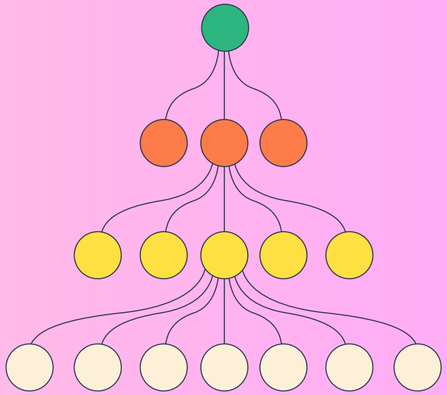


DATA MODELLING IN POWERBI

@ BHUPAL MARUCHETTY

WHAT IS DATA MODELLING?

Data modeling in Power BI is about organizing your data so it's easy to analyze and create reports. It includes linking tables, creating new columns or calculations, and arranging data for better analysis. This helps turn raw data into useful insights for your Power BI reports and dashboards.

1.NORMALIZATION:

Normalization in data modeling is the process of organizing data in a way that reduces redundancy and improves data integrity. The goal is to structure the data into multiple related tables, rather than storing everything in one large table. This helps ensure that data is stored efficiently, and updates to data (like correcting information) are easier to manage.

KEY BENEFITS OF DATA NORMALIZATION:

1.**Eliminate Redundancy:** Avoid storing the same data multiple times. For example, instead of repeating customer information in every transaction record, you store customer details in a separate table.

2.**Minimize Anomalies:** Reduces the chances of data anomalies like update, insert, or delete anomalies, ensuring consistent data across tables.

3.**Improve Efficiency:** By breaking down data into smaller tables, it’s easier to manage and update, especially when dealing with large datasets.

2. FACT TABLE:

Purpose: Fact tables store the measurable data or key metrics you want to analyze, such as sales amounts, quantities, or revenue.

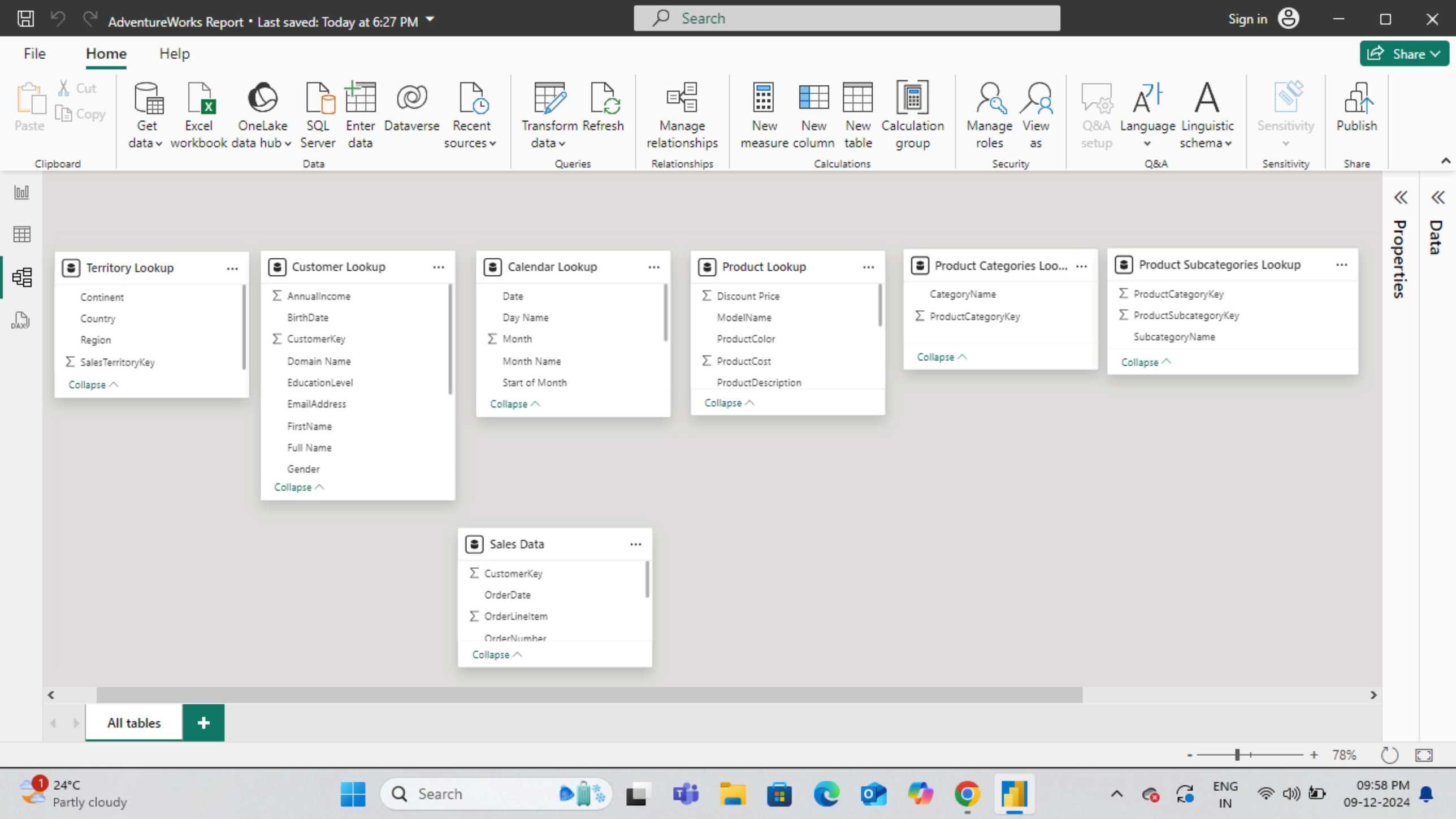
Example: The fact table might record

- **OrderDate:** Reference to when the sale happened.
- **Product Key:** Reference to the product sold.
- **Customer Key:** Reference to the customer who made the purchase.
- **Order Quantity:** Number of units sold.
- **StockDate:**The date stock was updated or an order was fulfilled.
- **TerritoryKey:** A unique identifier for a specific sales region or territory**.**

3.DIMENSION TABLE:

Purpose: Dimension tables store descriptive data that gives context to the facts. They help explain the "who," "what," "when," and "where" of the data.

1. **Customer Lookup Table:** Includes customer details like customer key, name, address, and demographics.
2. **Product Lookup Table:** Includes product details like productkey, name, category, and price.
3. **Calendar Lookup Table:** Includes Date, Dayname, month, quarters, and years for time-based analysis.
4. **Territory Lookup Table:** Includes country, region, Sales territory key


AdventureWorks Report • Last saved: Today at 6:27 PM
Search
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Transform data
Refresh
Manage relationships
New measure
New column
New table
Calculation group
Manage roles
View as
Q&A setup
Language
Linguistic schema
Sensitivity
Publish
Clipboard
Data
Queries
Relationships
Calculations
Security
Q&A
Sensitivity
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Product Subcategories Lookup
ProductCategoryKey
ProductSubcategoryKey
SubcategoryName
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
Collapse
Properties
Data
All tables
78%
24°C
Partly cloudy
Search
ENG
IN
09:58 PM
09-12-2024

4. FOREIGN KEY:

Definition: A column (or a set of columns) in one table that refers to the primary key in another table.

Purpose: Establishes relationships between tables.

Columns in Sales Table:

- **Customerkey** : Foreign key linking to the Customer Lookup Table.
- **Productkey:** Foreign key linking to the Product Lookup Table.
- **OrderDate:** Foreign key linking to the Calendar Lookup Table.
- **Territory key:** Foreign key linking to the Territory Lookup Table.
- **OrderQuantity:**The number of items ordered in a transaction.
- **StockDate:**The date stock was updated or an order was fulfilled.
- **OrderNumber:**A unique identifier for each order.

5.PRIMARY KEY:

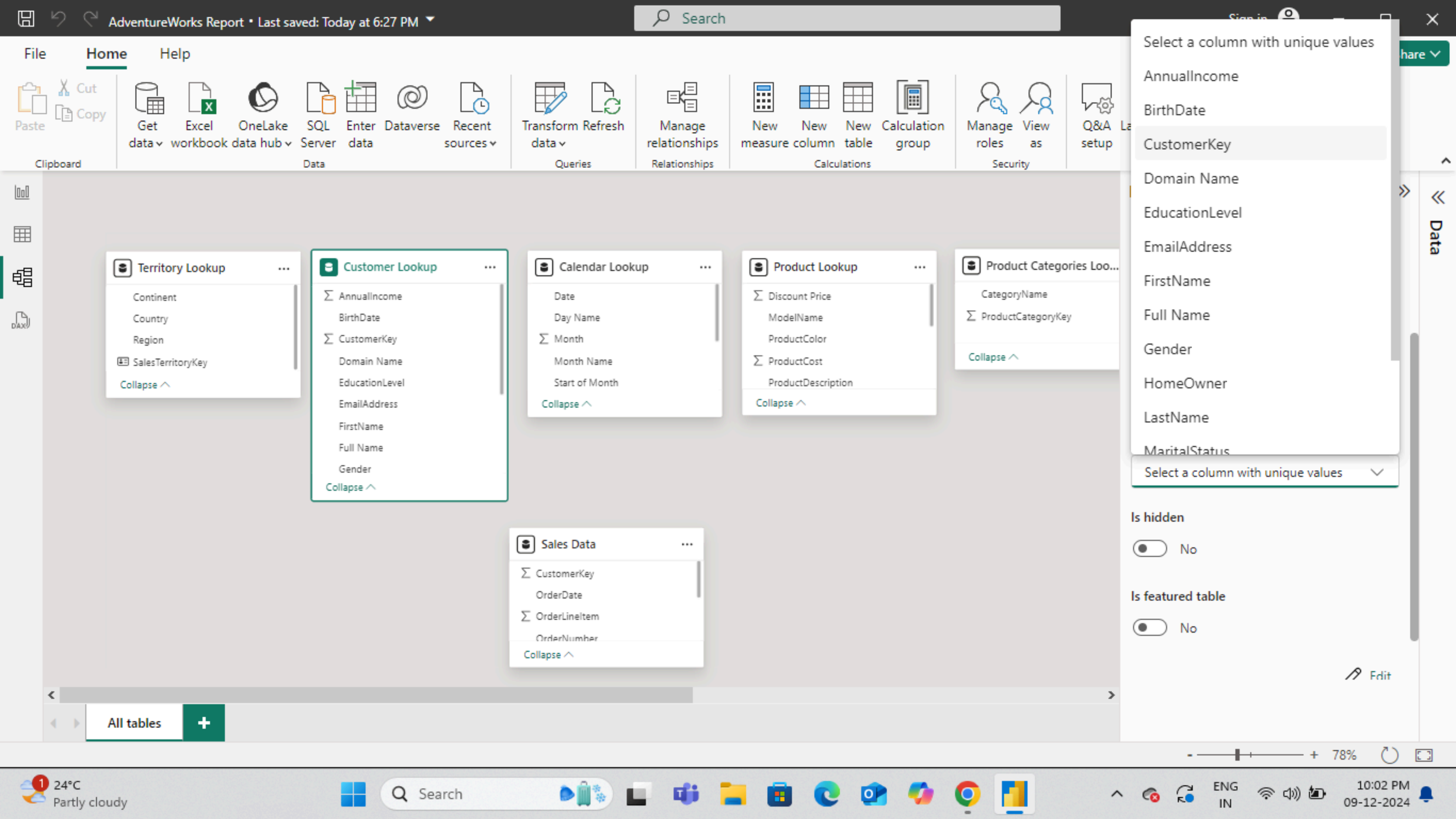
Definition: A column (or a set of columns) in a table that uniquely identifies each record in that table.

Purpose: Ensures that each row in the table is unique and can be referenced by other tables.

A. CUSTOMER LOOKUP TABLE:

Primary Key: CustomerKey

Other Columns: Anual income
Birthdate
FirstName
LastName
EmailAddress
Occupation etc...


AdventureWorks Report • Last saved: Today at 6:27 PM
Search
File
Home
Help
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Transform data
Refresh
Manage relationships
New measure
New column
New table
Calculation group
Manage roles
View as
Q&A setup
Clipboard
Data
Queries
Relationships
Calculations
Security
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
Collapse
Select a column with unique values
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
HomeOwner
LastName
MaritalStatus
Select a column with unique values
Is hidden
No
Is featured table
No
Edit
Data
All tables
78%
24°C
Partly cloudy
Search
ENG
IN
10:02 PM
09-12-2024

AdventureWorks Report • Last saved: Today at 6:27 PM

Search

Sign in

File Home Help

Share

Cut Copy Paste

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Transform data Refresh

Manage relationships

New measure New column New table Calculation group

Manage roles View as

Q&A setup Language Linguistic schema

Sensitivity

Publish

Clipboard Data Queries Relationships Calculations Security Q&A Sensitivity Share

Territory Lookup
- Continent
- Country
- Region
- SalesTerritoryKey

Collapse

Customer Lookup
- AnnualIncome
- BirthDate
- CustomerKey
- Domain Name
- EducationLevel
- EmailAddress
- FirstName
- Full Name
- Gender

Collapse

Calendar Lookup
- Date
- Day Name
- Month
- Month Name
- Start of Month

Collapse

Product Lookup
- Discount Price
- ModelName
- ProductColor
- ProductCost
- ProductDescription

Collapse

Product Categories Loo...
- CategoryName
- ProductCategoryKey

Collapse

Sales Data
- CustomerKey
- OrderDate
- OrderLineItem
- OrderNumber

Collapse

All tables +

Properties

Synonyms
customer lookup, lookup

Row label
Select a row label

Key column
CustomerKey

Is hidden
No

Is featured table
No

Edit

Data

78%

24°C Partly cloudy

Search

ENG IN

10:02 PM 09-12-2024

B. PRODUCT LOOKUP TABLE:

Primary Key: ProductKey

Other Columns: Product Name

Product Price

ProductSKU

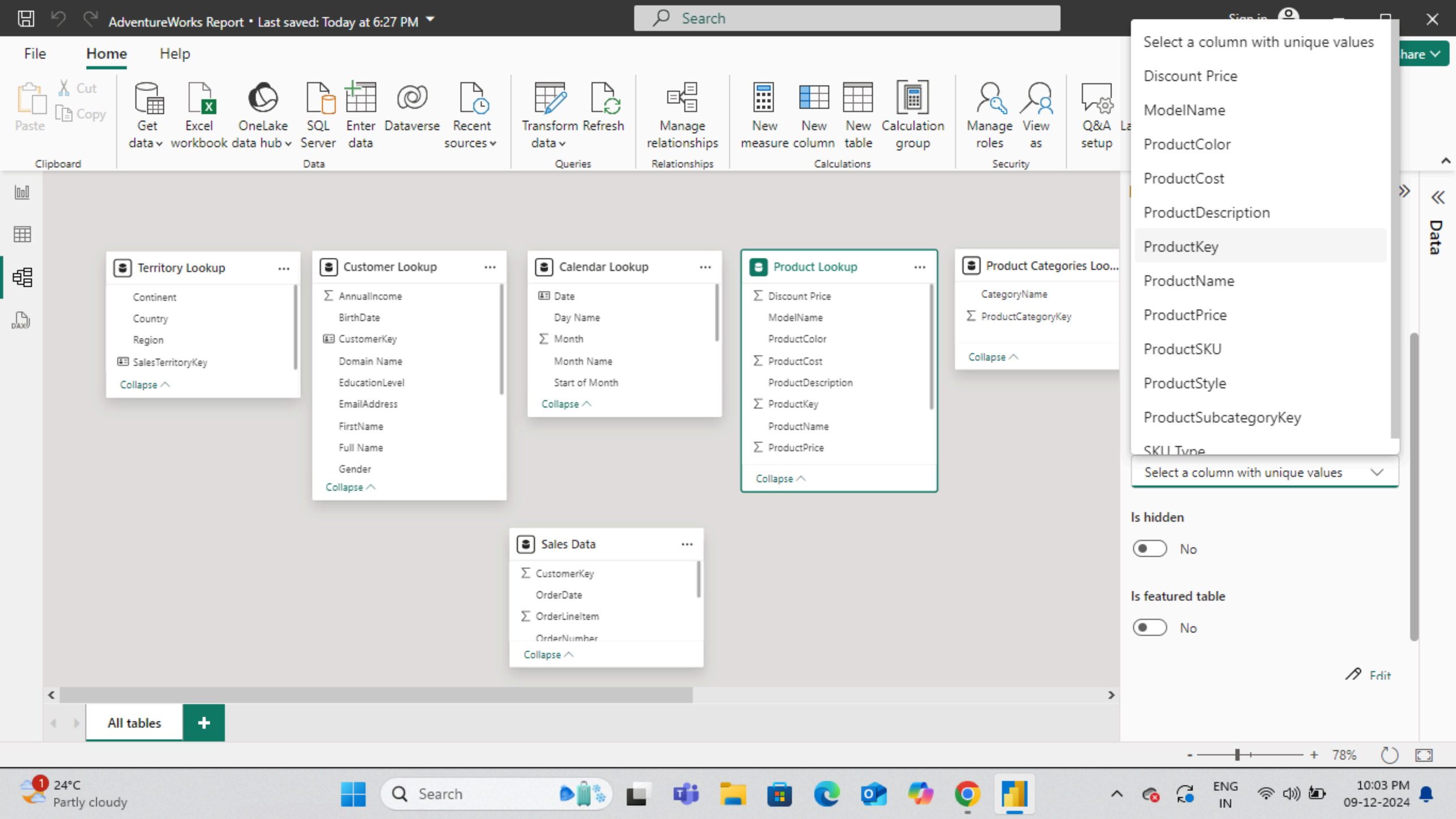
ProductColor

ProductStyle

ProductCost

ModelName

ProductSubcategorykey etc..


AdventureWorks Report • Last saved: Today at 6:27 PM
Search
File
Home
Help
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Transform data
Refresh
Manage relationships
New measure
New column
New table
Calculation group
Manage roles
View as
Q&A setup
Clipboard
Data
Queries
Relationships
Calculations
Security
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
Collapse
Select a column with unique values
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
ProductSKU
ProductStyle
ProductSubcategoryKey
SKU Type
Select a column with unique values
Is hidden
No
Is featured table
No
Edit
Data
All tables
78%
24°C
Partly cloudy
Search
ENG
IN
10:03 PM
09-12-2024

AdventureWorks Report • Last saved: Today at 6:27 PM

Search

Sign in

File Home Help

Share

Paste Cut Copy

Clipboard

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Data

Transform data Refresh

Queries

Manage relationships

Relationships

New measure New column New table Calculation group

Calculations

Manage roles View as

Security

Q&A setup Language Linguistic schema

Q&A

Sensitivity

Sensitivity

Publish

Share

Territory Lookup
- Continent
- Country
- Region
- SalesTerritoryKey

Collapse

Customer Lookup
- AnnualIncome
- BirthDate
- CustomerKey
- Domain Name
- EducationLevel
- EmailAddress
- FirstName
- Full Name
- Gender

Collapse

Calendar Lookup
- Date
- Day Name
- Month
- Month Name
- Start of Month

Collapse

Product Lookup
- Discount Price
- ModelName
- ProductColor
- ProductCost
- ProductDescription
- ProductKey
- ProductName
- ProductPrice

Collapse

Product Categories Loo...
- CategoryName
- ProductCategoryKey

Collapse

Sales Data
- CustomerKey
- OrderDate
- OrderLineItem
- OrderNumber

Collapse

All tables +

Properties

Synonyms

product lookup, lookup

Row label

Select a row label

Key column

ProductKey

Is hidden

No

Is featured table

No

Edit

Data

78%

24°C Partly cloudy

Search

ENG IN

10:04 PM 09-12-2024

C. CALENDAR LOOKUP TABLE:

Primary Key: Date

Other Columns:

DayName

Month

MonthName

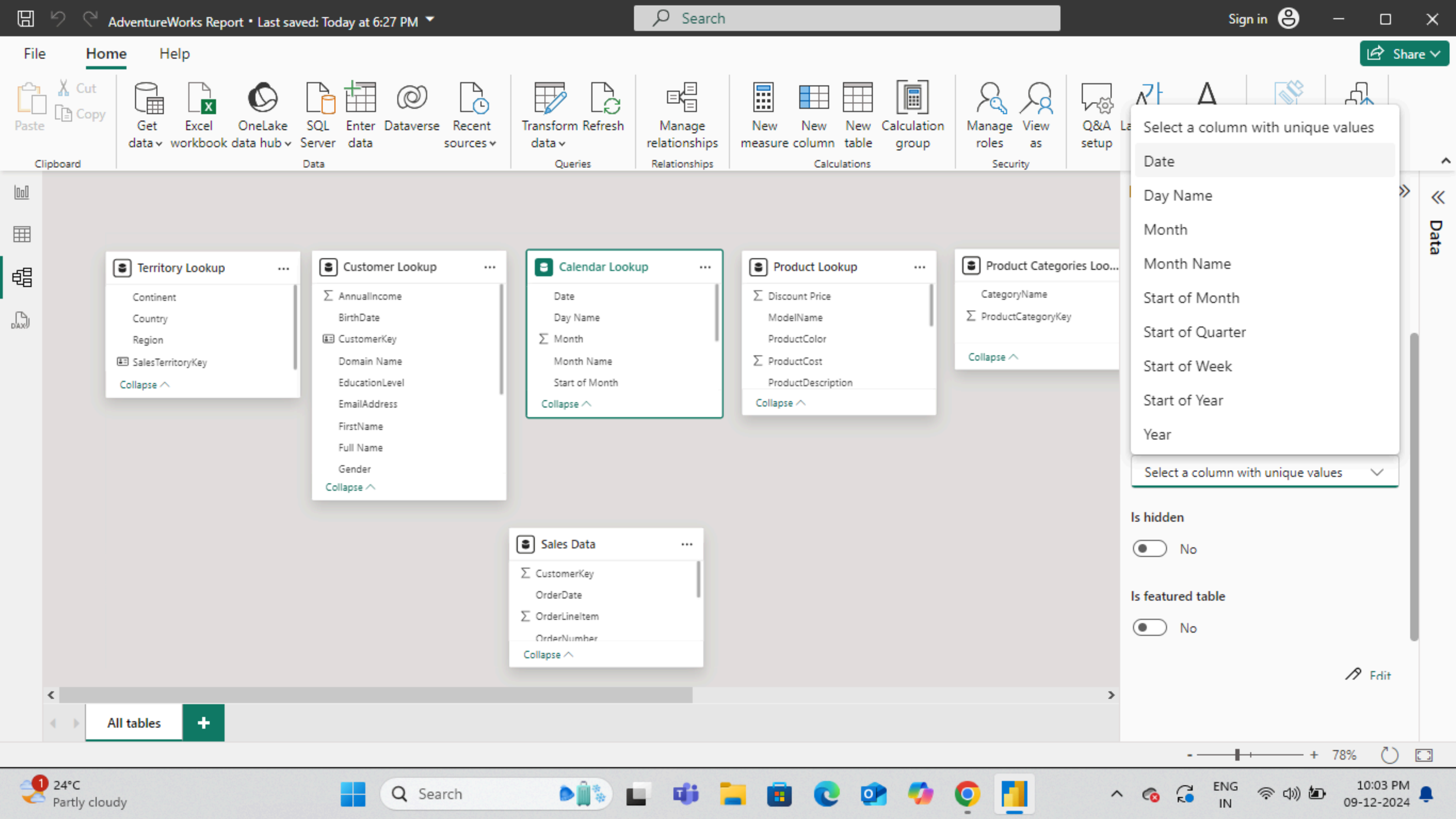
StartofMonth

StartofQuarter

StartofWeek

StartofYear

Year


AdventureWorks Report • Last saved: Today at 6:27 PM
Search
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Clipboard
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
Manage relationships
Relationships
New measure
New column
New table
Calculation group
Calculations
Manage roles
View as
Security
Q&A setup
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
Collapse
Select a column with unique values
Date
Day Name
Month
Month Name
Start of Month
Start of Quarter
Start of Week
Start of Year
Year
Select a column with unique values
Is hidden
No
Is featured table
No
Edit
Data
All tables
78%
24°C
Partly cloudy
Search
ENG
IN
10:03 PM
09-12-2024

AdventureWorks Report • Last saved: Today at 6:27 PM

Search

Sign in

File Home Help

Share

Paste Cut Copy

Clipboard

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Data

Transform data Refresh

Queries

Manage relationships

Relationships

New measure New column New table Calculation group

Calculations

Manage roles View as

Security

Q&A setup Language Linguistic schema

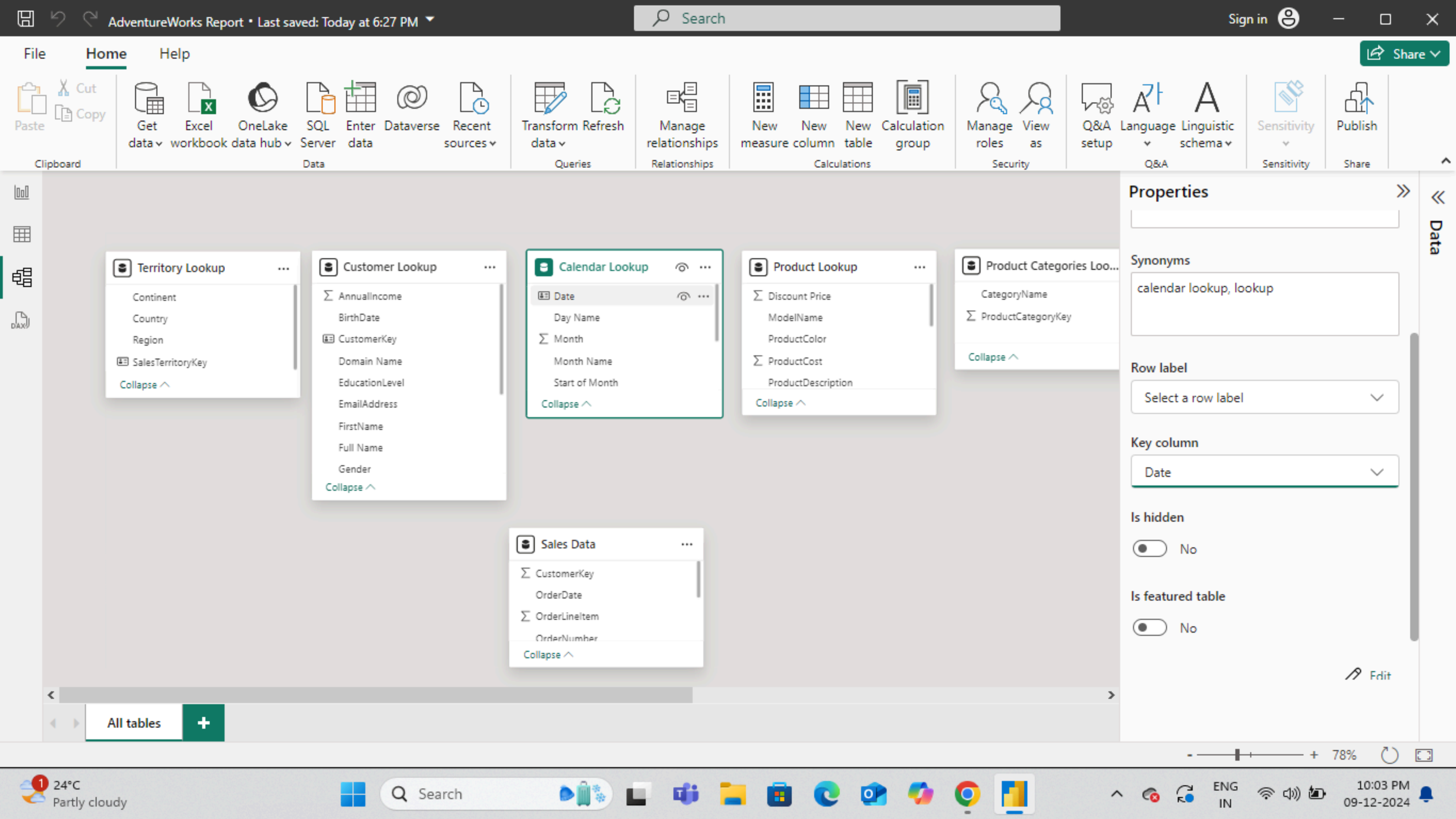
Q&A

Sensitivity

Sensitivity

Publish

Share



Properties

Synonyms

calendar lookup, lookup

Row label

Select a row label

Key column

Date

Is hidden

No

Is featured table

No

Edit

Data

All tables

78%

24°C Partly cloudy

Search

ENG IN

10:03 PM 09-12-2024

D. TERRITORY LOOKUP TABLE:

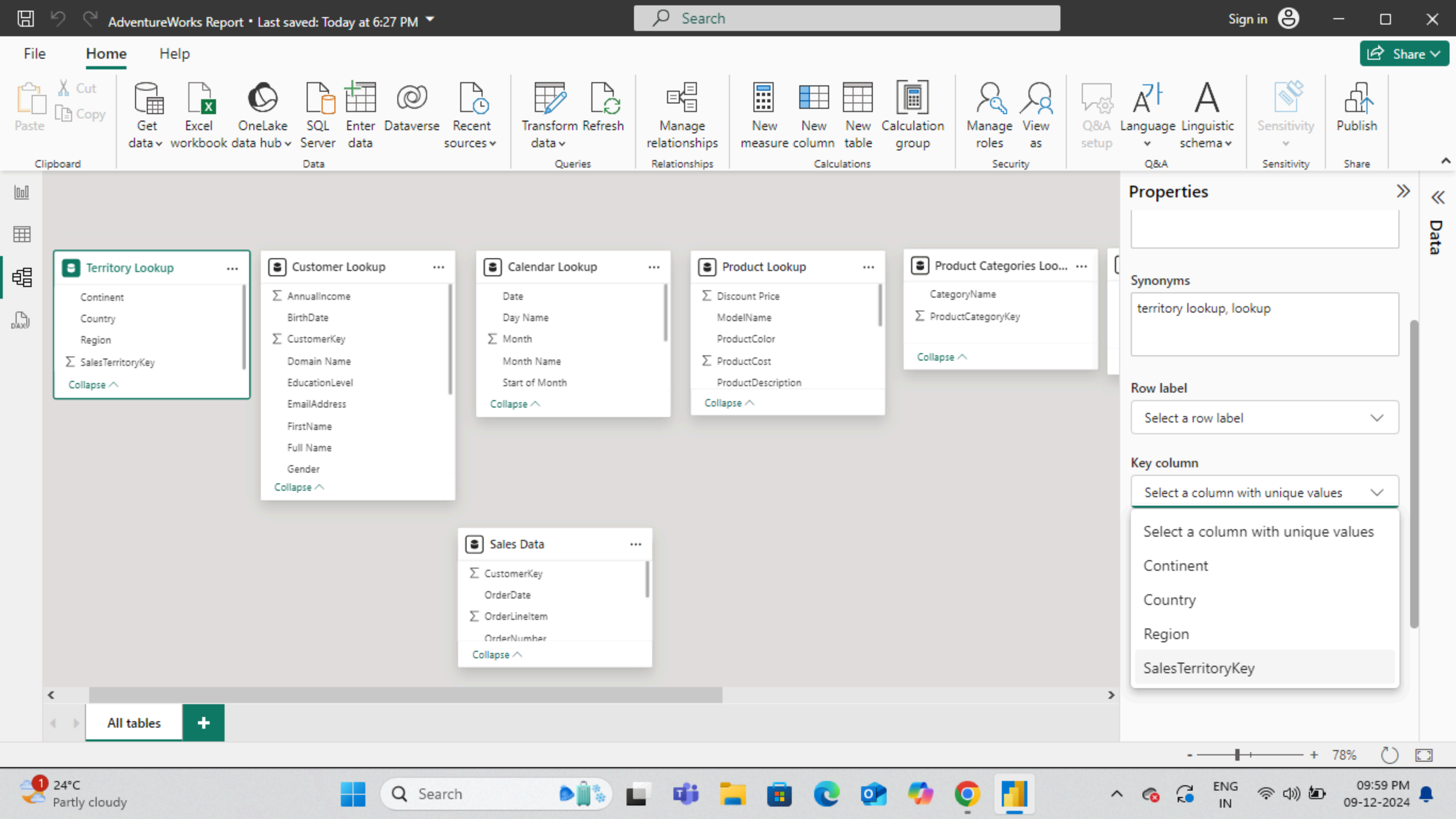
Primary Key: SalesTerritoryKey

Other Columns:

Continet

Country

Region


AdventureWorks Report • Last saved: Today at 6:27 PM
Search
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Clipboard
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
Manage relationships
Relationships
New measure
New column
New table
Calculation group
Calculations
Manage roles
View as
Security
Q&A setup
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
Collapse
Properties
Synonyms
territory lookup, lookup
Row label
Select a row label
Key column
Select a column with unique values
Select a column with unique values
Continent
Country
Region
SalesTerritoryKey
Data
All tables
78%
24°C
Partly cloudy
Search
ENG
IN
09:59 PM
09-12-2024

AdventureWorks Report • Last saved: Today at 6:27 PM

Search

Sign in

File Home Help

Share

Paste Cut Copy

Clipboard

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Data

Transform data Refresh

Queries

Manage relationships

Relationships

New measure New column New table Calculation group

Calculations

Manage roles View as

Security

Q&A setup Language Linguistic schema

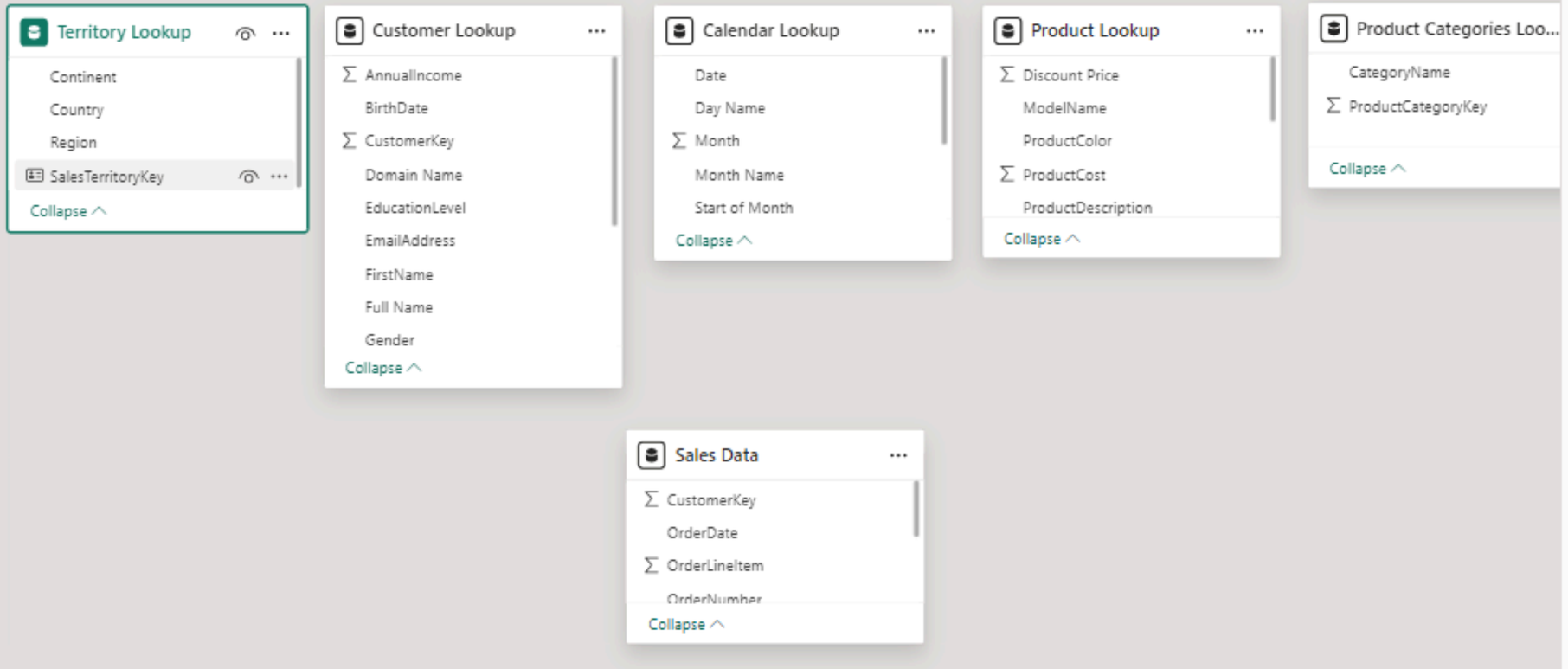
Q&A

Sensitivity

Sensitivity

Publish

Share



All tables +

Properties

Synonyms

territory lookup, lookup

Row label

Select a row label

Key column

SalesTerritoryKey

Is hidden

No

Is featured table

No

Data

78%

24°C Partly cloudy

Search

ENG IN

10:00 PM 09-12-2024

E. PRODUCT CATEGORIES LOOKUP TABLE:

Primary Key: ProductCategoryKey

Other Columns: CategoryName

F. PRODUCT SUB CATEGORIES LOOKUP TABLE:

Primary Key: ProductSubCategoryKey

Other Columns: ProductCategoryKey

SubCategoryName

AdventureWorks Report • Last saved: Today at 6:27 PM

Search

Sign in

File Home Help

Share

Cut Copy Paste

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Transform data Refresh

Manage relationships

New measure New column New table Calculation group

Manage roles View as

Q&A setup Language Linguistic schema

Sensitivity

Publish

Clipboard Data Queries Relationships Calculations Security Q&A Sensitivity Share

Customer Lookup
- AnnualIncome
- BirthDate
- CustomerKey
- Domain Name
- EducationLevel
- EmailAddress
- FirstName
- Full Name
- Gender

Collapse

Calendar Lookup
- Date
- Day Name
- Month
- Month Name
- Start of Month

Collapse

Product Lookup
- Discount Price
- ModelName
- ProductColor
- ProductCost
- ProductDescription
- ProductKey
- ProductName
- ProductPrice

Collapse

Product Categories Loo...
- CategoryName
- ProductCategoryKey

Collapse

Product Subcategories Lookup
- ProductCategoryKey
- ProductSubcategoryKey
- SubcategoryName

Collapse

Sales Data
- CustomerKey
- OrderDate
- OrderLineItem
- OrderNumber

Collapse

All tables +

Properties

Synonyms

product categories lookup, product category lookup, lookup, categories lookup, category lookup

Row label

Select a row label

Key column

Select a column with unique values

Select a column with unique values
CategoryName
ProductCategoryKey

No

Edit

Data

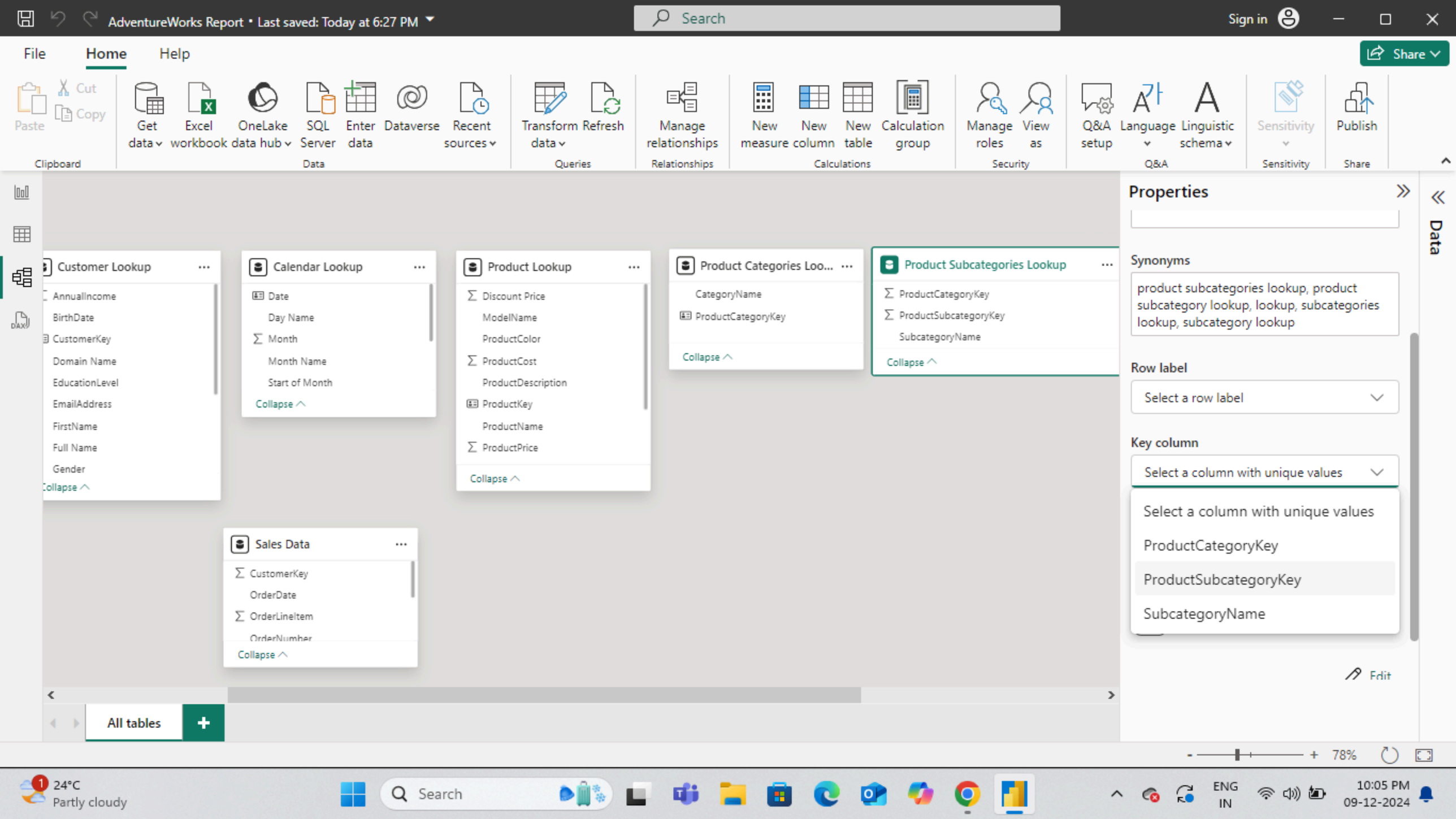
78%

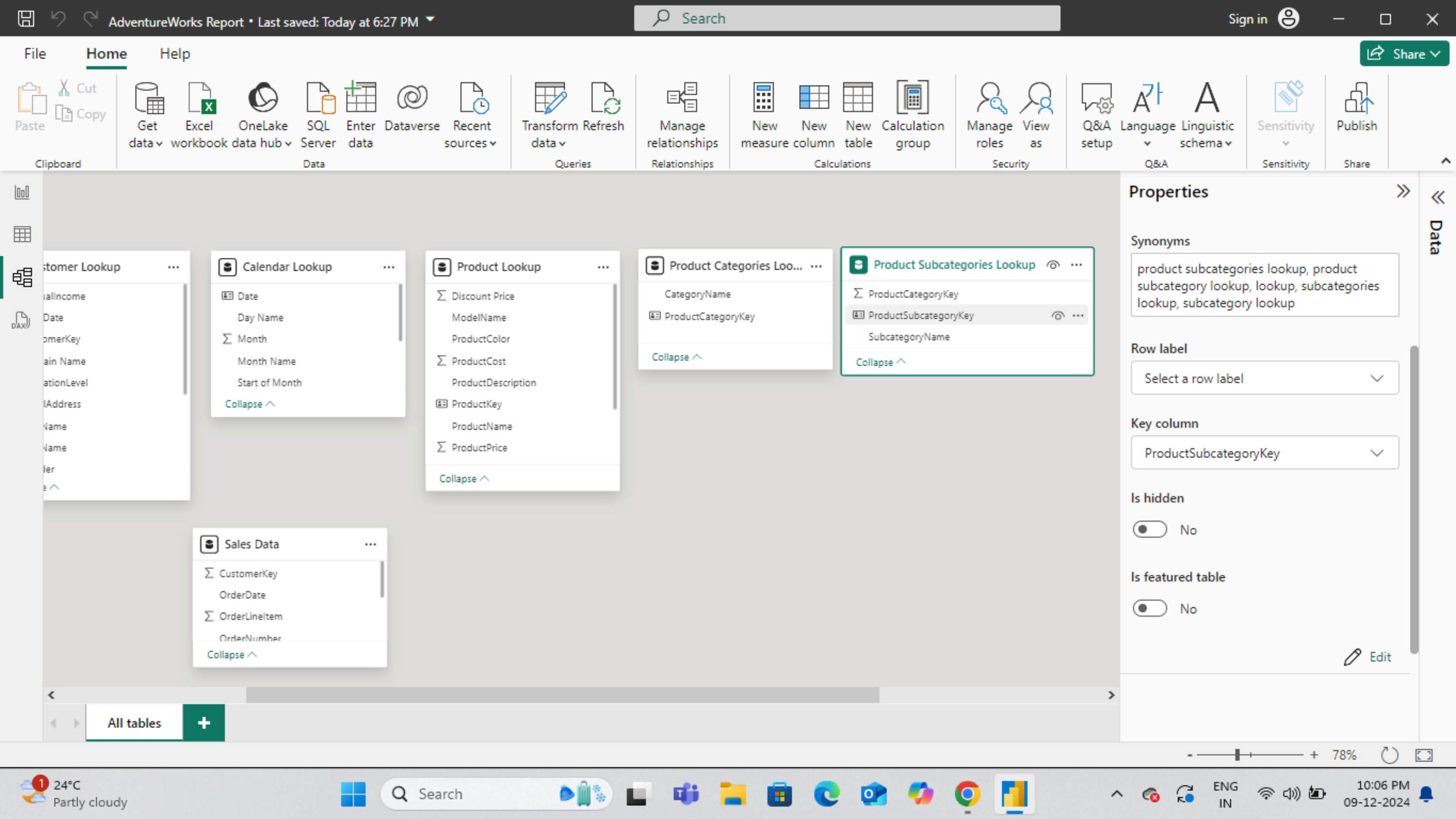
24°C Partly cloudy

Search

ENG IN

10:04 PM 09-12-2024


AdventureWorks Report • Last saved: Today at 6:27 PM
Search
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Transform data
Refresh
Manage relationships
New measure
New column
New table
Calculation group
Manage roles
View as
Q&A setup
Language
Linguistic schema
Sensitivity
Publish
Clipboard
Data
Queries
Relationships
Calculations
Security
Q&A
Sensitivity
Share
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Product Subcategories Lookup
ProductCategoryKey
ProductSubcategoryKey
SubcategoryName
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
Collapse
Properties
Synonyms
product subcategories lookup, product subcategory lookup, lookup, subcategories lookup, subcategory lookup
Row label
Select a row label
Key column
Select a column with unique values
Select a column with unique values
ProductCategoryKey
ProductSubcategoryKey
SubcategoryName
Edit
Data
All tables
78%
24°C
Partly cloudy
Search
ENG
IN
10:05 PM
09-12-2024

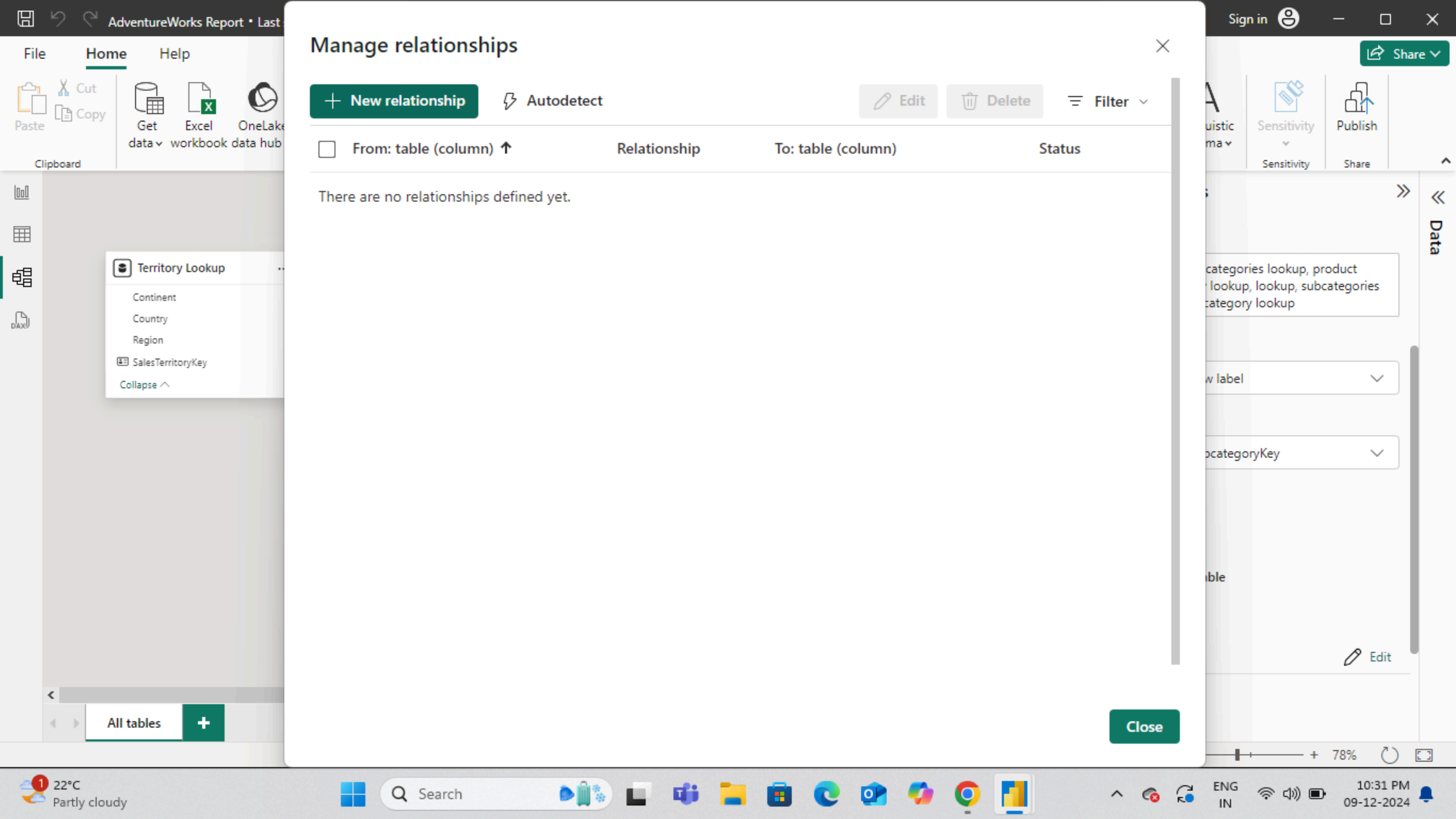

AdventureWorks Report • Last saved: Today at 6:27 PM
Search
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Clipboard
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
Manage relationships
Relationships
New measure
New column
New table
Calculation group
Calculations
Manage roles
View as
Security
Q&A setup
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Product Subcategories Lookup
ProductCategoryKey
ProductSubcategoryKey
SubcategoryName
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
Collapse
All tables
Properties
Synonyms
product subcategories lookup, product subcategory lookup, lookup, subcategories lookup, subcategory lookup
Row label
Select a row label
Key column
ProductSubcategoryKey
Is hidden
No
Is featured table
No
Edit
Data
78%
24°C
Partly cloudy
Search
ENG
IN
10:06 PM
09-12-2024

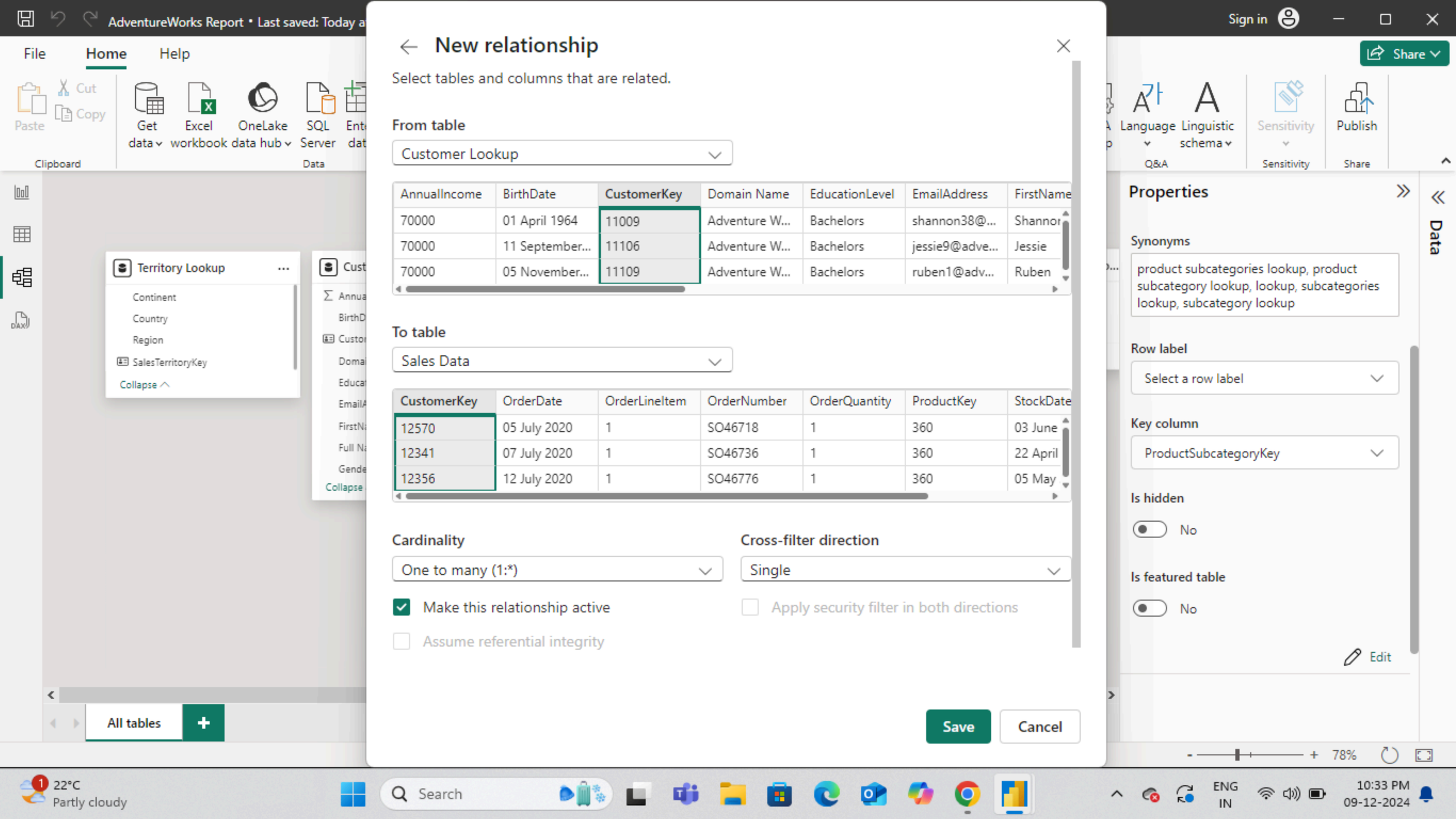
6. CREATING TABLE RELATIONSHIPS:

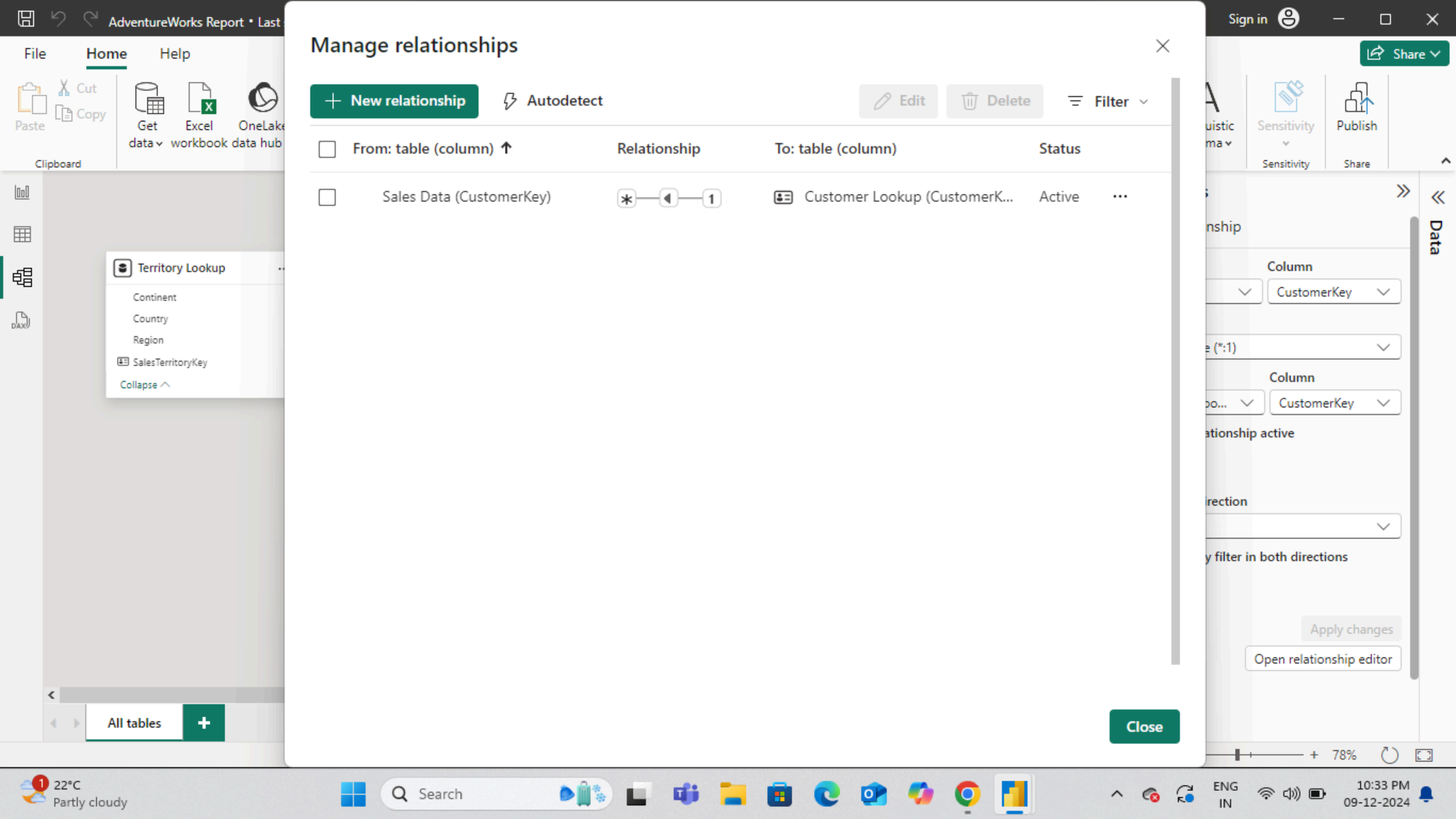
Creating table relationships involves linking tables in a database or Power BI model to enable meaningful data analysis. These relationships define how data in one table is connected to data in another, ensuring that the model is well-structured and easy to query.

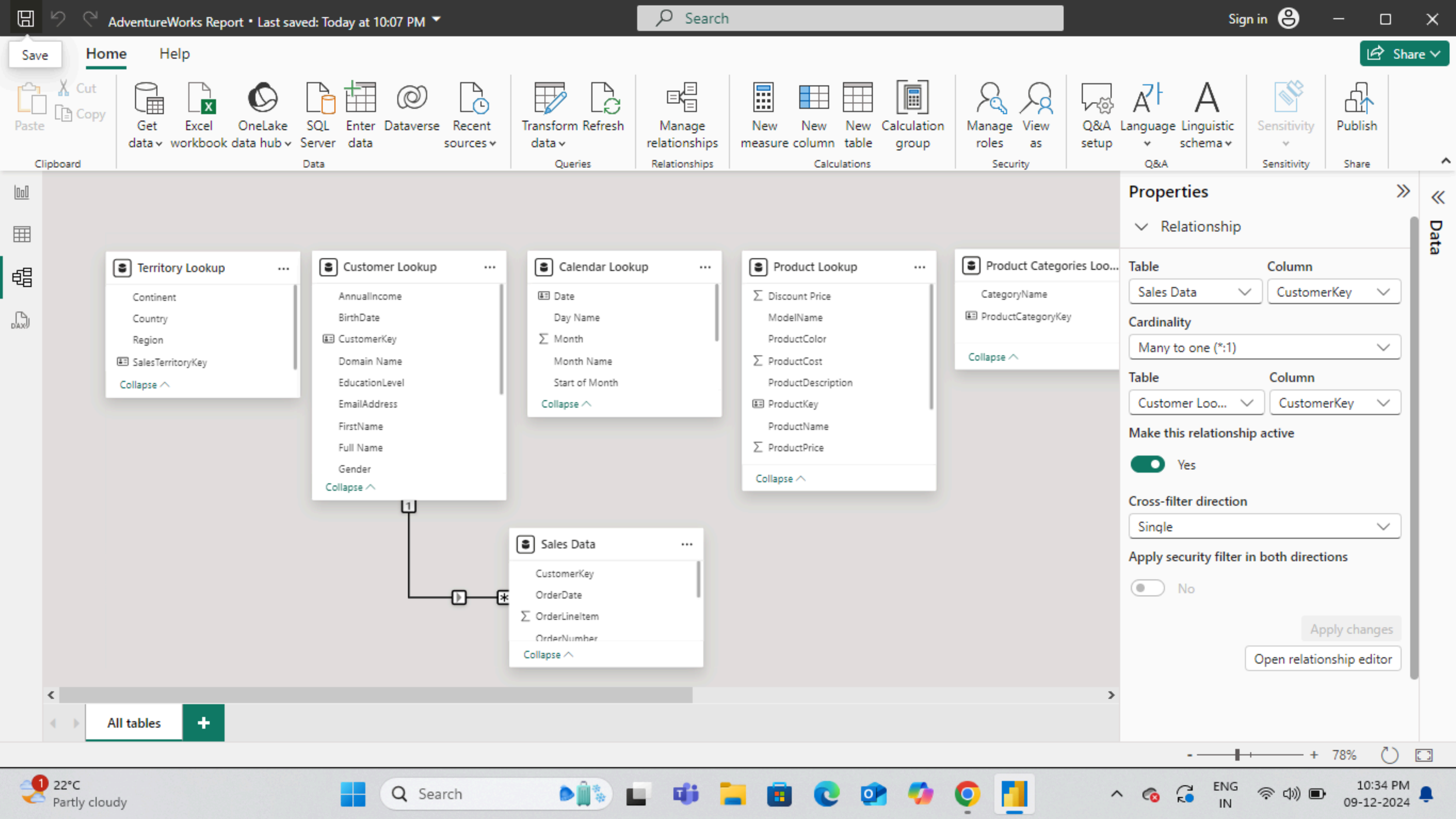
Establish Relationships:

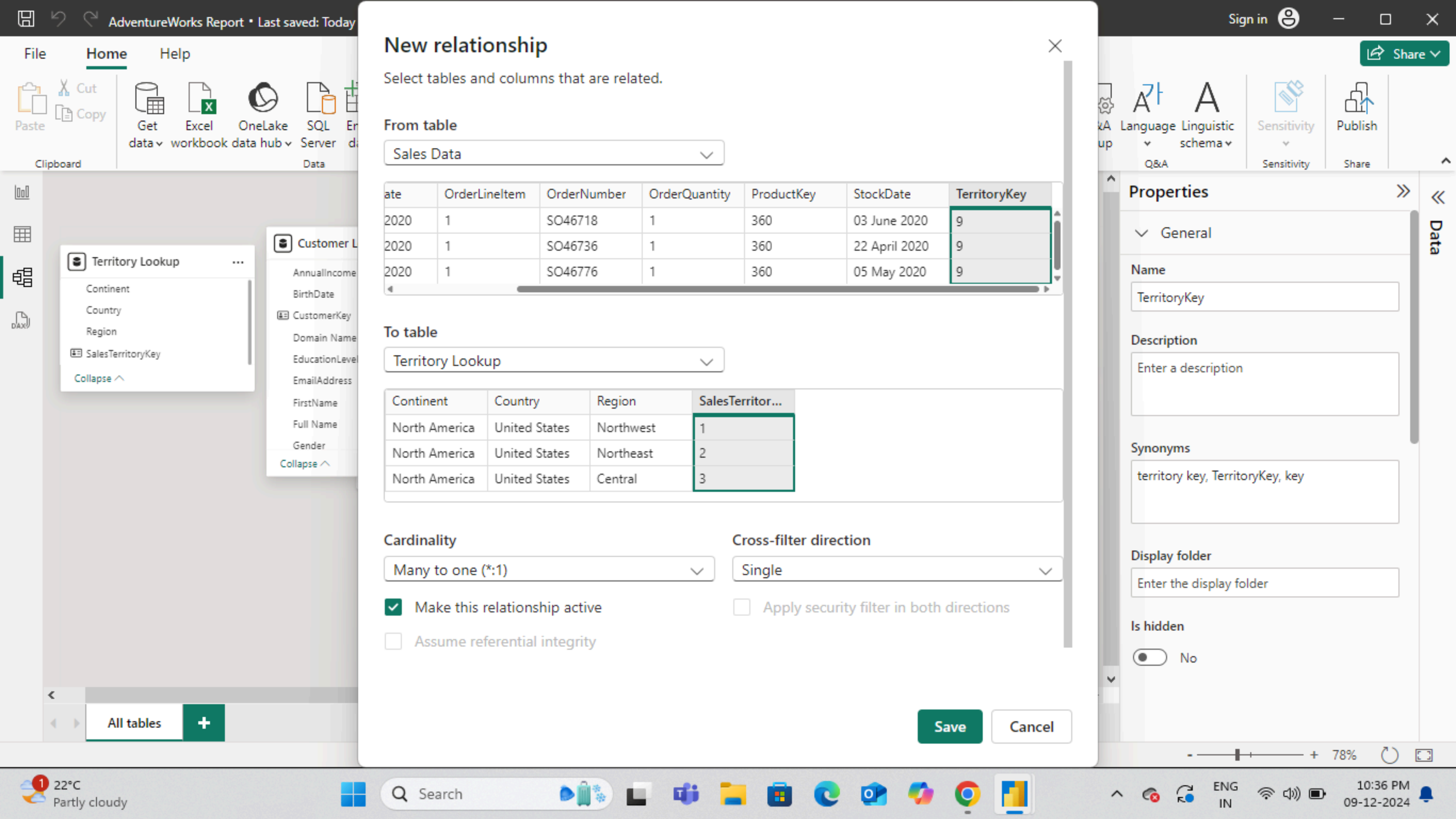
- **One-to-Many (1:M):** One record in the primary table matches multiple records in the other (eample: one customer → many orders).
- **Many-to-Many (M:M):** Multiple records in both tables relate to each other (example: many products ↔ many orders).
- **One-to-One (1:1):** One record in one table matches one record in the other (example: one employee → one profile)

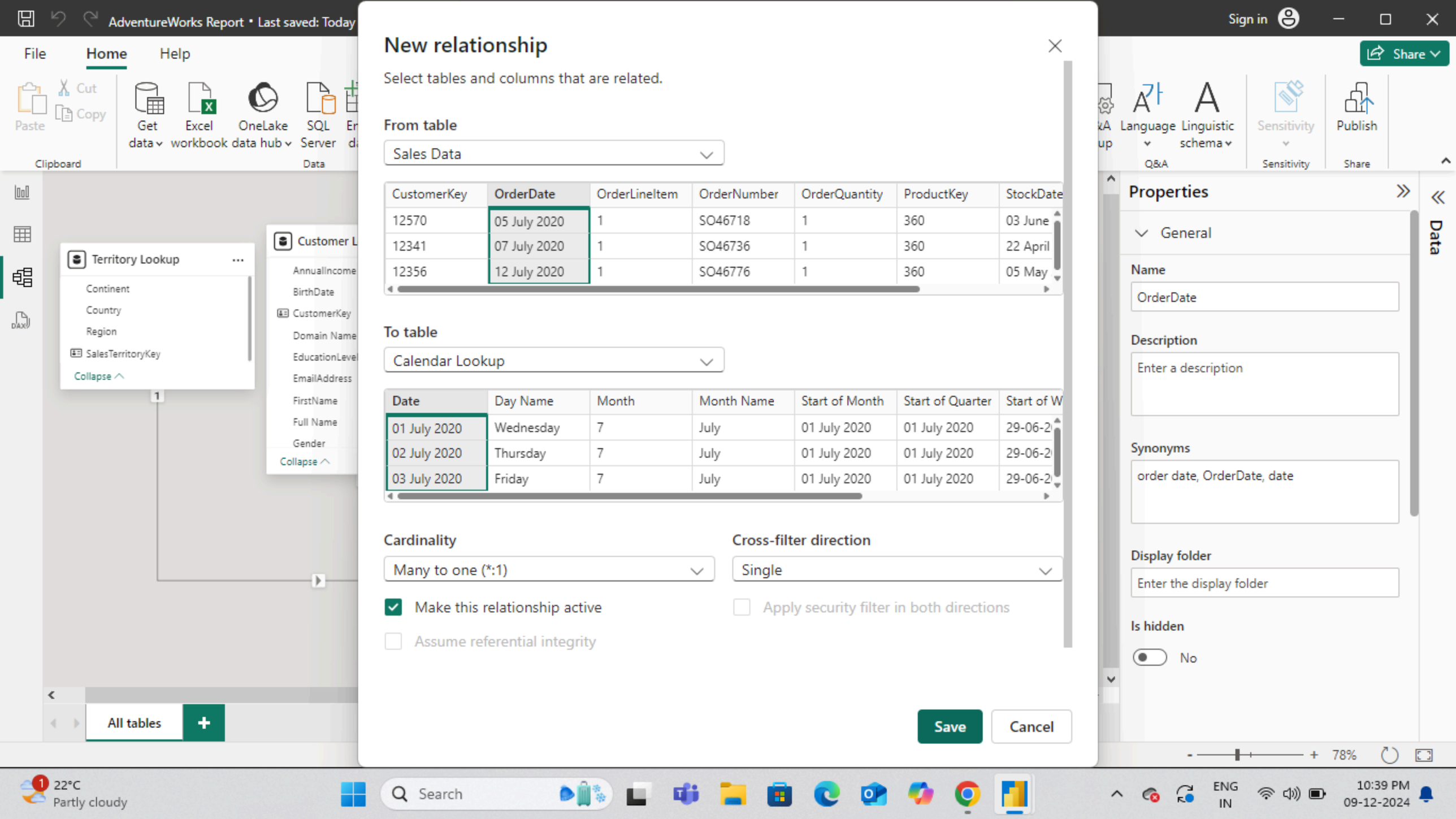

AdventureWorks Report • Last
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
Clipboard
Sensitivity
Publish
Share
Manage relationships
New relationship
Autodetect
Edit
Delete
Filter
From: table (column)
Relationship
To: table (column)
Status
There are no relationships defined yet.
Close
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
All tables
Data
Edit
78%
22°C
Partly cloudy
Search
ENG
IN
10:31 PM
09-12-2024

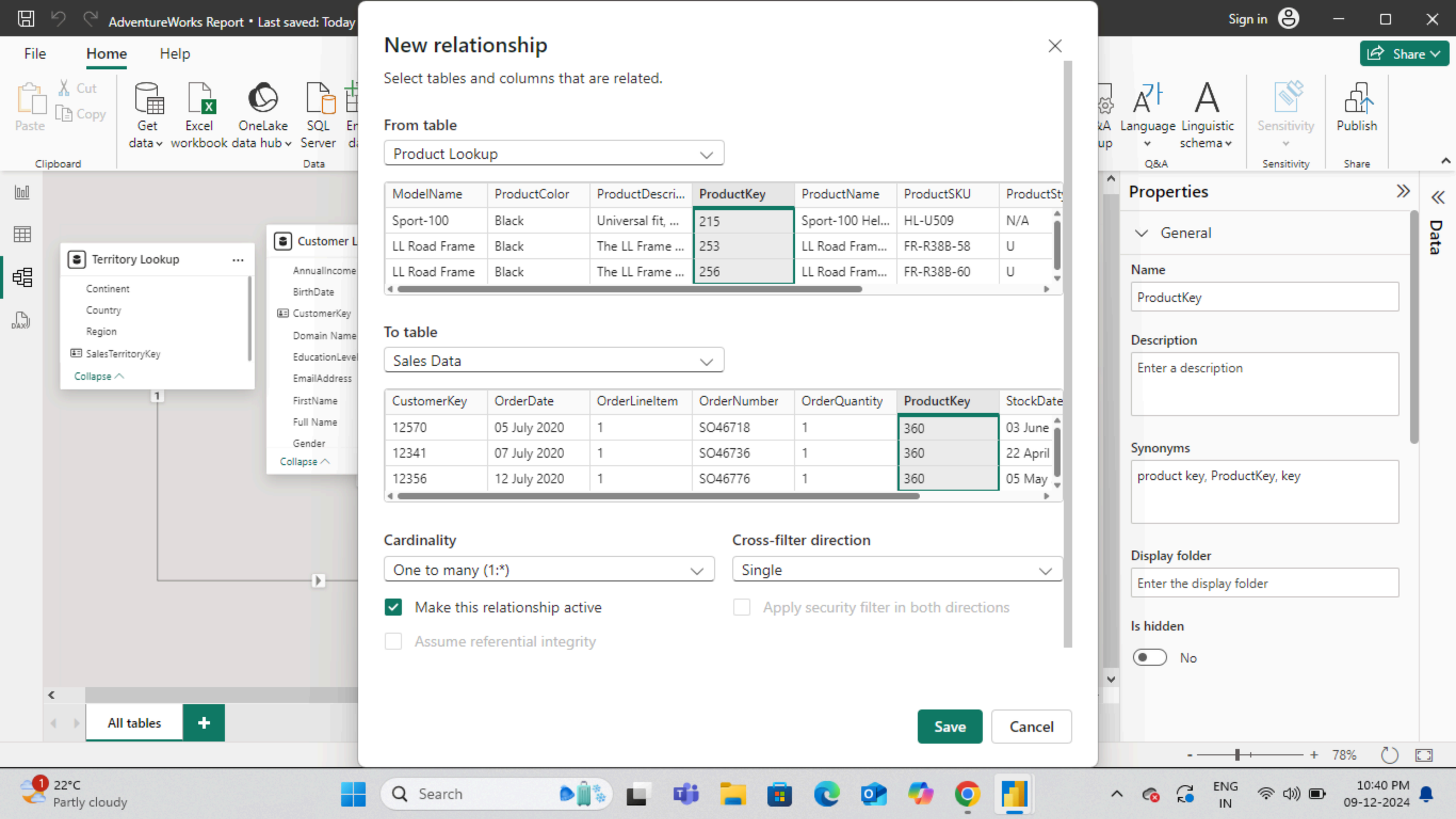

AdventureWorks Report • Last saved: Today a
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Clipboard
Data
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
All tables
New relationship
Select tables and columns that are related.
From table
Customer Lookup
AnnualIncome | BirthDate | CustomerKey | Domain Name | EducationLevel | EmailAddress | FirstName
70000 | 01 April 1964 | 11009 | Adventure W... | Bachelors | shannon38@... | Shannon
70000 | 11 September... | 11106 | Adventure W... | Bachelors | jessie9@adve... | Jessie
70000 | 05 November... | 11109 | Adventure W... | Bachelors | ruben1@adv... | Ruben
To 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
Cardinality
One to many (1:*)
Cross-filter direction
Single
Make this relationship active
Apply security filter in both directions
Assume referential integrity
Save
Cancel
Properties
Synonyms
product subcategories lookup, product subcategory lookup, lookup, subcategories lookup, subcategory lookup
Row label
Select a row label
Key column
ProductSubcategoryKey
Is hidden
No
Is featured table
No
Edit
Data
78%
22°C
Partly cloudy
Search
ENG
IN
10:33 PM
09-12-2024

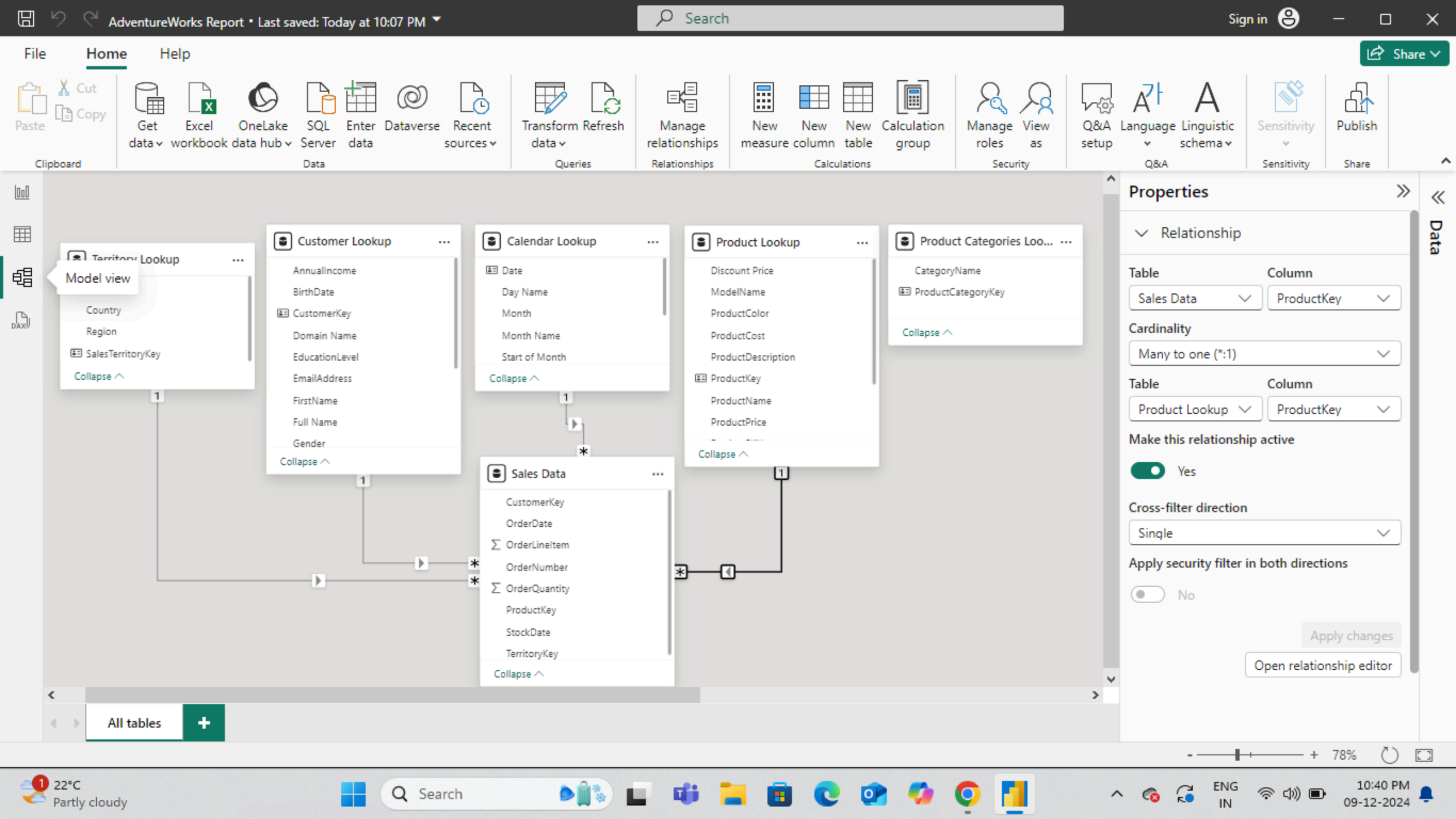

AdventureWorks Report • Last
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
Clipboard
Sensitivity
Publish
Share
Manage relationships
New relationship
Autodetect
Edit
Delete
Filter
From: table (column)
Relationship
To: table (column)
Status
Sales Data (CustomerKey)
Customer Lookup (CustomerK...
Active
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Column
CustomerKey
Column
CustomerKey
ationship active
irection
y filter in both directions
Apply changes
Open relationship editor
Data
All tables
Close
78%
22°C
Partly cloudy
Search
ENG
IN
10:33 PM
09-12-2024


AdventureWorks Report • Last saved: Today at 10:07 PM
Search
Sign in
Save
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Transform data
Refresh
Manage relationships
New measure
New column
New table
Calculation group
Manage roles
View as
Q&A setup
Language
Linguistic schema
Sensitivity
Publish
Clipboard
Data
Queries
Relationships
Calculations
Security
Q&A
Sensitivity
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
Collapse
Properties
Relationship
Table
Column
Sales Data
CustomerKey
Cardinality
Many to one (*:1)
Table
Column
Customer Loo...
CustomerKey
Make this relationship active
Yes
Cross-filter direction
Single
Apply security filter in both directions
No
Apply changes
Open relationship editor
Data
All tables
78%
22°C
Partly cloudy
Search
ENG
IN
10:34 PM
09-12-2024


AdventureWorks Report • Last saved: Today
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Clipboard
Data
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer L
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
All tables
New relationship
Select tables and columns that are related.
From table
Sales Data
ate | OrderLineItem | OrderNumber | OrderQuantity | ProductKey | StockDate | TerritoryKey
2020 | 1 | SO46718 | 1 | 360 | 03 June 2020 | 9
2020 | 1 | SO46736 | 1 | 360 | 22 April 2020 | 9
2020 | 1 | SO46776 | 1 | 360 | 05 May 2020 | 9
To table
Territory Lookup
Continent | Country | Region | SalesTerritor...
North America | United States | Northwest | 1
North America | United States | Northeast | 2
North America | United States | Central | 3
Cardinality
Many to one (*:1)
Cross-filter direction
Single
Make this relationship active
Apply security filter in both directions
Assume referential integrity
Save
Cancel
Properties
General
Name
TerritoryKey
Description
Enter a description
Synonyms
territory key, TerritoryKey, key
Display folder
Enter the display folder
Is hidden
No
Data
78%
22°C
Partly cloudy
Search
ENG
IN
10:36 PM
09-12-2024

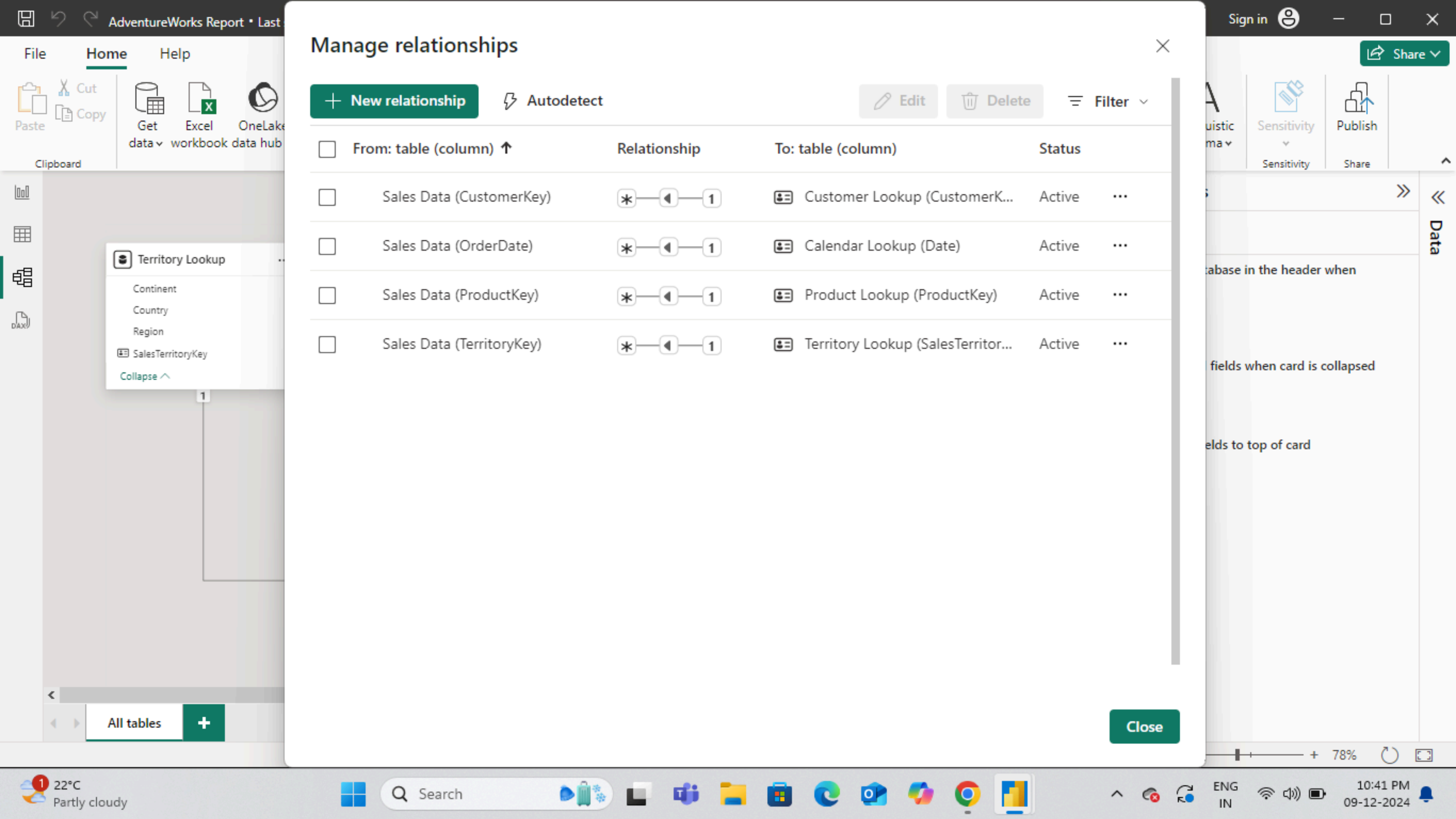

AdventureWorks Report • Last saved: Today
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Clipboard
Data
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
New relationship
Select tables and columns that are related.
From table
Sales Data
CustomerKey | 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 | Day Name | Month | Month Name | Start of Month | Start of Quarter | Start of W
01 July 2020 | Wednesday | 7 | July | 01 July 2020 | 01 July 2020 | 29-06-2
02 July 2020 | Thursday | 7 | July | 01 July 2020 | 01 July 2020 | 29-06-2
03 July 2020 | Friday | 7 | July | 01 July 2020 | 01 July 2020 | 29-06-2
Cardinality
Many to one (*:1)
Cross-filter direction
Single
Make this relationship active
Apply security filter in both directions
Assume referential integrity
Save
Cancel
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer L
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
All tables
Properties
General
Name
OrderDate
Description
Enter a description
Synonyms
order date, OrderDate, date
Display folder
Enter the display folder
Is hidden
No
Data
78%
22°C
Partly cloudy
Search
ENG
IN
10:39 PM
09-12-2024

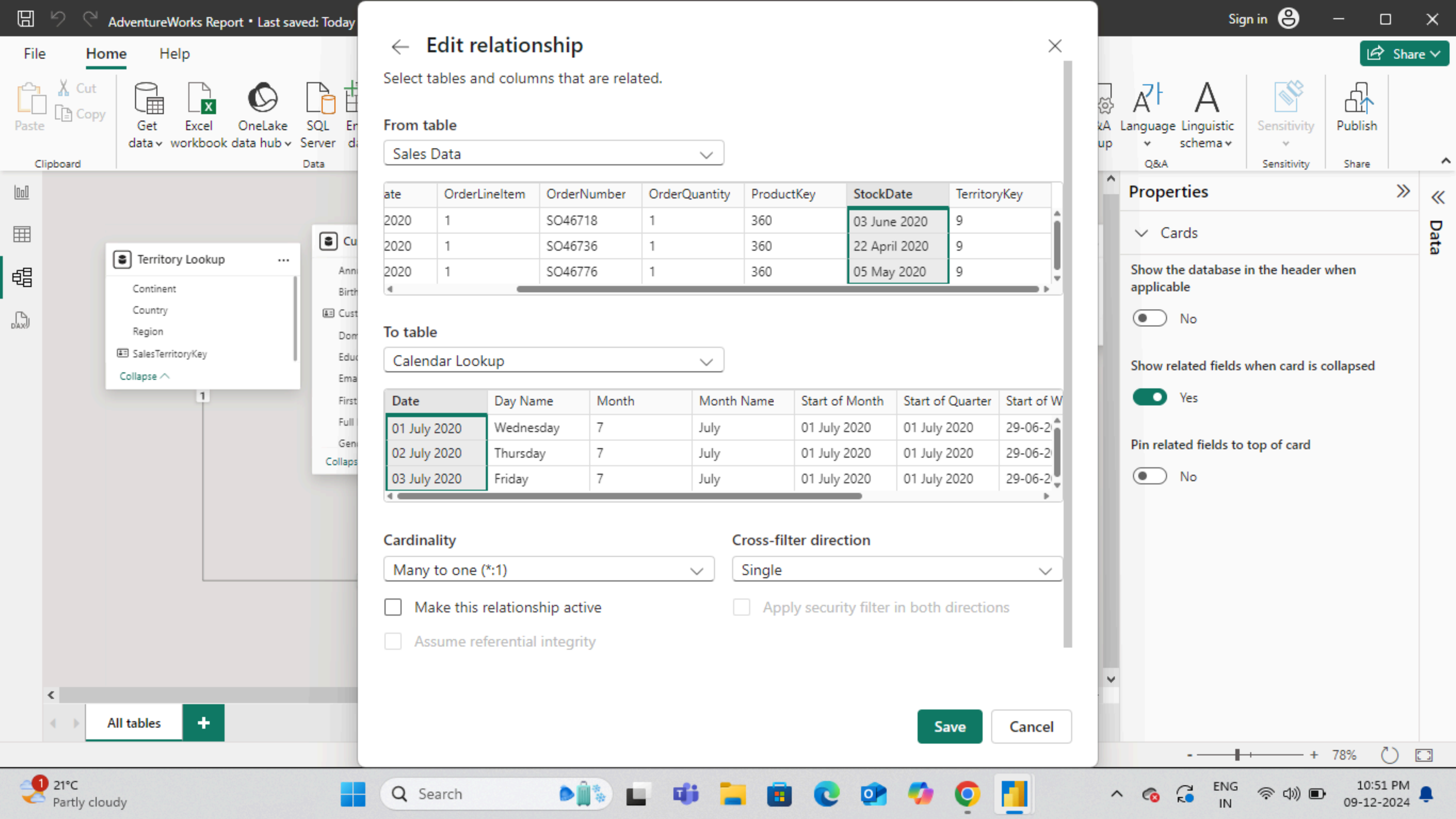

AdventureWorks Report • Last saved: Today
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Clipboard
Data
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer L
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
All tables
New relationship
Select tables and columns that are related.
From table
Product Lookup
ModelName | ProductColor | ProductDescri... | ProductKey | ProductName | ProductSKU | ProductSt
Sport-100 | Black | Universal fit, ... | 215 | Sport-100 Hel... | HL-U509 | N/A
LL Road Frame | Black | The LL Frame ... | 253 | LL Road Fram... | FR-R38B-58 | U
LL Road Frame | Black | The LL Frame ... | 256 | LL Road Fram... | FR-R38B-60 | U
To 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
Cardinality
One to many (1:*)
Cross-filter direction
Single
Make this relationship active
Assume referential integrity
Apply security filter in both directions
Save
Cancel
Properties
General
Name
ProductKey
Description
Enter a description
Synonyms
product key, ProductKey, key
Display folder
Enter the display folder
Is hidden
No
Data
78%
22°C
Partly cloudy
Search
ENG
IN
10:40 PM
09-12-2024


AdventureWorks Report • Last saved: Today at 10:07 PM
Search
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Transform data
Refresh
Manage relationships
New measure
New column
New table
Calculation group
Manage roles
View as
Q&A setup
Language
Linguistic schema
Sensitivity
Publish
Clipboard
Data
Queries
Relationships
Calculations
Security
Q&A
Sensitivity
Share
Model view
Territory Lookup
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
OrderQuantity
ProductