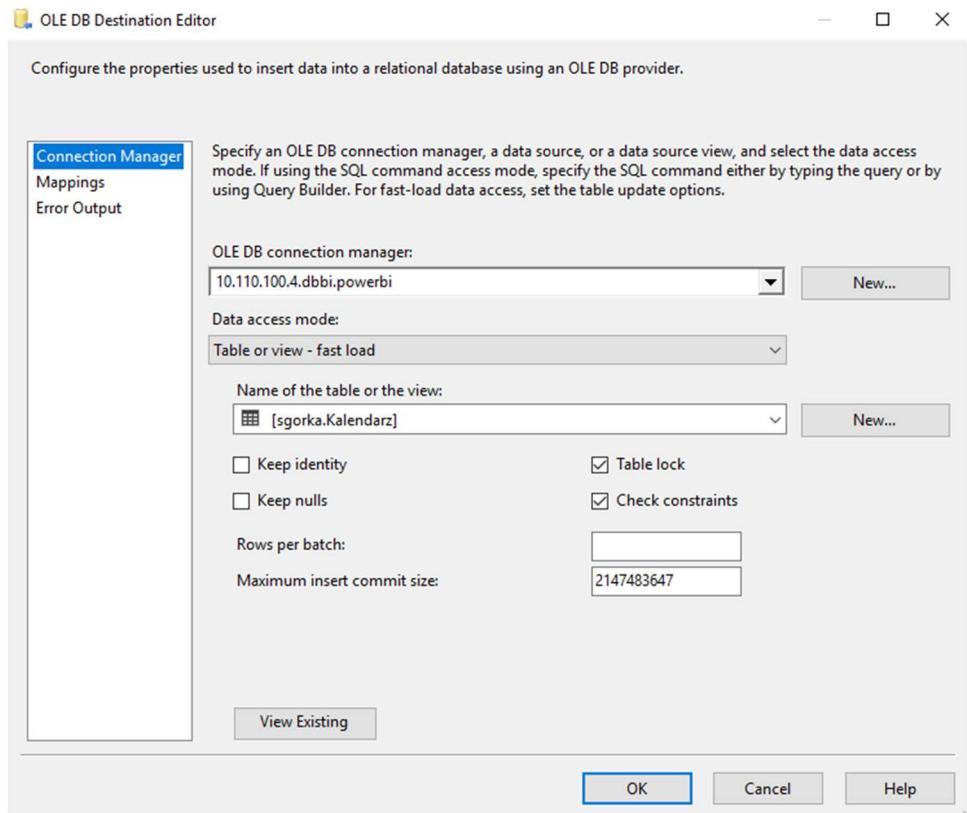
Then, "Source Assistant" was dragged to the "Calendar" item and "Flat file" was selected:



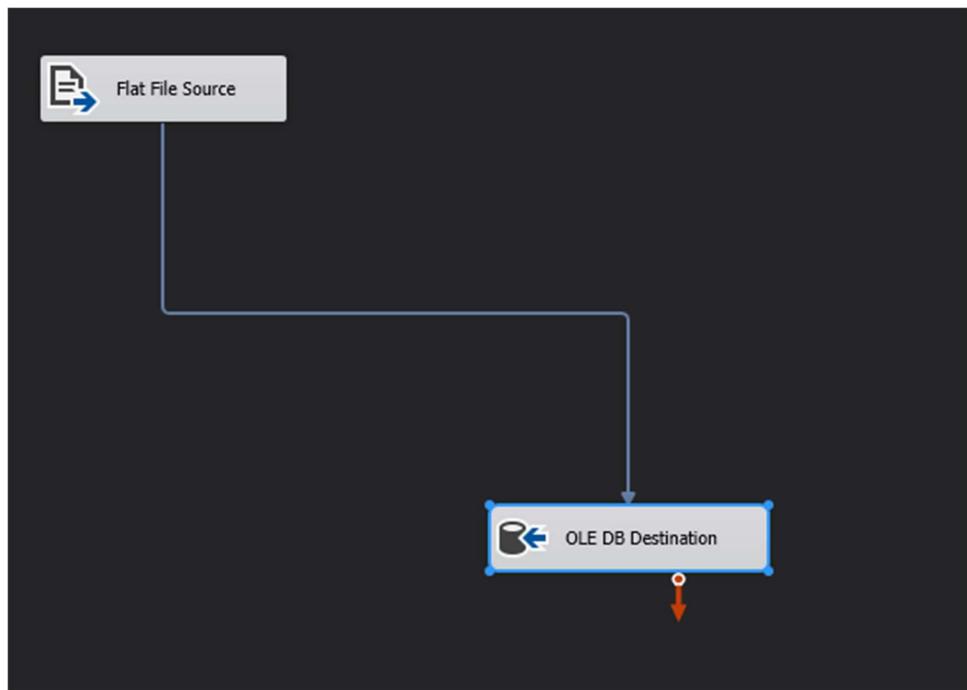
The next step was logging into the database by selecting "SQL Server Authentication" and entering the server data:



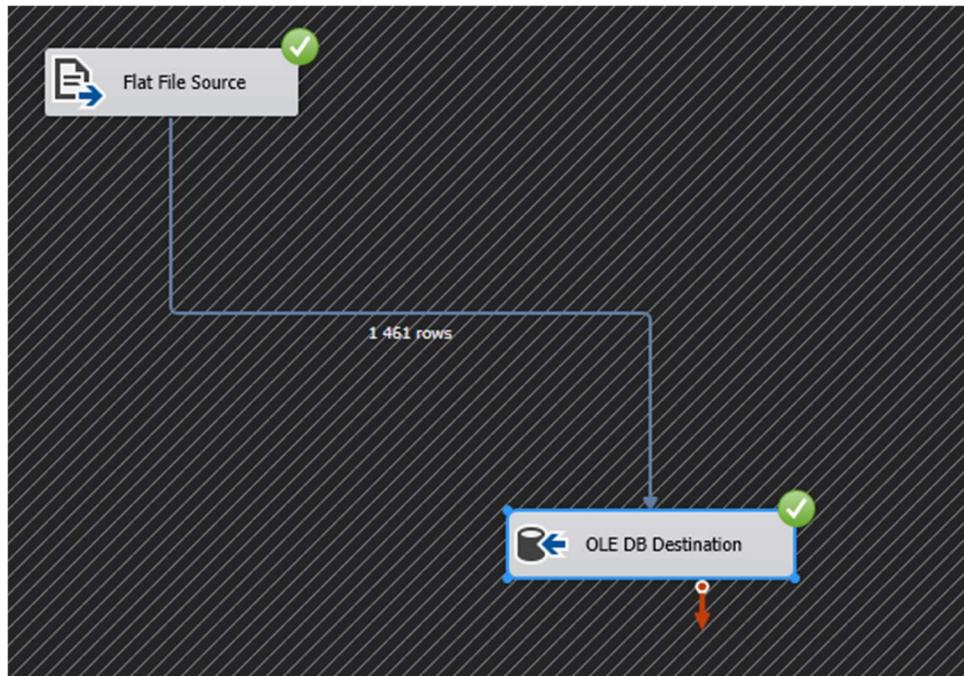
Then "Destination Assistant" was added to the project and the server data was re-entered and the name of the created table was set to "sgorka.Kalendarz":



The next step was to connect the elements "Flat File Source" and "OLE DB Destination":



Then clicked the "Start" button to compile the project. The following screenshot shows that the compilation was successful:



After a successful compilation in SQL Server Management Studio on the basis of "dbbi", the "Refresh" function was used to make the newly created table appear in the "Tables" tab. The next step was to use the "Select top 1000" function on the newly created table to display the first 1000 records from the table. The results are shown in the screenshot below:

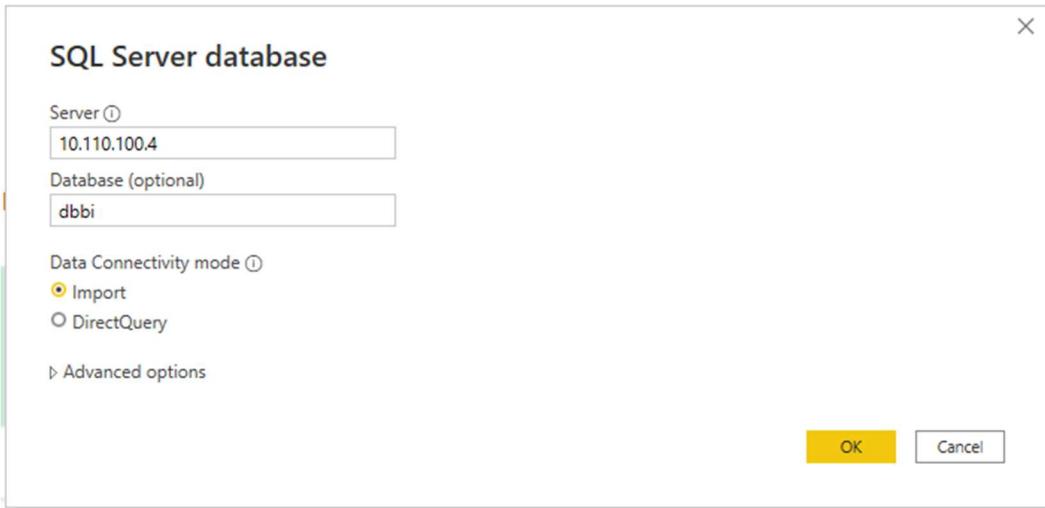
The screenshot shows a SQL Server Management Studio (SSMS) interface. At the top, there is a query window titled 'SQLQuery1.sql - 10...dbbi (powerbi (5))' containing the following SQL script:

```
***** Script for SelectTopNRows command from SSMS *****
SELECT TOP (1000) [Date]
FROM [dbbi].[dbo].[sgorka.Kalendarrz2]
```

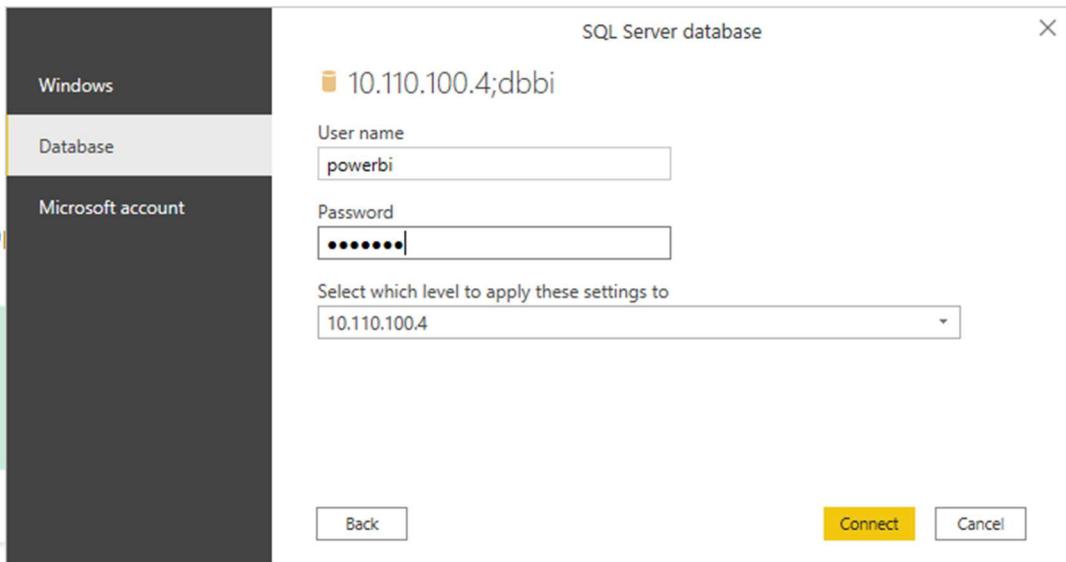
Below the query window is a results grid. The grid has a header row labeled 'Date' and contains 85 data rows. The data starts with the date '08.03.2015' and continues sequentially up to '26.03.2015'. The results grid is titled 'Results' and has a status bar at the bottom stating 'Query executed successfully.'

Import of the “sgorka.Kalendarz” table from the database to Power BI

To import data from the database, the "Download data -> SQL Server" function was used and the server address and database name were entered:



Then you logged into the database by entering your username, password and server address:



Later, our table was found in the list and the "Transform data" option was selected:

The screenshot shows the Power Query Navigator window. On the left, there is a list of tables under 'Opcje wyświetlania'. One table, 'sgorka.Kalendarz2', is highlighted with a yellow selection bar. On the right, the contents of 'sgorka.Kalendarz2' are displayed in a table titled 'Date' with rows from 01.01.2015 to 24.01.2015. At the bottom, there are buttons for 'Załaduj' (Load), 'Przekształć dane' (Transform data), and 'Anuluj' (Cancel).

In Power Query Changed the column type "Date" using the "Change type -> Date" function and renamed the column to "Date". The transformed data is shown below:

	Data
1	2015-01-01
2	2015-01-02
3	2015-01-03
4	2015-01-04
5	2015-01-05
6	2015-01-06
7	2015-01-07
8	2015-01-08
9	2015-01-09
10	2015-01-10
11	2015-01-11
12	2015-01-12
13	2015-01-13
14	2015-01-14
15	2015-01-15
16	2015-01-16
17	2015-01-17
18	2015-01-18
19	2015-01-19
20	2015-01-20
21	2015-01-21
22	2015-01-22
23	2015-01-23
24	2015-01-24
25	2015-01-25
26	2015-01-26
27	2015-01-27
28	2015-01-28

Import of data from the "Orders" file to Power BI

The data was imported using the "Get data -> From Excel file" function. Then the "Transform data" function was used. In the next step, the "Use first row as header" option was used so that the table header had column names instead of the table name. The "Remove Duplicates" function has been used in the "Order ID" column because the order number must be unique. Finally, the "Row ID" column was removed, because it does not add anything to the report, and the table name was changed from "Sheet 1" to "Orders". The following screenshot shows the transformed data:

	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Product ID
1	CA-2017-152156	08.11.2017	11.11.2017	Second Class	CG-12520	FUR-BO-10001798
2	CA-2017-152156	08.11.2017	11.11.2017	Second Class	CG-12520	FUR-CH-10000454
3	CA-2017-138688	12.06.2017	16.06.2017	Second Class	DV-13045	OFF-LA-10000240
4	US-2016-108966	11.10.2016	18.10.2016	Standard Class	SO-20335	FUR-TA-10000577
5	US-2016-108966	11.10.2016	18.10.2016	Standard Class	SO-20335	OFF-ST-10000760
6	CA-2015-115812	09.06.2015	14.06.2015	Standard Class	BH-11710	FUR-FU-10001487
7	CA-2015-115812	09.06.2015	14.06.2015	Standard Class	BH-11710	OFF-AR-10002833
8	CA-2015-115812	09.06.2015	14.06.2015	Standard Class	BH-11710	TEC-PH-10002275
9	CA-2015-115812	09.06.2015	14.06.2015	Standard Class	BH-11710	OFF-BI-10003910
10	CA-2015-115812	09.06.2015	14.06.2015	Standard Class	BH-11710	OFF-AP-10002892
11	CA-2015-115812	09.06.2015	14.06.2015	Standard Class	BH-11710	FUR-TA-10001539
12	CA-2015-115812	09.06.2015	14.06.2015	Standard Class	BH-11710	TEC-PH-10002033
13	CA-2018-114412	15.04.2018	20.04.2018	Standard Class	AA-10480	OFF-PA-10002365
14	CA-2017-161389	05.12.2017	10.12.2017	Standard Class	IM-15070	OFF-BI-10003656
15	US-2016-118983	22.11.2016	26.11.2016	Standard Class	HP-14815	OFF-AP-10002311
16	US-2016-118983	22.11.2016	26.11.2016	Standard Class	HP-14815	OFF-BI-10000756
17	CA-2015-105893	11.11.2015	18.11.2015	Standard Class	PK-19075	OFF-ST-100004186
18	CA-2015-167164	13.05.2015	15.05.2015	Second Class	AG-10270	OFF-ST-10000107
19	CA-2015-143336	27.08.2015	01.09.2015	Second Class	ZD-21925	OFF-AR-10003056
20	CA-2015-143336	27.08.2015	01.09.2015	Second Class	ZD-21925	TEC-PH-10001949
21	CA-2015-143336	27.08.2015	01.09.2015	Second Class	ZD-21925	OFF-BI-10002215
22	CA-2017-137330	09.12.2017	13.12.2017	Standard Class	KB-16585	OFF-AR-10000246
23	CA-2017-137330	09.12.2017	13.12.2017	Standard Class	KB-16585	OFF-AP-10001492
24	US-2018-156909	16.07.2018	18.07.2018	Second Class	SF-20065	FUR-CH-10002774
25	CA-2016-106320	25.09.2016	30.09.2016	Standard Class	EB-13870	FUR-TA-10000577
26	CA-2017-121755	16.01.2017	20.01.2017	Second Class	EH-13945	OFF-BI-10001634
27	CA-2017-121755	16.01.2017	20.01.2017	Second Class	EH-13945	TEC-AC-10003027

Import of data from the "Customers" file to Power BI

Using the "Get data -> From Excel file" function, data was imported and the "Transform data" function was used. Then, just like in the previous table, the "Use first row as header" option was used, the "Row ID" column was removed, the table name was changed from "Sheet 1" to "Customers". The column "Customer ID" uses the function "Remove Duplicates" because the customer ID must be unique. The transformed data is shown below:

	Customer ID	Customer Name	Segment
1	CG-12520	Claire Gute	Consumer
2	DV-13045	Darrin Van Huff	Corporate
3	SO-20335	Sean O'Donnell	Consumer
4	BH-11710	Brosina Hoffman	Consumer
5	AA-10480	Andrew Allen	Consumer
6	IM-15070	Irene Maddox	Consumer
7	HP-14815	Harold Pawlani	Home Office
8	PK-19075	Pete Kriz	Consumer
9	AG-10270	Alejandro Grove	Consumer
10	ZD-21925	Zuschuss Donatelli	Consumer
11	KB-16585	Ken Black	Corporate
12	SF-20065	Sandra Flanagan	Consumer
13	EB-13870	Emily Burns	Consumer
14	EH-13945	Eric Hoffmann	Consumer
15	TB-21520	Tracy Blumstein	Consumer
16	MA-17560	Matt Abelman	Home Office
17	GH-14485	Gene Hale	Corporate
18	SN-20710	Steve Nguyen	Home Office
19	LC-16930	Linda Cazanias	Corporate
20	RA-19885	Ruben Ausman	Corporate
21	ES-14080	Erin Smith	Corporate
22	ON-18715	Odella Nelson	Corporate
23	PO-18865	Patrick O'Donnell	Consumer
24	LH-16900	Lena Hernandez	Consumer
25	DP-13000	Darren Powers	Consumer
26	JM-15265	Janet Molinari	Corporate
27	TB-21055	Ted Butterfield	Consumer

Import of data from the “Customer Addresses” file to Power BI

The data was imported using the "Get data -> From CSV file" function. Then the "Transform data" function was used. Then used the "Use first row as header" option twice so that the table header would have the column names instead of the table name. Then we changed the zip code from integer to text format. The column "Customer ID" uses the function "Remove Duplicates" because the customer ID must be unique. Finally, the "Row ID" column was removed, because it does not add anything to the report, and the table was renamed and renamed from "Sheet 1" to "Customer Addresses".

	Customer ID	Country	City	State	Postal Code	Region
1	CG-12520	United States	Henderson	Kentucky	42420	South
2	DV-13045	United States	Los Angeles	California	90036	West
3	SO-20335	United States	Fort Lauderdale	Florida	33311	South
4	BH-11710	United States	Los Angeles	California	90032	West
5	AA-10480	United States	Concord	North Carolina	28027	South
6	IM-15070	United States	Seattle	Washington	98103	West
7	HP-14815	United States	Fort Worth	Texas	76106	Central
8	PK-19075	United States	Madison	Wisconsin	53711	Central
9	AG-10270	United States	West Jordan	Utah	84084	West
10	ZD-21925	United States	San Francisco	California	94109	West
11	KB-16585	United States	Fremont	Nebraska	68025	Central
12	SF-20065	United States	Philadelphia	Pennsylvania	19140	East
13	EB-13870	United States	Orem	Utah	84057	West
14	EH-13945	United States	Los Angeles	California	90049	West
15	TB-21520	United States	Philadelphia	Pennsylvania	19140	East
16	MA-17560	United States	Houston	Texas	77095	Central
17	GH-14485	United States	Richardson	Texas	75080	Central
18	SN-20710	United States	Houston	Texas	77041	Central
19	LC-16930	United States	Naperville	Illinois	60540	Central
20	RA-19885	United States	Los Angeles	California	90049	West
21	ES-14080	United States	Melbourne	Florida	32935	South
22	ON-18715	United States	Eagan	Minnesota	55122	Central
23	PO-18865	United States	Westland	Michigan	48185	Central
24	LH-16900	United States	Dover	Delaware	19901	East
25	DP-13000	United States	New Albany	Indiana	47150	Central
26	JM-15265	United States	New York City	New York	10024	East
27	TB-21055	United States	Troy	New York	12180	East

Import of data from the “Products” file to Power BI

The data was imported using the "Get data -> From Excel file" function. Then the "Transform data" function was used. Later, the "Use first row as header" option was used. Then, the "Sales" column was typed from text to fixed decimal via locale and renamed to "Price". The column "Product ID" uses the "Remove Duplicates" function because the customer ID must be unique. Finally, the "Row ID" column was removed, because it does not add anything to the report, and the table name was changed from "Sheet 1" to "Products".



The following screenshot shows the transformed data:

	A ^B _C Product ID	A ^B _C Category	A ^B _C Sub-Category	A ^B _C Product Name	\$ Price
1	FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Collection Bookcase	261,96
2	FUR-CH-10000454	Furniture	Chairs	Hon Deluxe Fabric Upholstered Stacking Chairs, Rounded Back	731,94
3	OFF-LA-10000240	Office Supplies	Labels	Self-Adhesive Address Labels for Typewriters by Universal	14,62
4	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 Series Slim Rectangular Table	957,58
5	OFF-ST-10000760	Office Supplies	Storage	Eldon Fold 'N Roll Cart System	22,37
6	FUR-FU-10001487	Furniture	Furnishings	Eldon Expressions Wood and Plastic Desk Accessories, Cherry Wood	48,86
7	OFF-AR-10002833	Office Supplies	Art	Newell 322	7,28
8	TEC-PH-10002275	Technology	Phones	Mitel 5320 IP Phone VoIP phone	907,15
9	OFF-BI-10003916	Office Supplies	Binders	DXL Angle-View Binders with Locking Rings by Samsill	18,50
10	OFF-AP-10002892	Office Supplies	Appliances	Belkin F5C206VTEL 6 Outlet Surge	114,90
11	FUR-TA-10001539	Furniture	Tables	Chromcraft Rectangular Conference Tables	1 706,18
12	TEC-PH-10002033	Technology	Phones	Konftel 250 Conference phone - Charcoal black	911,42
13	OFF-PA-10002365	Office Supplies	Paper	Xerox 1967	15,55
14	OFF-BI-10003656	Office Supplies	Binders	Fellowes PB200 Plastic Comb Binding Machine	407,98
15	OFF-AP-10002311	Office Supplies	Appliances	Holmes Replacement Filter for HEPA Air Cleaner, Very Large Room, HE...	68,81
16	OFF-BI-10000756	Office Supplies	Binders	Store DuraTech Recycled Plastic Frosted Binders	2,54
17	OFF-ST-10004186	Office Supplies	Storage	Stur-D-Stor Shelving, Vertical 5-Shelf: 72" H x 36" W x 18 1/2" D	665,88
18	OFF-ST-10000107	Office Supplies	Storage	Fellowes Super Stor/Drawer	55,50
19	OFF-AR-10003056	Office Supplies	Art	Newell 341	8,56
20	TEC-PH-10001949	Technology	Phones	Cisco SPA 501G IP Phone	213,48
21	OFF-BI-10002215	Office Supplies	Binders	Wilson Jones Hanging View Binder, White, 1"	22,72
22	OFF-AR-10000246	Office Supplies	Art	Newell 318	19,46
23	OFF-AP-10001492	Office Supplies	Appliances	Acco Six-Outlet Power Strip, 4' Cord Length	60,34
24	FUR-CH-10002774	Furniture	Chairs	Global Deluxe Stacking Chair, Gray	71,37
25	OFF-BI-10001634	Office Supplies	Binders	Wilson Jones Active Use Binders	11,65
26	TEC-AC-10003027	Technology	Accessories	Imation 8GB Mini TravelDrive USB 2.0 Flash Drive	90,57
27	FUR-BO-10004834	Furniture	Bookcases	Riverside Palais Royal Lawyers Bookcase, Royale Cherry Finish	3 083,43

Import of currency exchange rates from the National Bank of Poland to Power BI

Using the "Download data -> From the Internet" function, data was imported by pasting a link to the page with the exchange rates:

Z sieci Web

Podstawowy Zaawansowane

Adres URL

In the navigator, a table called "Average odds" was found and the "Transform data" option was selected:

The screenshot shows the Power BI Navigator window. On the left, there is a tree view of data sources and tables. A table named 'Kursy średnie' is selected, indicated by a checked checkbox next to its name. The main pane displays the contents of this table:

Column1	Column2
1 EUR	4,603
1 USD	4,3363
1 CHF	4,4292
1 GBP	5,4127
100 JPY	3,2395

At the bottom of the window, there are three buttons: 'Załaduj' (Load), 'Przekształć dane' (Transform data), and 'Anuluj' (Cancel).

In Power Query, column names have been changed from "Column1" to "Currency" and "Column2" to "Exchange rate" respectively:

The screenshot shows the Power Query Editor with a transformed table. The columns are labeled 'Currency' and 'Exchange rate'. The data is identical to the table in the Navigator:

Currency	Exchange rate
1 EUR	4,603
1 USD	4,3363
1 CHF	4,4292
1 GBP	5,4127
100 JPY	3,2395

Preparation of the data model

Below is how to create a relationship between the table with orders and the "Product ID" field and the table with products and the "Product ID" field. The "Many to One" cardinality was chosen because the same product can appear in multiple orders. The relationships between the tables "Orders" and "Customers" and "Orders" and "Calendar" were created in a similar way.

Edytowanie relacji

Wybierz powiązane tabele i kolumny.

The screenshot shows the 'Edytowanie relacji' (Edit Relationship) dialog box. At the top, there are two dropdown menus: 'Orders' and 'Products'. Below each menu is a table view showing data from those respective tables. Under the 'Orders' table, there are three rows of data: one row for Order ID 2016-108966, another for 2016-108966, and a third for 2015-115812. Under the 'Products' table, there are three rows of data: OFF-PA-10002365, OFF-PA-10000249, and OFF-PA-10001569. Below the tables are two dropdown menus for 'Kardynalność' (Cardinality): 'Wiele do jednego (*:1)' and 'Jeden'. There are also two checkboxes: 'Aktywuj tę relację' (Enable this relationship) and 'Przyjmowanie integralności referencyjnej' (Enforce referential integrity). At the bottom right are 'OK' and 'Anuluj' (Cancel) buttons.

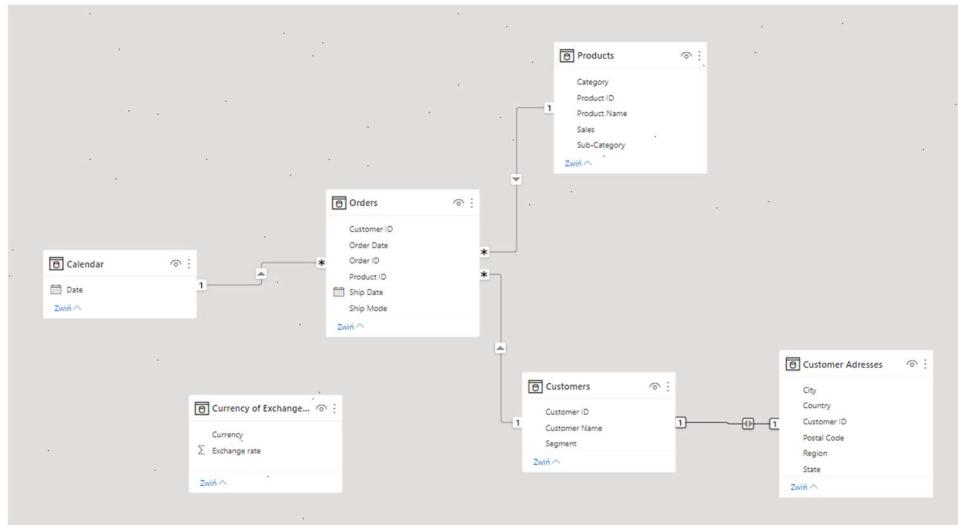
The screenshot below shows the relationship between the customer address table with the "Customer ID" field and the customer table with the "Customer ID" field. The cardinality has been set to one-to-one, and the direction of cross-filtering to two-way, because each customer has one residential address.

Edytowanie relacji

Wybierz powiązane tabele i kolumny.

The screenshot shows the 'Edytowanie relacji' (Edit Relationship) dialog box. At the top, there are two dropdown menus: 'Customer Adresses' and 'Customers'. Below each menu is a table view showing data from those respective tables. Under the 'Customer Adresses' table, there are three rows of data: DV-13045, BH-11710, and ZD-21925. Under the 'Customers' table, there are three rows of data: CG-12520, SO-20335, and BH-11710. Below the tables are two dropdown menus for 'Kardynalność' (Cardinality): 'Jeden do jednego (1:1)' and 'Oba'. There are also two checkboxes: 'Aktywuj tę relację' (Enable this relationship) and 'Przyjmowanie integralności referencyjnej' (Enforce referential integrity). At the bottom right are 'OK' and 'Anuluj' (Cancel) buttons.

Below is the finished data model in star-like form:



Creation of dedicated columns and measures using the DAX language

The column with the converted price of the product from dollars to zlotys

To convert the price from dollars to zlotys, the "LOOKUPVALUE" function was used, which allows you to refer to a column from another table not related to the current table. It returns a value for a row that meets all the criteria specified by one or more search conditions. The "*" operator allows you to multiply the dollar exchange rate by the price of the product. Below is the formula for calculating the "Price PLN" column:

Price PLN = `LOOKUPVALUE('Currency of Exchange rate'[Exchange rate],'Currency of Exchange rate'[Currency], "1 USD")*Products[Price]`

Product ID	Category	Sub-Category	Product Name	Price	Price PLN
FUR-BO-10000112	Furniture	Bookcases	Bush Birmingham Collection Bookcase, Dark Cherry	\$825,17	3 578,202 zł
FUR-BO-10000330	Furniture	Bookcases	Sauder Camden County Barrister Bookcase, Planked Cherry	\$411,33	1 783,659 zł
FUR-BO-10000362	Furniture	Bookcases	Sauder Inglewood Library Bookcases	\$359,06	1 556,983 zł
FUR-BO-10000468	Furniture	Bookcases	O'Sullivan 2-Shelf Heavy-Duty Bookcases	\$145,74	631,972 zł
FUR-BO-10000711	Furniture	Bookcases	Hon Metal Bookcases, Gray	\$638,82	2 770,115 zł
FUR-BO-10000780	Furniture	Bookcases	O'Sullivan Plantations 2-Door Library in Landover Oak	\$956,66	4 148,385 zł
FUR-BO-10001337	Furniture	Bookcases	O'Sullivan Living Dimensions 2-Shelf Bookcases	\$514,17	2 229,573 zł
FUR-BO-10001519	Furniture	Bookcases	O'Sullivan 3-Shelf Heavy-Duty Bookcases	\$186,05	806,759 zł
FUR-BO-10001567	Furniture	Bookcases	Bush Westfield Collection Bookcases, Dark Cherry Finish, F	\$90,88	394,091 zł
FUR-BO-10001601	Furniture	Bookcases	Sauder Mission Library with Doors, Fruitwood Finish	\$222,67	965,546 zł
FUR-BO-10001608	Furniture	Bookcases	Hon Metal Bookcases, Black	\$193,07	837,190 zł
FUR-BO-10001619	Furniture	Bookcases	O'Sullivan Cherrywood Estates Traditional Bookcase	\$84,98	368,498 zł
FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Collection Bookcase	\$261,96	1 135,937 zł
FUR-BO-10001811	Furniture	Bookcases	Atlantic Metals Mobile 5-Shelf Bookcases, Custom Colors	\$722,35	3 132,335 zł
FUR-BO-10001918	Furniture	Bookcases	Sauder Forest Hills Library with Doors, Woodland Oak Finish	\$257,57	1 116,892 zł
FUR-BO-10001972	Furniture	Bookcases	O'Sullivan 4-Shelf Bookcase in Odessa Pine	\$1 336,83	5 796,891 zł
FUR-BO-10002202	Furniture	Bookcases	Atlantic Metals Mobile 2-Shelf Bookcases, Custom Colors	\$72,29	313,488 zł
FUR-BO-10002206	Furniture	Bookcases	Bush Saratoga Collection 5-Shelf Bookcase, Hanover Cherry	\$119,83	519,631 zł
FUR-BO-10002213	Furniture	Bookcases	DMI Eclipse Executive Suite Bookcases	\$425,83	1 846,539 zł
FUR-BO-10002268	Furniture	Bookcases	Sauder Barrister Bookcases	\$388,70	1 685,537 zł
FUR-BO-10002545	Furniture	Bookcases	Atlantic Metals Mobile 3-Shelf Bookcases, Custom Colors	\$532,40	2 308,642 zł
FUR-BO-10002598	Furniture	Bookcases	Hon Metal Bookcases, Putty	\$141,96	615,581 zł
FUR-BO-10002613	Furniture	Bookcases	Atlantic Metals Mobile 4-Shelf Bookcases, Custom Colors	\$899,14	3 898,923 zł
FUR-BO-10002824	Furniture	Bookcases	Bush Mission Pointe Library	\$205,33	890,384 zł
FUR-BO-10002853	Furniture	Bookcases	O'Sullivan 5-Shelf Heavy-Duty Bookcases	\$81,94	355,316 zł
FUR-BO-10002916	Furniture	Bookcases	Rush Hierlooms Collection 1" Thick Stackable Bookcases	\$436,00	1 890,622 zł
FUR-BO-10003034	Furniture	Bookcases	O'Sullivan Elegance Bookcase, Cherry Finish	\$183,37	795,156 zł

The column with the converted price of the product from zlotys to euros

The "LOOKUPVALUE" function and the "*" operator were used to convert the price from PLN to EUR, as in the case above. Below is the formula to calculate the "Price EUR" column:

```
Price EUR = Products[Price PLN]/LOOKUPVALUE('Currency of Exchange rate'[Exchange rate],'Currency of Exchange rate'[Currency], "1 EUR")
```

Product ID	Category	Sub-Category	Product Name	Price	Price PLN	Price EUR
FUR-BO-10000112	Furniture	Bookcases	Bush Birmingham Collection Bookcase, Dark Cherry	\$825,17	3 578,202 zł	€ 777,36
FUR-BO-10000330	Furniture	Bookcases	Sauder Camden County Barrister Bookcase, Planked Cherry	\$411,33	1 783,659 zł	€ 387,50
FUR-BO-10000362	Furniture	Bookcases	Sauder Inglewood Library Bookcases	\$359,06	1 556,9832 zł	€ 338,25
FUR-BO-10000468	Furniture	Bookcases	O'Sullivan 2-Shelf Heavy-Duty Bookcases	\$145,74	631,9724 zł	€ 137,30
FUR-BO-10000711	Furniture	Bookcases	Hon Metal Bookcases, Gray	\$638,82	2 770,1152 zł	€ 601,81
FUR-BO-10000780	Furniture	Bookcases	O'Sullivan Plantations 2-Door Library in Landvery Oak	\$956,66	4 148,3856 zł	€ 901,24
FUR-BO-10001337	Furniture	Bookcases	O'Sullivan Living Dimensions 2-Shelf Bookcases	\$514,17	2 229,5737 zł	€ 484,37
FUR-BO-10001519	Furniture	Bookcases	O'Sullivan 3-Shelf Heavy-Duty Bookcases	\$186,05	806,7599 zł	€ 175,27
FUR-BO-10001567	Furniture	Bookcases	Bush Westfield Collection Bookcases, Dark Cherry Finish, F	\$90,88	394,0916 zł	€ 85,62
FUR-BO-10001601	Furniture	Bookcases	Sauder Mission Library with Doors, Fruitwood Finish	\$222,67	965,5466 zł	€ 209,76
FUR-BO-10001608	Furniture	Bookcases	Hon Metal Bookcases, Black	\$193,07	837,1904 zł	€ 181,88
FUR-BO-10001619	Furniture	Bookcases	O'Sullivan Cherrywood Estates Traditional Bookcase	\$84,98	368,4988 zł	€ 80,06
FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Collection Bookcase	\$261,96	1 135,9371 zł	€ 246,78
FUR-BO-10001811	Furniture	Bookcases	Atlantic Metals Mobile 5-Shelf Bookcases, Custom Colors	\$722,35	3 132,335 zł	€ 680,50
FUR-BO-10001918	Furniture	Bookcases	Sauder Forest Hills Library with Doors, Woodland Oak Finish	\$257,57	1 116,8921 zł	€ 242,64
FUR-BO-10001972	Furniture	Bookcases	O'Sullivan 4-Shelf Bookcase in Odessa Pine	\$1 336,83	5 796,8916 zł	€ 1 259,37
FUR-BO-10002202	Furniture	Bookcases	Atlantic Metals Mobile 2-Shelf Bookcases, Custom Colors	\$72,29	313,4885 zł	€ 68,11
FUR-BO-10002206	Furniture	Bookcases	Bush Saratoga Collection 5-Shelf Bookcase, Hanover Cherry	\$119,83	519,6318 zł	€ 112,89
FUR-BO-10002213	Furniture	Bookcases	DMI Eclipse Executive Suite Bookcases	\$425,83	1 846,5396 zł	€ 401,16
FUR-BO-10002268	Furniture	Bookcases	Sauder Barrister Bookcases	\$388,70	1 685,5372 zł	€ 366,18
FUR-BO-10002545	Furniture	Bookcases	Atlantic Metals Mobile 3-Shelf Bookcases, Custom Colors	\$532,40	2 308,6427 zł	€ 501,55
FUR-BO-10002598	Furniture	Bookcases	Hon Metal Bookcases, Putty	\$141,96	615,5811 zł	€ 133,73
FUR-BO-10002613	Furniture	Bookcases	Atlantic Metals Mobile 4-Shelf Bookcases, Custom Colors	\$899,14	3 898,9234 zł	€ 847,04
FUR-BO-10002824	Furniture	Bookcases	Bush Mission Pointe Library	\$205,33	890,3846 zł	€ 193,44
FUR-BO-10002853	Furniture	Bookcases	O'Sullivan 5-Shelf Heavy-Duty Bookcases	\$81,94	355,3164 zł	€ 77,19
FUR-BO-10002916	Furniture	Bookcases	Rush Hierlooms Collection 1" Thick Stackable Bookcases	\$436,00	1 890,6225 zł	€ 410,74

A column showing the tax percentage by product category

In the "Tax" column, the "SWITCH" function was used, which returns a different tax percentage for each product category, e.g. for furniture (Furniture) products, the tax value is 0.15. The column type has also been changed to percentage. The formula used is shown below:

```
Tax = SWITCH(Products[Category], "Furniture", 0.15, "Office Supplies", 0.07, "Technology", 0.23)
```

Product ID	Category	Sub-Category	Product Name	Price	Price PLN	Price EUR	Tax
FUR-BO-10000112	Furniture	Bookcases	Bush Birmingham Collection Bookcase, Dark Cherry	\$825,17	3 578,202 zł	€ 777,36	15,00%
FUR-BO-10000330	Furniture	Bookcases	Sauder Camden County Barrister Bookcase, Planked Cherry	\$411,33	1 783,659 zł	€ 387,50	15,00%
FUR-BO-10000362	Furniture	Bookcases	Sauder Inglewood Library Bookcases	\$359,06	1 556,9832 zł	€ 338,25	15,00%
FUR-BO-10000468	Furniture	Bookcases	O'Sullivan 2-Shelf Heavy-Duty Bookcases	\$145,74	631,9724 zł	€ 137,30	15,00%
FUR-BO-10000711	Furniture	Bookcases	Hon Metal Bookcases, Gray	\$638,82	2 770,1152 zł	€ 601,81	15,00%
FUR-BO-10000780	Furniture	Bookcases	O'Sullivan Plantations 2-Door Library in Landvery Oak	\$956,66	4 148,3856 zł	€ 901,24	15,00%
FUR-BO-10001337	Furniture	Bookcases	O'Sullivan Living Dimensions 2-Self Bookcases	\$514,17	2 229,5737 zł	€ 484,37	15,00%
FUR-BO-10001519	Furniture	Bookcases	O'Sullivan 3-Shelf Heavy-Duty Bookcases	\$186,05	806,7599 zł	€ 175,27	15,00%
FUR-BO-10001567	Furniture	Bookcases	Bush Westfield Collection Bookcases, Dark Cherry Finish, F	\$90,88	394,0916 zł	€ 85,62	15,00%
FUR-BO-10001601	Furniture	Bookcases	Sauder Mission Library with Doors, Fruitwood Finish	\$222,67	965,5466 zł	€ 209,76	15,00%
FUR-BO-10001608	Furniture	Bookcases	Hon Metal Bookcases, Black	\$193,07	837,1904 zł	€ 181,88	15,00%
FUR-BO-10001619	Furniture	Bookcases	O'Sullivan Cherrywood Estates Traditional Bookcase	\$84,98	368,4988 zł	€ 80,06	15,00%
FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Collection Bookcase	\$261,96	1 135,9371 zł	€ 246,78	15,00%
FUR-BO-10001811	Furniture	Bookcases	Atlantic Metals Mobile 5-Shelf Bookcases, Custom Colors	\$722,35	3 132,335 zł	€ 680,50	15,00%
FUR-BO-10001918	Furniture	Bookcases	Sauder Forest Hills Library with Doors, Woodland Oak Finish	\$257,57	1 116,8921 zł	€ 242,64	15,00%
FUR-BO-10001972	Furniture	Bookcases	O'Sullivan 4-Shelf Bookcase in Odessa Pine	\$1 336,83	5 796,8916 zł	€ 1 259,37	15,00%
FUR-BO-10002202	Furniture	Bookcases	Atlantic Metals Mobile 2-Shelf Bookcases, Custom Colors	\$72,29	313,4885 zł	€ 68,11	15,00%
FUR-BO-10002206	Furniture	Bookcases	Bush Saratoga Collection 5-Shelf Bookcase, Hanover Cherry	\$119,83	519,6318 zł	€ 112,89	15,00%
FUR-BO-10002213	Furniture	Bookcases	DMI Eclipse Executive Suite Bookcases	\$425,83	1 846,5396 zł	€ 401,16	15,00%
FUR-BO-10002268	Furniture	Bookcases	Sauder Barrister Bookcases	\$388,70	1 685,5372 zł	€ 366,18	15,00%
FUR-BO-10002545	Furniture	Bookcases	Atlantic Metals Mobile 3-Shelf Bookcases, Custom Colors	\$532,40	2 308,6427 zł	€ 501,55	15,00%
FUR-BO-10002598	Furniture	Bookcases	Hon Metal Bookcases, Putty	\$141,96	615,5811 zł	€ 133,73	15,00%
FUR-BO-10002613	Furniture	Bookcases	Atlantic Metals Mobile 4-Shelf Bookcases, Custom Colors	\$899,14	3 898,9234 zł	€ 847,04	15,00%
FUR-BO-10002824	Furniture	Bookcases	Bush Mission Pointe Library	\$205,33	890,3846 zł	€ 193,44	15,00%
FUR-BO-10002853	Furniture	Bookcases	O'Sullivan 5-Shelf Heavy-Duty Bookcases	\$81,94	355,3164 zł	€ 77,19	15,00%
FUR-BO-10002916	Furniture	Bookcases	Rush Hierlooms Collection 1" Thick Stackable Bookcases	\$436,00	1 890,6225 zł	€ 410,74	15,00%
FUR-BO-10003034	Furniture	Bookcases	O'Sullivan Elevations Bookcase, Cherry Finish	\$183,37	795,156 zł	€ 172,75	15,00%

Column with the amount of tax paid in dollars

The “Tax value” column shows the calculated tax value, taking into account the product price and the tax percentage.

$$\text{Tax value} = \text{Products[Price]} * \text{Products[Tax]}$$

Product ID	Category	Sub-Category	Product Name	Price	Price PLN	Price EUR	Tax	Tax value
FUR-BO-10000112	Furniture	Bookcases	Bush Birmingham Collection Bookcase, Dark Cherry	\$825,17	3 578,202 zł	€ 777,36	15,00%	\$123,78
FUR-BO-10000330	Furniture	Bookcases	Sauder Camden County Barrister Bookcase, Planked Cherry	\$411,33	1 783,659 zł	€ 387,50	15,00%	\$61,70
FUR-BO-10000362	Furniture	Bookcases	Sauder Inglewood Library Bookcases	\$359,06	1 556,9832 zł	€ 338,25	15,00%	\$53,86
FUR-BO-10000468	Furniture	Bookcases	O'Sullivan 2-Shelf Heavy-Duty Bookcases	\$145,74	631,9724 zł	€ 137,30	15,00%	\$21,86
FUR-BO-10000711	Furniture	Bookcases	Hon Metal Bookcases, Gray	\$638,82	2 770,1152 zł	€ 601,81	15,00%	\$95,82
FUR-BO-10000780	Furniture	Bookcases	O'Sullivan Plantations 2-Door Library in Landvery Oak	\$956,66	4 148,3856 zł	€ 901,24	15,00%	\$143,50
FUR-BO-10001337	Furniture	Bookcases	O'Sullivan Living Dimensions 2-Self Bookcases	\$514,17	2 229,5737 zł	€ 484,37	15,00%	\$77,12
FUR-BO-10001519	Furniture	Bookcases	O'Sullivan 3-Shelf Heavy-Duty Bookcases	\$186,05	806,7599 zł	€ 175,27	15,00%	\$27,91
FUR-BO-10001567	Furniture	Bookcases	Bush Westfield Collection Bookcases, Dark Cherry Finish, F	\$90,88	394,0916 zł	€ 85,62	15,00%	\$13,63
FUR-BO-10001601	Furniture	Bookcases	Sauder Mission Library with Doors, Fruitwood Finish	\$222,67	965,5466 zł	€ 209,76	15,00%	\$33,40
FUR-BO-10001608	Furniture	Bookcases	Hon Metal Bookcases, Black	\$193,07	837,1904 zł	€ 181,88	15,00%	\$28,96
FUR-BO-10001619	Furniture	Bookcases	O'Sullivan Cherrywood Estates Traditional Bookcase	\$84,98	368,4988 zł	€ 80,06	15,00%	\$12,75
FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Collection Bookcase	\$261,96	1 135,9371 zł	€ 246,78	15,00%	\$39,29
FUR-BO-10001811	Furniture	Bookcases	Atlantic Metals Mobile 5-Shelf Bookcases, Custom Colors	\$722,35	3 132,335 zł	€ 680,50	15,00%	\$108,35
FUR-BO-10001918	Furniture	Bookcases	Sauder Forest Hills Library with Doors, Woodland Oak Finish	\$257,57	1 116,8921 zł	€ 242,64	15,00%	\$38,64
FUR-BO-10001972	Furniture	Bookcases	O'Sullivan 4-Shelf Bookcase in Odessa Pine	\$1 336,83	5 796,8916 zł	€ 1 259,37	15,00%	\$200,52
FUR-BO-10002202	Furniture	Bookcases	Atlantic Metals Mobile 2-Shelf Bookcases, Custom Colors	\$72,29	313,4885 zł	€ 68,11	15,00%	\$10,84
FUR-BO-10002206	Furniture	Bookcases	Bush Saratoga Collection 5-Shelf Bookcase, Hanover Cherry	\$119,83	519,6318 zł	€ 112,89	15,00%	\$17,98
FUR-BO-10002213	Furniture	Bookcases	DMI Eclipse Executive Suite Bookcases	\$425,83	1 846,5396 zł	€ 401,16	15,00%	\$63,88
FUR-BO-10002268	Furniture	Bookcases	Sauder Barrister Bookcases	\$388,70	1 685,5372 zł	€ 366,18	15,00%	\$58,31
FUR-BO-10002545	Furniture	Bookcases	Atlantic Metals Mobile 3-Shelf Bookcases, Custom Colors	\$532,40	2 308,6427 zł	€ 501,55	15,00%	\$79,86
FUR-BO-10002598	Furniture	Bookcases	Hon Metal Bookcases, Putty	\$141,96	615,5811 zł	€ 133,73	15,00%	\$21,29
FUR-BO-10002613	Furniture	Bookcases	Atlantic Metals Mobile 4-Shelf Bookcases, Custom Colors	\$899,14	3 898,9234 zł	€ 847,04	15,00%	\$134,87
FUR-BO-10002824	Furniture	Bookcases	Bush Mission Pointe Library	\$205,33	890,3846 zł	€ 193,44	15,00%	\$30,80
FUR-BO-10002853	Furniture	Bookcases	O'Sullivan 5-Shelf Heavy-Duty Bookcases	\$81,94	355,3164 zł	€ 77,19	15,00%	\$12,29
FUR-BO-10002916	Furniture	Bookcases	Rush Hierlooms Collection 1" Thick Stackable Bookcases	\$436,00	1 890,6225 zł	€ 410,74	15,00%	\$65,40
FUR-BO-10003034	Furniture	Bookcases	O'Sullivan Elevations Bookcase, Cherry Finish	\$183,37	795,156 zł	€ 172,75	15,00%	\$27,51

Column with showing the store's profit on a given product

The “Price after tax” column shows the dollar value of the product after subtracting the tax from the original value of the product.

$$\text{Price after tax} = \text{Products[Price]} - \text{Products[Tax value]}$$

Product ID	Category	Sub-Category	Product Name	Price	Price PLN	Price EUR	Tax	Tax value	Price after tax
FUR-BO-10000112	Furniture	Bookcases	Bush Birmingham Collection Bookcase, Dark Cherry	\$825,17	3 578,202 zł	€ 777,36	15,00%	\$123,78	\$701,40
FUR-BO-10000330	Furniture	Bookcases	Sauder Camden County Barrister Bookcase, Planked Cherry	\$411,33	1 783,659 zł	€ 387,50	15,00%	\$61,70	\$349,63
FUR-BO-10000362	Furniture	Bookcases	Sauder Inglenook Library Bookcases	\$359,06	1 556,683 zł	€ 338,25	15,00%	\$53,86	\$305,20
FUR-BO-10000468	Furniture	Bookcases	O'Sullivan 2-Shelf Heavy-Duty Bookcases	\$145,74	631,972 zł	€ 137,30	15,00%	\$21,86	\$123,88
FUR-BO-10000711	Furniture	Bookcases	Hon Metal Bookcases, Gray	\$638,82	2 770,152 zł	€ 601,81	15,00%	\$95,82	\$543,00
FUR-BO-10000780	Furniture	Bookcases	O'Sullivan Plantations 2-Door Library in Landvery Oak	\$956,66	4 148,385 zł	€ 901,24	15,00%	\$143,50	\$813,17
FUR-BO-10001337	Furniture	Bookcases	O'Sullivan Living Dimensions 2-Shelf Bookcases	\$514,17	2 225,573 zł	€ 484,37	15,00%	\$77,12	\$437,04
FUR-BO-10001519	Furniture	Bookcases	O'Sullivan 3-Shelf Heavy-Duty Bookcases	\$186,05	806,559 zł	€ 175,27	15,00%	\$27,91	\$158,14
FUR-BO-10001567	Furniture	Bookcases	Bush Westfield Collection Bookcases, Dark Cherry Finish, F	\$90,88	394,091 zł	€ 85,62	15,00%	\$13,63	\$77,25
FUR-BO-10001601	Furniture	Bookcases	Sauder Mission Library with Doors, Fruitwood Finish	\$222,67	965,546 zł	€ 209,76	15,00%	\$33,40	\$189,27
FUR-BO-10001608	Furniture	Bookcases	Hon Metal Bookcases, Black	\$193,07	837,190 zł	€ 181,88	15,00%	\$28,96	\$164,11
FUR-BO-10001619	Furniture	Bookcases	O'Sullivan Cherrywood Estates Traditional Bookcase	\$84,98	368,4988 zł	€ 80,06	15,00%	\$12,75	\$72,23
FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Collection Bookcase	\$261,96	1 135,971 zł	€ 246,78	15,00%	\$39,29	\$222,67
FUR-BO-10001811	Furniture	Bookcases	Atlantic Metals Mobile 5-Shelf Bookcases, Custom Colors	\$722,35	3 132,935 zł	€ 680,50	15,00%	\$108,35	\$614,00
FUR-BO-10001918	Furniture	Bookcases	Sauder Forest Hills Library with Doors, Woodland Oak Finish	\$257,57	1 116,892 zł	€ 242,64	15,00%	\$38,64	\$218,93
FUR-BO-10001972	Furniture	Bookcases	O'Sullivan 4-Shelf Bookcase in Odessa Pine	\$1336,83	5 796,8918 zł	€ 1 259,37	15,00%	\$200,52	\$1 136,30
FUR-BO-10002202	Furniture	Bookcases	Atlantic Metals Mobile 2-Shelf Bookcases, Custom Colors	\$72,29	313,4885 zł	€ 68,11	15,00%	\$10,84	\$61,45
FUR-BO-10002206	Furniture	Bookcases	Bush Saratoga Collection 5-Shelf Bookcase, Hanover Cherry	\$119,83	516,9318 zł	€ 112,89	15,00%	\$17,98	\$101,86
FUR-BO-10002213	Furniture	Bookcases	DMI Eclipse Executive Suite Bookcases	\$425,83	1 845,596 zł	€ 401,16	15,00%	\$63,88	\$361,96
FUR-BO-10002268	Furniture	Bookcases	Sauder Barrister Bookcases	\$388,70	1 685,5372 zł	€ 366,18	15,00%	\$58,31	\$330,40
FUR-BO-10002545	Furniture	Bookcases	Atlantic Metals Mobile 3-Shelf Bookcases, Custom Colors	\$532,40	2 308,6427 zł	€ 501,55	15,00%	\$79,86	\$452,54
FUR-BO-10002598	Furniture	Bookcases	Hon Metal Bookcases, Putty	\$141,96	615,5,811 zł	€ 133,73	15,00%	\$21,29	\$120,67
FUR-BO-10002613	Furniture	Bookcases	Atlantic Metals Mobile 4-Shelf Bookcases, Custom Colors	\$899,14	3 898,9234 zł	€ 847,04	15,00%	\$134,87	\$764,27
FUR-BO-10002824	Furniture	Bookcases	Bush Mission Pointe Library	\$205,33	890,3,846 zł	€ 193,44	15,00%	\$30,80	\$174,53
FUR-BO-10002853	Furniture	Bookcases	O'Sullivan 5-Shelf Heavy-Duty Bookcases	\$81,94	355,3164 zł	€ 77,19	15,00%	\$12,29	\$69,65
FUR-BO-10002916	Furniture	Bookcases	Rush Hierlooms Collection 1" Thick Stackable Bookcases	\$436,00	1 890,6225 zł	€ 410,74	15,00%	\$65,40	\$370,60

A column containing the delivery price for a given order

The "Ship cost" column shows the value of shipping costs depending on the selected type of shipment. The "SWITCH" function was used to calculate this column, which returns the appropriate values depending on the type of delivery. The formula used is shown below:

```
Ship cost = SWITCH(Orders[Ship Mode], "Same Day", 25, "First Class", 20, "Second Class", 15, "Standard Class", 8)
```

Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Product ID	Ship cost
CA-2018-140326	wtorek, 4 września 2018	czwartek, 6 września 2018	First Class	HW-14935	FUR-BO-10000112	\$20,00
CA-2016-130785	poniedziałek, 5 września 2016	piątek, 9 września 2016	Standard Class	AG-10900	FUR-BO-10000330	\$8,00
CA-2018-125472	środa, 30 maja 2018	czwartek, 31 maja 2018	First Class	BD-11725	FUR-BO-10000330	\$20,00
CA-2015-105249	sobota, 28 listopada 2015	sobota, 28 listopada 2015	Same Day	DH-13675	FUR-BO-10000330	\$25,00
US-2015-123183	czwartek, 19 listopada 2015	środa, 25 listopada 2015	Standard Class	GR-14560	FUR-BO-10000362	\$8,00
CA-2015-133592	czwartek, 31 grudnia 2015	czwartek, 7 stycznia 2016	Standard Class	KM-16375	FUR-BO-10000362	\$8,00
CA-2016-118423	czwartek, 24 marca 2016	niedziela, 27 marca 2016	First Class	DP-13390	FUR-BO-10000362	\$20,00
CA-2017-165848	niedziela, 4 czerwca 2017	niedziela, 4 czerwca 2017	Same Day	EN-13780	FUR-BO-10000362	\$25,00
CA-2015-156349	wtorek, 26 maja 2015	sobota, 30 maja 2015	Standard Class	ML-17395	FUR-BO-10000362	\$8,00
CA-2018-126914	piątek, 15 czerwca 2018	wtorek, 19 czerwca 2018	Standard Class	JE-15715	FUR-BO-10000468	\$8,00
CA-2016-168480	środa, 21 września 2016	wtorek, 27 września 2016	Standard Class	DM-12955	FUR-BO-10000468	\$8,00
CA-2018-116946	środa, 19 grudnia 2018	niedziela, 23 grudnia 2018	Standard Class	TS-21505	FUR-BO-10000468	\$8,00
CA-2018-161200	poniedziałek, 6 sierpnia 2018	piątek, 10 sierpnia 2018	Second Class	SV-20365	FUR-BO-10000468	\$15,00
US-2017-166660	poniedziałek, 30 stycznia 2017	środa, 1 lutego 2017	Second Class	TB-21250	FUR-BO-10000468	\$15,00
CA-2015-156790	sobota, 8 sierpnia 2015	poniedziałek, 10 sierpnia 2015	Second Class	VG-21790	FUR-BO-10000468	\$15,00
US-2015-156559	środa, 19 sierpnia 2015	środa, 26 sierpnia 2015	Standard Class	LH-16900	FUR-BO-10000711	\$8,00
CA-2015-140487	niedziela, 14 czerwca 2015	sobota, 20 czerwca 2015	Standard Class	SR-20425	FUR-BO-10000711	\$8,00
US-2017-110170	środa, 27 września 2017	wtorek, 3 października 2017	Standard Class	HM-14860	FUR-BO-10000780	\$8,00
US-2017-131611	niedziela, 5 listopada 2017	czwartek, 9 listopada 2017	Standard Class	EP-13915	FUR-BO-10000780	\$8,00
CA-2018-168641	sobota, 24 listopada 2018	sobota, 1 grudnia 2018	Standard Class	KA-16525	FUR-BO-10000780	\$8,00
US-2016-164238	wtorek, 16 sierpnia 2016	sobota, 20 sierpnia 2016	Standard Class	JW-15955	FUR-BO-10000780	\$8,00
CA-2018-137449	piątek, 29 czerwca 2018	sobota, 30 czerwca 2018	First Class	ME-17725	FUR-BO-10000780	\$20,00
CA-2015-101931	środa, 28 października 2015	sobota, 31 października 2015	First Class	TS-21270	FUR-BO-10001337	\$20,00
CA-2018-108070	poniedziałek, 16 kwietnia 2018	piątek, 20 kwietnia 2018	Standard Class	JE-15745	FUR-BO-10001337	\$8,00
CA-2015-154599	niedziela, 12 kwietnia 2015	piątek, 17 kwietnia 2015	Standard Class	KN-16450	FUR-BO-10001337	\$8,00

The column containing the total price of the product including delivery

The "Total price" column uses the "RELATED" function to fetch the price of the ordered product from the related "Products" table. The value returned by the column is the sum of the product price and the delivery price. This column has been placed in the table with orders, instead of the table with products, due to the fact that in the table with orders the same product may appear many times (in

several orders), so there is no unique identifier that can be used to refer to this table. The following is the formula used for this column:

Total price = RELATED(Products[Price])+Orders[Ship cost]

Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Product ID	Ship cost	Total price
CA-2018-140326	wtorek, 4 września 2018	czwartek, 6 września 2018	First Class	HW-14935	FUR-BO-10000112	\$20,00	\$845,17
CA-2016-130785	poniedziałek, 5 września 2016	piątek, 9 września 2016	Standard Class	AG-10900	FUR-BO-10000330	\$8,00	\$419,33
CA-2018-125472	środa, 30 maja 2018	czwartek, 31 maja 2018	First Class	BD-11725	FUR-BO-10000330	\$20,00	\$431,33
CA-2015-105249	sobota, 28 listopada 2015	sobota, 28 listopada 2015	Same Day	DH-13675	FUR-BO-10000330	\$25,00	\$436,33
US-2015-123183	czwartek, 19 listopada 2015	środa, 25 listopada 2015	Standard Class	GR-14560	FUR-BO-10000362	\$8,00	\$367,06
CA-2015-133592	czwartek, 31 grudnia 2015	czwartek, 7 stycznia 2016	Standard Class	KM-16375	FUR-BO-10000362	\$8,00	\$367,06
CA-2016-118423	czwartek, 24 marca 2016	niedziela, 27 marca 2016	First Class	DP-13390	FUR-BO-10000362	\$20,00	\$379,06
CA-2017-165848	niedziela, 4 czerwca 2017	niedziela, 4 czerwca 2017	Same Day	EN-13780	FUR-BO-10000362	\$25,00	\$384,06
CA-2015-156349	wtorek, 26 maja 2015	sobota, 30 maja 2015	Standard Class	ML-17395	FUR-BO-10000362	\$8,00	\$367,06
CA-2018-126914	piątek, 15 czerwca 2018	wtorek, 19 czerwca 2018	Standard Class	JE-15715	FUR-BO-10000468	\$8,00	\$153,74
CA-2016-168480	środa, 21 września 2016	wtorek, 27 września 2016	Standard Class	DM-12955	FUR-BO-10000468	\$8,00	\$153,74
CA-2018-116946	środa, 19 grudnia 2018	niedziela, 23 grudnia 2018	Standard Class	TS-21505	FUR-BO-10000468	\$8,00	\$153,74
CA-2018-161200	poniedziałek, 6 sierpnia 2018	piątek, 10 sierpnia 2018	Second Class	SV-20365	FUR-BO-10000468	\$15,00	\$160,74
US-2017-166660	poniedziałek, 30 stycznia 2017	środa, 1 lutego 2017	Second Class	TB-21250	FUR-BO-10000468	\$15,00	\$160,74
CA-2015-156790	sobota, 8 sierpnia 2015	poniedziałek, 10 sierpnia 2015	Second Class	VG-21790	FUR-BO-10000468	\$15,00	\$160,74
US-2015-156559	środa, 19 sierpnia 2015	środa, 26 sierpnia 2015	Standard Class	LH-16900	FUR-BO-10000711	\$8,00	\$646,82
CA-2015-140487	niedziela, 14 czerwca 2015	sobota, 20 czerwca 2015	Standard Class	SR-20425	FUR-BO-10000711	\$8,00	\$646,82
US-2017-110170	środa, 27 września 2017	wtorek, 3 października 2017	Standard Class	HM-14860	FUR-BO-10000780	\$8,00	\$964,66
US-2017-131611	niedziela, 5 listopada 2017	czwartek, 9 listopada 2017	Standard Class	EP-13915	FUR-BO-10000780	\$8,00	\$964,66
CA-2018-168641	sobota, 24 listopada 2018	sobota, 1 grudnia 2018	Standard Class	KA-16525	FUR-BO-10000780	\$8,00	\$964,66
US-2016-164238	wtorek, 16 sierpnia 2016	sobota, 20 sierpnia 2016	Standard Class	JW-15955	FUR-BO-10000780	\$8,00	\$964,66
CA-2018-137449	piątek, 29 czerwca 2018	sobota, 30 czerwca 2018	First Class	ME-17725	FUR-BO-10000780	\$20,00	\$976,66
CA-2015-101931	środa, 28 października 2015	sobota, 31 października 2015	First Class	TS-21370	FUR-BO-10001337	\$20,00	\$534,17
CA-2018-108070	poniedziałek, 16 kwietnia 2018	piątek, 20 kwietnia 2018	Standard Class	JE-15745	FUR-BO-10001337	\$8,00	\$522,17
CA-2015-154599	niedziela, 12 kwietnia 2015	piątek, 17 kwietnia 2015	Standard Class	KN-16450	FUR-BO-10001337	\$8,00	\$522,17
CA-2015-166744	niedziela, 20 września 2015	czwartek, 24 września 2015	Standard Class	DN-13690	FUR-BO-10001337	\$8,00	\$522,17
CA-2015-131247	poniedziałek, 30 marca 2015	sobota, 4 kwietnia 2015	Standard Class	GA-14725	FUR-BO-10001337	\$8,00	\$522,17

A measure of the store's total profit

Added measure "Total Profit", which shows the total sum of prices of all products sold. The "SUM" function was used here, which sums the values from the column given as its argument:

Total profit = SUM(Orders[Total price])

A measure of the previous day's revenue

The "Total profit LD" measure has been added, which returns the sum of the prices of all products sold from the previous day. Here, the "Calculate" function is used, which calculates the expression in the modified filter context, and the "DATEADD" function, which returns the date to which the specified interval has been added (the "DAY" argument indicates that the interval is expressed in days, and "-1" that it has be the previous day). The formula used is shown below:

Total profit LD = CALCULATE([Total profit], DATEADD('Calendar'[Date], -1, DAY))

A measure representing the previous month's revenue

Added measure "Total Profit MTD" which returns a table containing a month-to-date column in the current context. The "Calculate" function is used here, which calculates an expression in a modified filter context, and the "DATESSMTD" function takes dates from the calendar as arguments.

```
Total profit MTD = CALCULATE([Total profit], DATESMTD('Calendar'[Date]))
```

A measure that represents revenue for each year

Added measure "Total Profit TotalYTD", calculates year to date expression in current context. The function sums up the obtained values from the whole year and at the very end presents the value obtained after summing up the last year. The function uses the date column from the calendar file.

```
Total profit TotalYTD = TOTALYTD([Total profit], 'Calendar'[Date])
```

Measure representing revenue from June to August 2018

The measure "Total profit June-August 2018" has been added, which uses the previously described "CALCULATE" function, the "DATESBETWEEN" function, which selects dates from the calendar that fall within the range of dates given as arguments to this function. The DATE function returns a specified date in date (or time) format. Below is the formula used:

```
Total profit June-August 2018 = CALCULATE([Total profit], DATESBETWEEN('Calendar'[Date], DATE(2018, 06, 01), Date(2018, 08, 31))).
```

The "Initials" column showing the client's initials

The Initials column has been added, which searches the "Customer ID" table, returning the first letters of the name and surname, creating a column with the initials of the buyer. For this purpose, we use the MID function with the settings "StartPosition = 1" and "NumberOfCharacters = 2".

```
Initials = MID(Customers[Customer ID], 1, 2)
```

Customer ID	Customer Name	Segment	Initials
CG-12520	Claire Gute	Consumer	CG
SO-20335	Sean O'Donnell	Consumer	SO
BH-11710	Brosina Hoffman	Consumer	BH
AA-10480	Andrew Allen	Consumer	AA
IM-15070	Irene Maddox	Consumer	IM
PK-19075	Pete Kriz	Consumer	PK
AG-10270	Alejandro Grove	Consumer	AG
ZD-21925	Zuschuss Donatelli	Consumer	ZD
SF-20065	Sandra Flanagan	Consumer	SF
EB-13870	Emily Burns	Consumer	EB
EH-13945	Eric Hoffmann	Consumer	EH
TB-21520	Tracy Blumstein	Consumer	TB
PO-18865	Patrick O'Donnell	Consumer	PO
LH-16900	Lena Hernandez	Consumer	LH

Delivery time column

Added column "Ship time" showing how many days the delivery took from the day of order to the day the package was delivered to the customer. We used the “DATEDIFF” function, which can calculate the time difference between two selected columns. In our case, we chose the interval as “day”.

Ship time = DATEDIFF(Orders[Order Date], Orders[Ship Date], DAY)

Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Product ID	Ship cost	Total price	Ship time
CA-2018-140326	wtorek, 4 września 2018	czwartek, 6 września 2018	First Class	HW-14935	FUR-BO-10000112	\$20,00	\$845,17	2
CA-2016-130785	poniedziałek, 5 września 2016	piątek, 9 września 2016	Standard Class	AG-10900	FUR-BO-10000330	\$8,00	\$419,33	4
CA-2018-125472	środa, 30 maja 2018	czwartek, 31 maja 2018	First Class	BD-11725	FUR-BO-10000330	\$20,00	\$431,33	1
CA-2015-105249	sobota, 28 listopada 2015	sobota, 28 listopada 2015	Same Day	DH-13675	FUR-BO-10000330	\$25,00	\$436,33	0
US-2015-123183	czwartyk, 19 listopada 2015	środa, 25 listopada 2015	Standard Class	GR-14560	FUR-BO-10000362	\$8,00	\$367,06	6
CA-2015-133592	czwartyk, 31 grudnia 2015	czwartyk, 7 stycznia 2016	Standard Class	KM-16375	FUR-BO-10000362	\$8,00	\$367,06	7
CA-2016-118423	czwartyk, 24 marca 2016	niedziela, 27 marca 2016	First Class	DP-13390	FUR-BO-10000362	\$20,00	\$379,06	3
CA-2017-165848	niedziela, 4 czerwca 2017	niedziela, 4 czerwca 2017	Same Day	EN-13780	FUR-BO-10000362	\$25,00	\$384,06	0
CA-2015-156349	wtorek, 26 maja 2015	sobota, 30 maja 2015	Standard Class	ML-17395	FUR-BO-10000362	\$8,00	\$367,06	4
CA-2018-126914	piątek, 15 czerwca 2018	wtorek, 19 czerwca 2018	Standard Class	JE-15715	FUR-BO-10000468	\$8,00	\$153,74	4
CA-2016-168480	środa, 21 września 2016	wtorek, 27 września 2016	Standard Class	DM-12955	FUR-BO-10000468	\$8,00	\$153,74	6
CA-2018-116946	środa, 19 grudnia 2018	niedziela, 23 grudnia 2018	Standard Class	TS-21505	FUR-BO-10000468	\$8,00	\$153,74	4
CA-2018-161200	poniedziałek, 6 sierpnia 2018	piątek, 10 sierpnia 2018	Second Class	SV-20365	FUR-BO-10000468	\$15,00	\$160,74	4
US-2017-166660	poniedziałek, 30 stycznia 2017	środa, 1 lutego 2017	Second Class	TB-21250	FUR-BO-10000468	\$15,00	\$160,74	2
CA-2015-156790	sobota, 8 sierpnia 2015	poniedziałek, 10 sierpnia 2015	Second Class	VG-21790	FUR-BO-10000468	\$15,00	\$160,74	2
US-2015-156559	środa, 19 sierpnia 2015	środa, 26 sierpnia 2015	Standard Class	LH-16900	FUR-BO-10000711	\$8,00	\$646,82	7
CA-2015-140487	niedziela, 14 czerwca 2015	sobota, 20 czerwca 2015	Standard Class	SR-20425	FUR-BO-10000711	\$8,00	\$646,82	6
US-2017-110170	środa, 27 września 2017	wtorek, 3 października 2017	Standard Class	HM-14860	FUR-BO-10000780	\$8,00	\$964,66	6
US-2017-131611	niedziela, 5 listopada 2017	czwartyk, 9 listopada 2017	Standard Class	EP-13915	FUR-BO-10000780	\$8,00	\$964,66	4
CA-2018-168641	sobota, 24 listopada 2018	sobota, 1 grudnia 2018	Standard Class	KA-16525	FUR-BO-10000780	\$8,00	\$964,66	7
US-2016-164238	wtorek, 16 sierpnia 2016	sobota, 20 sierpnia 2016	Standard Class	JW-15955	FUR-BO-10000780	\$8,00	\$964,66	4
CA-2018-137449	piątek, 29 czerwca 2018	sobota, 30 czerwca 2018	First Class	ME-17725	FUR-BO-10000780	\$20,00	\$976,66	1
CA-2015-101931	środa, 28 października 2015	sobota, 31 października 2015	First Class	TS-21370	FUR-BO-10001337	\$20,00	\$534,17	3
CA-2018-108070	poniedziałek, 16 kwietnia 2018	piątek, 20 kwietnia 2018	Standard Class	JE-15745	FUR-BO-10001337	\$8,00	\$522,17	4
CA-2015-154599	niedziela, 12 kwietnia 2015	piątek, 17 kwietnia 2015	Standard Class	KN-16450	FUR-BO-10001337	\$8,00	\$522,17	5
CA-2015-166744	niedziela, 20 września 2015	czwartyk, 24 września 2015	Standard Class	DN-13690	FUR-BO-10001337	\$8,00	\$522,17	4

A column specifying whether the delivery time is long

Added column "Ship time length" showing if the delivery time was long or short. We used the “IF” function, taking the delivery time from the “Ship time” column and assessing whether the delivery time was more than 3 days or shorter.

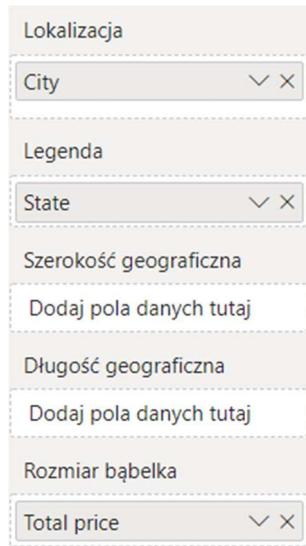
Ship time length = IF(Orders[Ship time]<=3, "Quick", "Long")

Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Product ID	Ship cost	Total price	Ship time	Ship time length
CA-2018-140326	wtorek, 4 września 2018	czwartek, 6 września 2018	First Class	HW-14935	FUR-BO-10000112	\$20,00	\$845,17	2	Quick
CA-2016-130785	poniedziałek, 5 września 2016	piątek, 9 września 2016	Standard Class	AG-10900	FUR-BO-10000330	\$8,00	\$419,33	4	Long
CA-2018-125472	środa, 30 maja 2018	czwartyk, 31 maja 2018	First Class	BD-11725	FUR-BO-10000330	\$20,00	\$431,33	1	Quick
CA-2015-105249	sobota, 28 listopada 2015	sobota, 28 listopada 2015	Same Day	DH-13675	FUR-BO-10000330	\$25,00	\$436,33	0	Quick
US-2015-123183	czwartyk, 19 listopada 2015	środa, 25 listopada 2015	Standard Class	GR-14560	FUR-BO-10000362	\$8,00	\$367,06	6	Long
CA-2015-133592	czwartyk, 31 grudnia 2015	czwartyk, 7 stycznia 2016	Standard Class	KM-16375	FUR-BO-10000362	\$8,00	\$367,06	7	Long
CA-2016-118423	czwartyk, 24 marca 2016	niedziela, 27 marca 2016	First Class	DP-13390	FUR-BO-10000362	\$20,00	\$379,06	3	Quick
CA-2017-165848	niedziela, 4 czerwca 2017	niedziela, 4 czerwca 2017	Same Day	EN-13780	FUR-BO-10000362	\$25,00	\$384,06	0	Quick
CA-2015-156349	wtorek, 26 maja 2015	sobota, 30 maja 2015	Standard Class	ML-17395	FUR-BO-10000362	\$8,00	\$367,06	4	Long
CA-2018-126914	piątek, 15 czerwca 2018	wtorek, 19 czerwca 2018	Standard Class	JE-15715	FUR-BO-10000468	\$8,00	\$153,74	4	Long
CA-2016-168480	środa, 21 września 2016	wtorek, 27 września 2016	Standard Class	DM-12955	FUR-BO-10000468	\$8,00	\$153,74	6	Long
CA-2018-116946	środa, 19 grudnia 2018	niedziela, 23 grudnia 2018	Standard Class	TS-21505	FUR-BO-10000468	\$8,00	\$153,74	4	Long
CA-2018-161200	poniedziałek, 6 sierpnia 2018	piątek, 10 sierpnia 2018	Second Class	SV-20365	FUR-BO-10000468	\$15,00	\$160,74	2	Quick
US-2017-166660	poniedziałek, 30 stycznia 2017	środa, 1 lutego 2017	Second Class	TB-21250	FUR-BO-10000468	\$15,00	\$160,74	2	Quick
CA-2015-156790	sobota, 8 sierpnia 2015	poniedziałek, 10 sierpnia 2015	Second Class	VG-21790	FUR-BO-10000468	\$15,00	\$160,74	2	Quick
US-2015-156559	środa, 19 sierpnia 2015	środa, 26 sierpnia 2015	Standard Class	LH-16900	FUR-BO-10000711	\$8,00	\$646,82	7	Long
CA-2015-140487	niedziela, 14 czerwca 2015	sobota, 20 czerwca 2015	Standard Class	SR-20425	FUR-BO-10000711	\$8,00	\$646,82	6	Long
US-2017-110170	środa, 27 września 2017	wtorek, 3 października 2017	Standard Class	HM-14860	FUR-BO-10000780	\$8,00	\$964,66	6	Long
US-2017-131611	niedziela, 5 listopada 2017	czwartyk, 9 listopada 2017	Standard Class	EP-13915	FUR-BO-10000780	\$8,00	\$964,66	4	Long
CA-2018-168641	sobota, 24 listopada 2018	sobota, 1 grudnia 2018	Standard Class	KA-16525	FUR-BO-10000780	\$8,00	\$964,66	7	Long
US-2016-164238	wtorek, 18 sierpnia 2016	sobota, 20 sierpnia 2016	Standard Class	JW-15955	FUR-BO-10000780	\$8,00	\$964,66	4	Long
CA-2018-137449	piątek, 29 czerwca 2018	sobota, 30 czerwca 2018	First Class	ME-17725	FUR-BO-10000780	\$20,00	\$976,66	1	Quick
CA-2015-101931	środa, 28 października 2015	sobota, 31 października 2015	First Class	TS-21370	FUR-BO-10001337	\$20,00	\$534,17	3	Quick
CA-2018-108070	poniedziałek, 16 kwietnia 2018	piątek, 20 kwietnia 2018	Standard Class	JE-15745	FUR-BO-10001337	\$8,00	\$522,17	4	Long
CA-2015-154599	niedziela, 12 kwietnia 2015	piątek, 17 kwietnia 2015	Standard Class	KN-16450	FUR-BO-10001337	\$8,00	\$522,17	5	Long
CA-2015-166744	niedziela, 20 września 2015	czwartyk, 24 września 2015	Standard Class	DN-13690	FUR-BO-10001337	\$8,00	\$522,17	4	Long

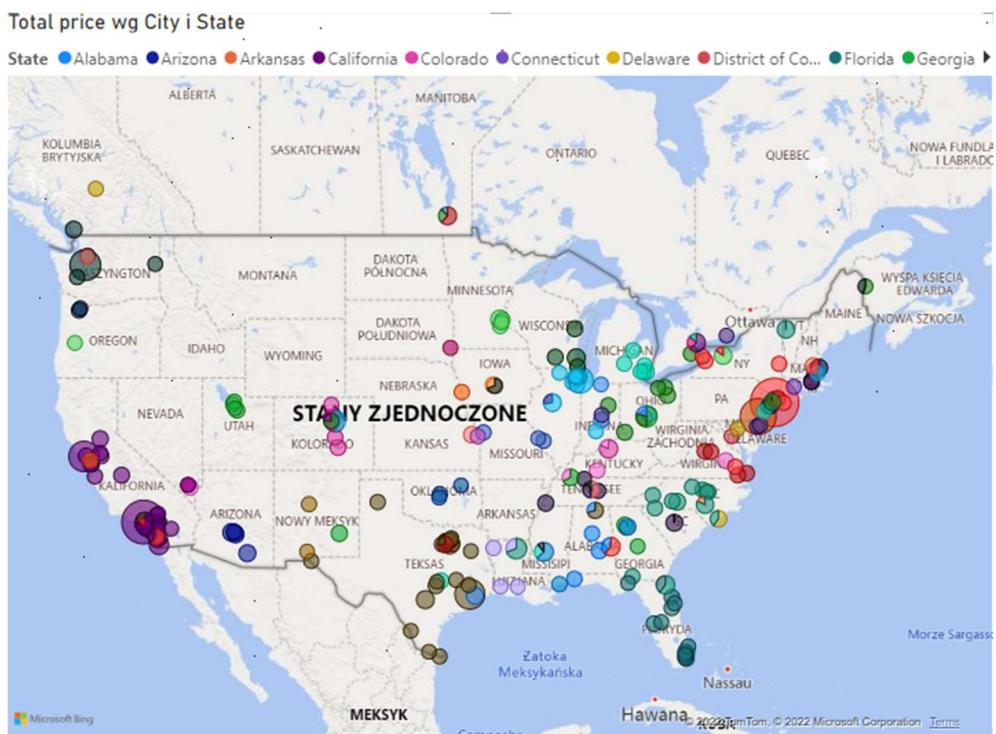
Report 1

Map showing the volume of orders in individual cities

A map has been added to the report and the following values have been assigned to it:

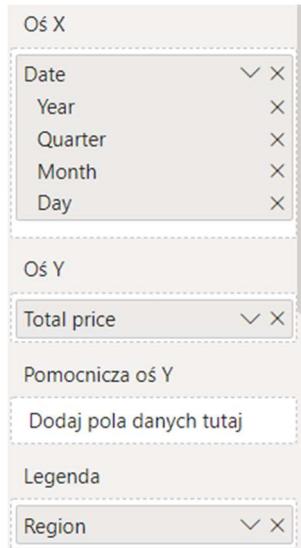


The map shows the value of orders in each city. The size of the bubble represents the total value of the order, and the color represents the status. The map shows that the highest value of orders is in the state of California:

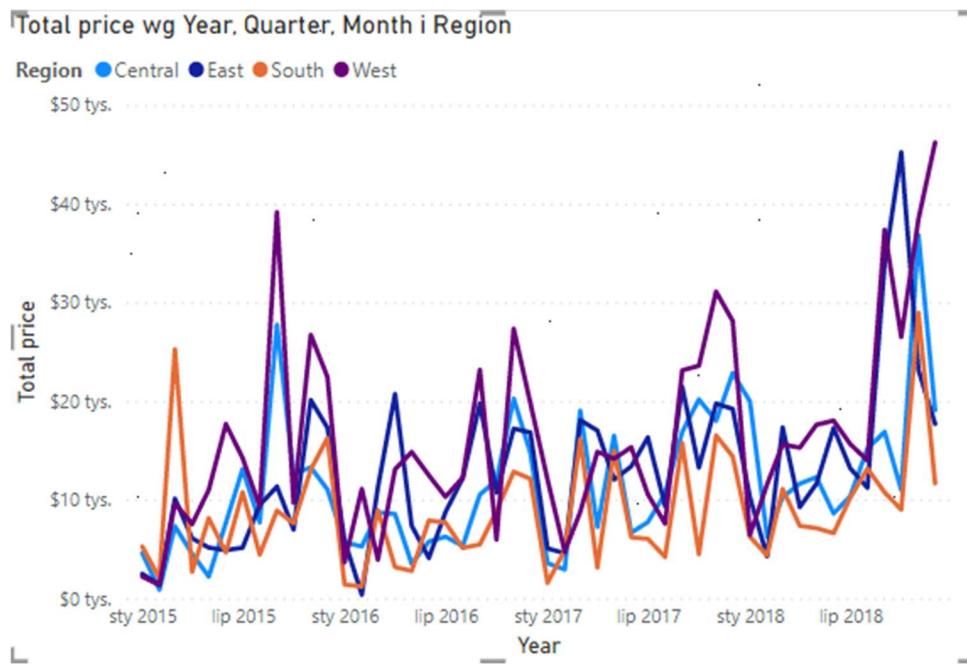


Graph showing order volume over the years, broken down by region

A graph has been added to the report and the following values have been assigned to it:



The graph shows the order volumes over the years from the beginning of 2015 to the end of 2018. The graph shows four lines representing the situation in different regions of the USA. The chart shows that the largest revenues come from the western region, and the period in which the revenues were the highest were the holiday months of 2018:



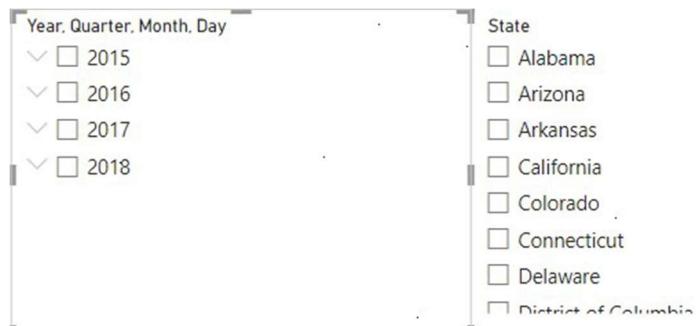
Card

A card showing the total value obtained from order fulfillment has been added to the report.

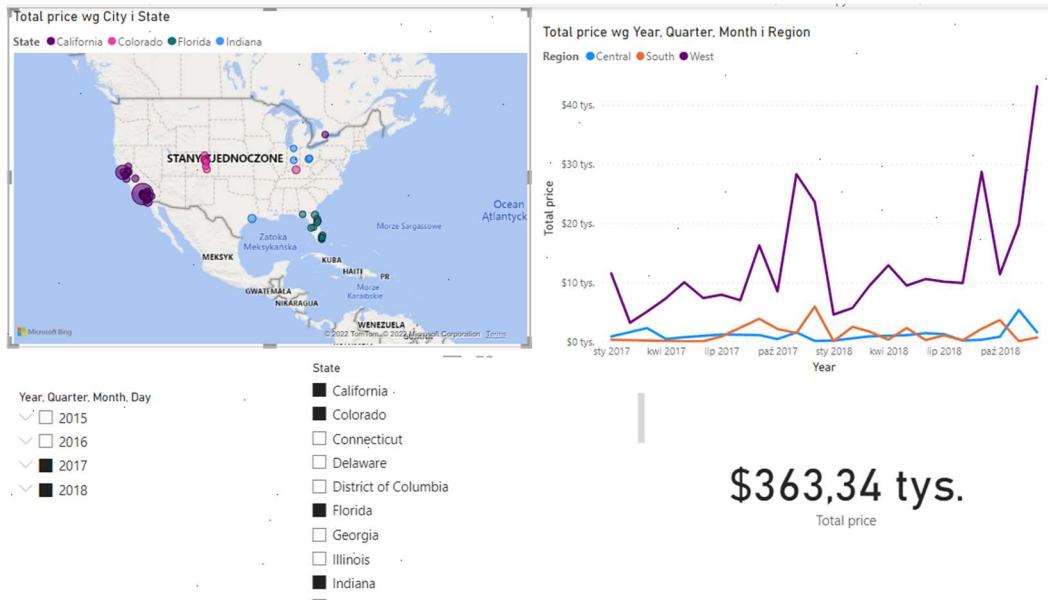
\$2,38 mln
Total price

Fragmetators

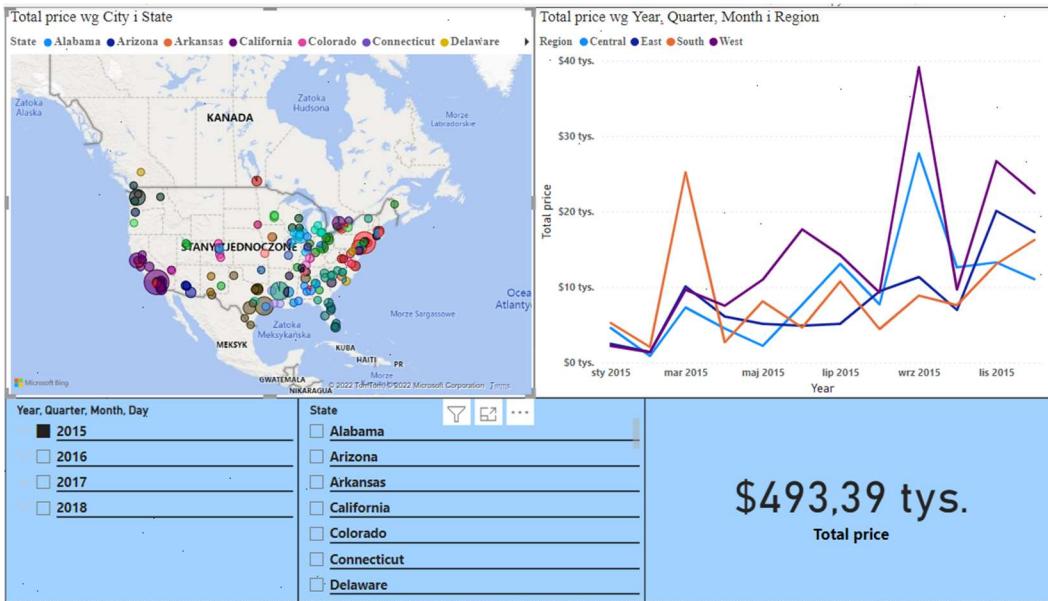
Two slicers have been added to the project. The hierarchical date division was dragged to the first one, and the "State" field from the "Customer Addresses" table to the second, which will allow us to display filtered data on visualizations:



Below are the visualizations, with slicer-filtered data, for the period from 2017 to 2018 for the states of California, Colorado, Florida and Indiana:



In the "Visualizations -> Format visual element" tab, the appearance of report elements was personalized by changing the background color, increasing the font size, bolding the font and adding a frame. This is what the report looks like:



Report 2

Matrix showing total revenue over time

A matrix has been added to the report and the following values have been assigned to it:

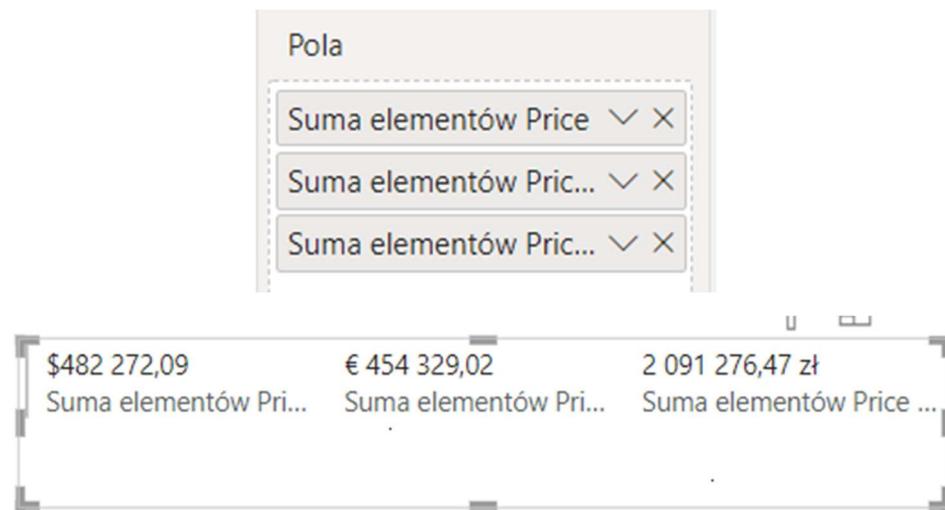
The screenshot shows a matrix configuration interface. The top section, 'Date', lists dimensions: Year, Quarter, Month, and Day, each with a 'X' button to remove. Below this is a section labeled 'Kolumny' (Columns) with a placeholder 'Dodaj pola danych tutaj' (Add data fields here). The bottom section, 'Wartości' (Values), lists measures: Total profit, Total profit LD, Total profit MTD, and Total profit TotalYTD, each with a 'X' button.

The matrix shows the total revenue over time, revenue from the previous day, month and year:

Year	Total profit	Total profit LD	Total profit MTD	Total profit TotalYTD
2015	\$493 393,77	\$490 364,23	\$67 068,17	\$493 393,77
Qtr 1	\$72 640,28	\$71 394,59	\$52 328,32	\$72 640,28
January	\$14 561,39	\$14 182,33	\$14 561,39	\$14 561,39
February	\$5 750,57	\$6 129,63	\$5 750,57	\$20 311,96
March	\$52 328,32	\$51 082,64	\$52 328,32	\$72 640,28
Qtr 2	\$82 294,54	\$82 920,73	\$34 911,22	\$154 934,82
April	\$20 869,39	\$21 648,21	\$20 869,39	\$93 509,67
May	\$26 513,92	\$26 222,92	\$26 513,92	\$120 023,60
June	\$34 911,22	\$35 049,60	\$34 911,22	\$154 934,82
Qtr 3	\$161 305,18	\$161 577,37	\$87 123,92	\$316 239,99
July	\$43 263,80	\$43 883,30	\$43 263,80	\$198 198,62
August	\$30 917,45	\$30 884,78	\$30 917,45	\$229 116,07
September	\$87 123,92	\$86 809,30	\$87 123,92	\$316 239,99
Qtr 4	\$177 153,78	\$174 471,53	\$67 068,17	\$493 393,77
October	\$36 925,06	\$31 808,53	\$36 925,06	\$353 165,05
November	\$73 160,55	\$78 485,99	\$73 160,55	\$426 325,60
December	\$67 068,17	\$64 177,01	\$67 068,17	\$493 393,77
2016	\$477 202,60	\$479 042,46	\$63 525,78	\$477 202,60
Qtr 1	\$67 404,95	\$70 300,96	\$32 833,23	\$67 404,95
January	\$16 612,00	\$19 497,28	\$16 612,00	\$16 612,00
February	\$17 959,72	\$18 103,98	\$17 959,72	\$34 571,72
March	\$32 833,23	\$32 699,70	\$32 833,23	\$67 404,95
Qtr 2	\$104 297,88	\$104 431,42	\$30 256,26	\$171 702,83
April	\$45 525,51	\$43 854,29	\$45 525,51	\$112 930,46
May	\$28 516,12	\$25 100,73	\$28 516,12	\$141 446,58
June	\$30 256,26	\$35 476,39	\$30 256,26	\$171 702,83
Qtr 3	\$126 803,00	\$126 803,00	\$58 920,94	\$298 505,84
July	\$33 010,22	\$29 407,75	\$33 010,22	\$204 713,05
Suma	\$2 376 495,39	\$2 376 495,39	\$94 643,65	\$781 943,76

Card with multiple lines

A card with multiple rows was added to the report, to which the following preset values were assigned (the total was selected in the card settings):



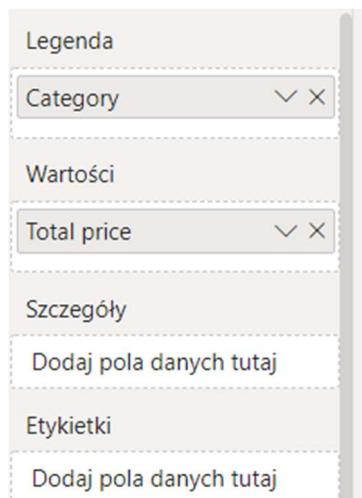
Card

A card has been added to the project showing the total profit for the period from June to August 2018

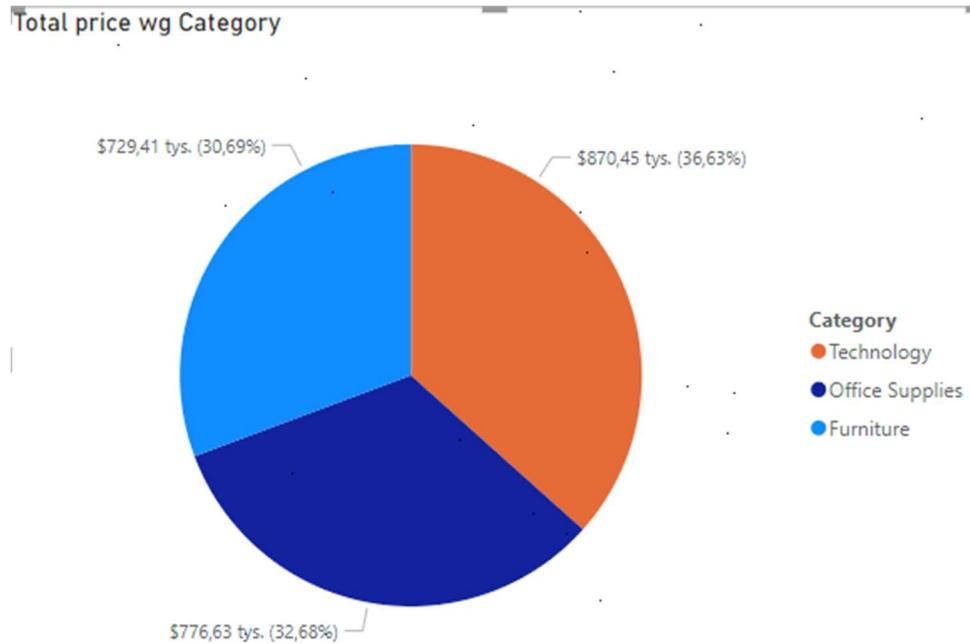
\$153,47 tys.
Total profit June-August 2018

Pie chart

A pie chart has been added to the project, which shows the order values broken down by the category of items sold. The following properties have been assigned to it:

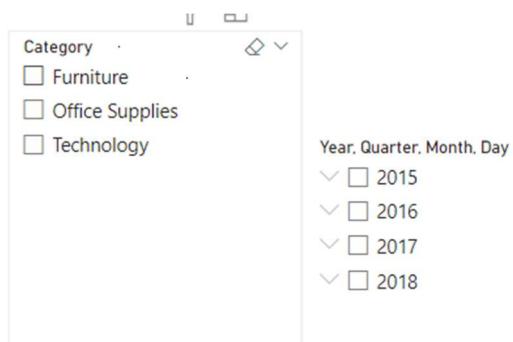


The chart shows that all three product categories bring comparable revenues to the company, but the technology category has a slight advantage in this aspect:

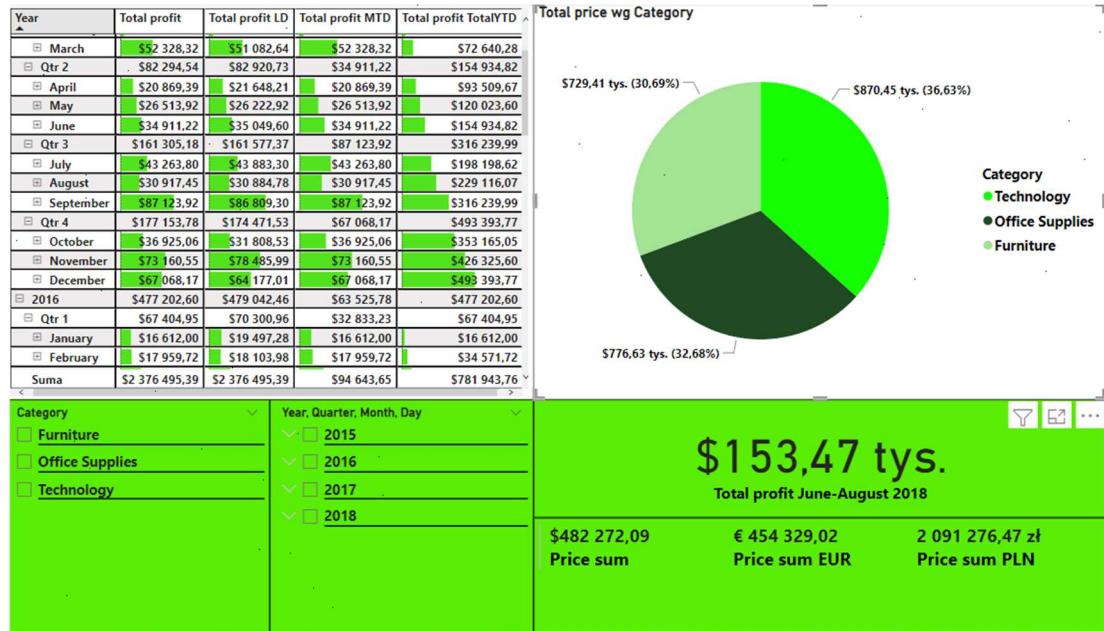


Slicers

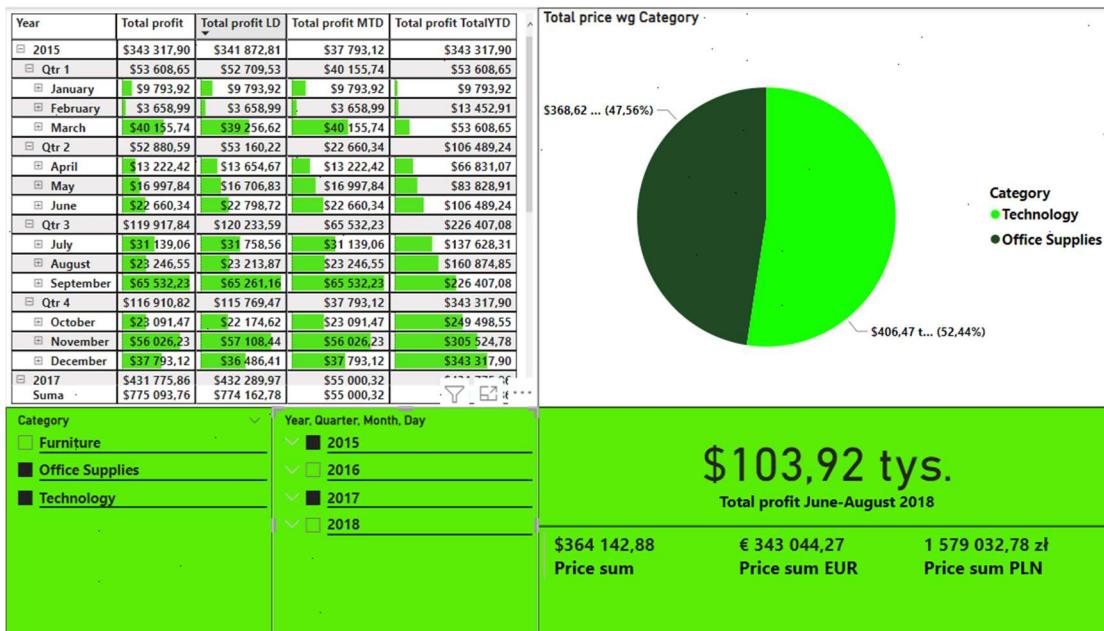
Two slicers have been added to the project. The "Category" field from the "Products" table was dragged to the first one, and the date every second, which will allow us to display filtered data on visualizations, according to a specific date and product category:



In the "Visualizations -> Format visual element" tab, the appearance of report elements has been changed again, by changing the background color, increasing the font size, bolding the font and adding a frame. Element names have also been changed for the tab. The background colors of the slices have been changed in the chart. This is what the report looks like:



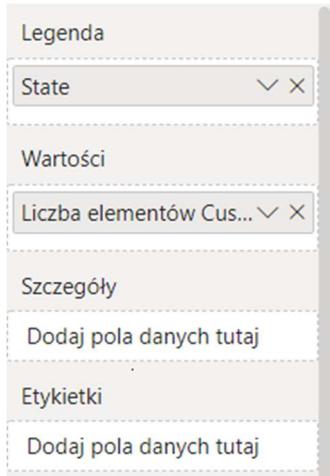
Below is a visualization using slicer filtering, as you can see in the June-August 2018 data card, after using the slicer, we still see the total profit for the mentioned period. The only change is that the category furniture is not included. The situation shows that changing the slicer's date does not affect the time functions, while category filtering does.



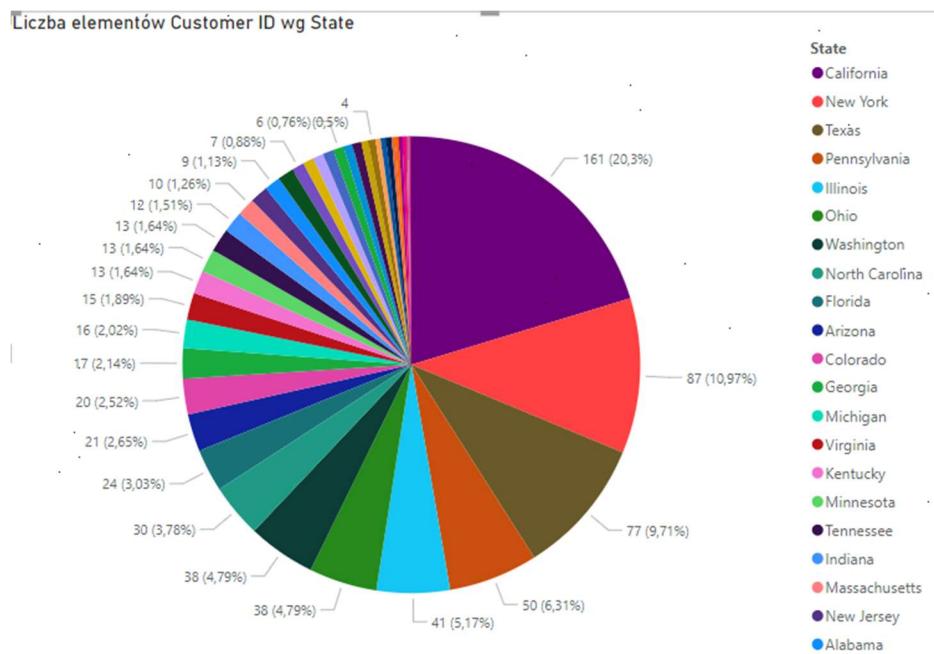
Report 3

Pie chart

A pie chart has been added to the project that shows the number of customers in a given state. The following properties have been assigned to it:

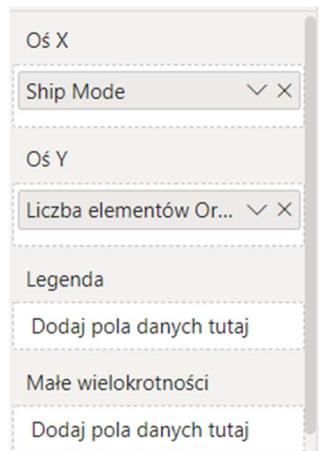


The graph shows in which region the company has the most customers and in which the least:



A bar graph

A column chart has been added to the project and the following values have been assigned to it:



The chart shows which form of delivery is chosen most often (standard) and which is chosen least rarely (delivery on the same day):



Card

A card has been added to the project, to which the "Customer ID" field from the "Customers" table has been added. The tab shows the total number of customers who made a purchase.

793
Liczba elementów Customer ID

Slicers

Two slicers have been added to the project: one filtering states in the USA and the other filtering delivery types, the addition of which will allow us to filter data on visualizations for selected attributes.

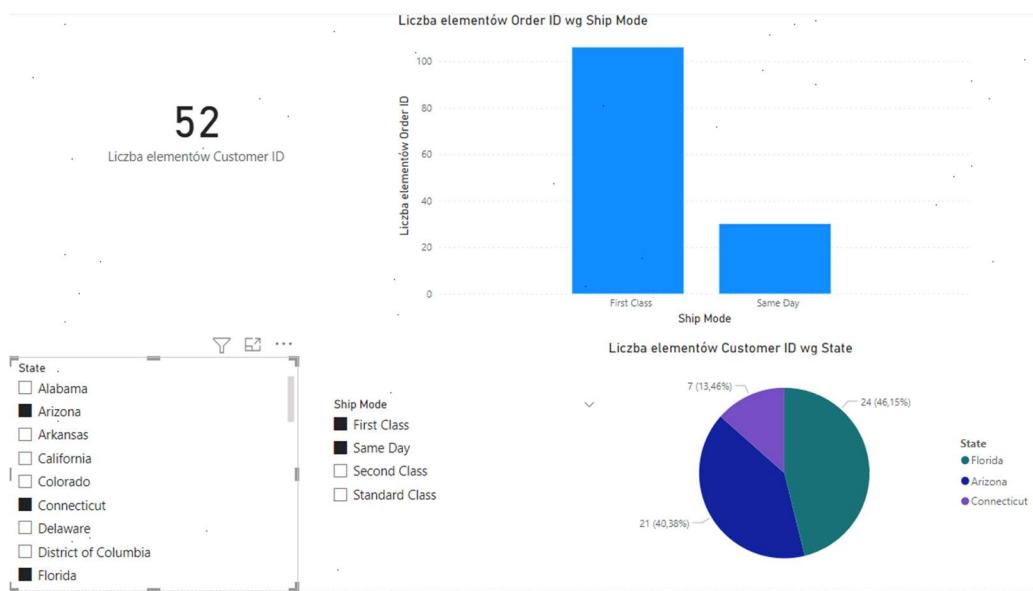
State

- Alabama
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida

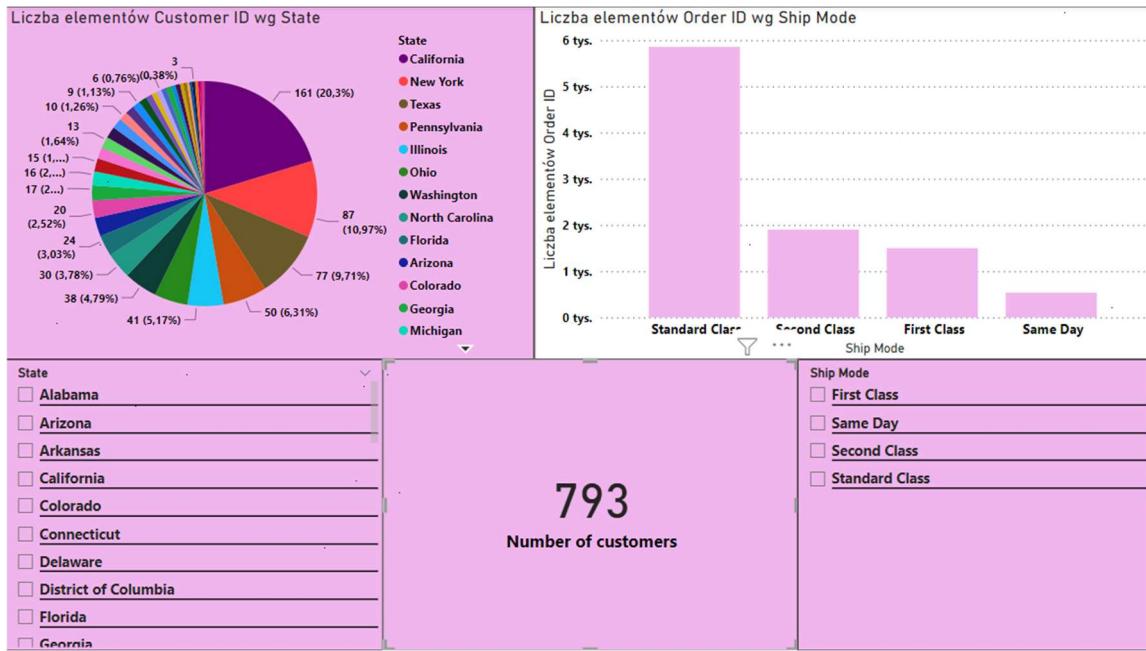
Ship Mode

- First Class
- Same Day
- Second Class
- Standard Class

Below is a visualization using a slicer set to get results for Arizona, Connecticut, and Florida with the shipping type set to "First Class" and "Same Day".



In the "Visualizations -> Format visual element" tab, the appearance of report elements has been changed once again, by changing the background color, increasing the font size, bolding the font and adding a frame. This is what the report looks like:



Dashboards at powerbi.com

The developed report was published and opened on powerbi.com. Then, by clicking on individual elements of the created report, the "Pin visual element" function was used. Using the "Edit -> Dashboard Theme" function, the appearance of the dashboard was changed (text, tiles and background color).

This is what the finished dashboard looks like:



Total profit, Total profit LD, Total profit MTD, Total profit TotalYTD
WG YEAR, QUARTER, MONTH

Year	Total profit	Total profit LD	Total profit MTD	Total profit TotalYTD
2015	\$493 393,77	\$490 364,23	\$67 068,17	\$493 393,77
Qtr 1	\$72 640,28	\$71 394,59	\$52 328,32	\$72 640,28
January	\$14 561,39	\$14 182,33	\$14 561,39	\$14 561,39
February	\$5 750,57	\$6 129,63	\$5 750,57	\$20 311,96
March	\$52 328,32	\$51 082,64	\$52 328,32	\$72 640,28
Qtr 2	\$82 294,54	\$82 920,73	\$34 911,22	\$154 934,82
April	\$20 869,39	\$21 648,21	\$20 869,39	\$93 509,67
May	\$26 513,92	\$26 222,92	\$26 513,92	\$120 023,60
June	\$34 911,22	\$35 049,60	\$34 911,22	\$154 934,82
Qtr 3	\$161 305,18	\$161 577,37	\$87 123,92	\$316 239,99
July	\$43 263,80	\$43 883,30	\$43 263,80	\$198 198,62
August	\$30 917,45	\$30 884,78	\$30 917,45	\$229 116,07
September	\$87 123,92	\$86 809,30	\$87 123,92	\$316 239,99
Qtr 4	\$177 153,78	\$174 471,53	\$67 068,17	\$493 393,77
October	\$36 925,06	\$31 808,53	\$36 925,06	\$353 165,05
November	\$73 160,55	\$78 485,99	\$73 160,55	\$426 325,60
December	\$67 068,17	\$64 177,01	\$67 068,17	\$493 393,77
2016	\$477 202,60	\$479 042,46	\$63 525,78	\$477 202,60
2017	\$623 455,26	\$624 402,13	\$64 455,43	\$623 455,26
Suma	\$2 376 495,39	\$2 376 495,39	\$94 643,65	\$781 943,76

Total price

\$2,38 mln

Price sum, Price sum EUR, Price sum PLN

\$482 272,09 € 454 329,02 2 091 276,47 zł
Price sum Price sum EUR Price sum PLN

Number of customers

793

This is how the finished dashboard looks like in the mobile view:

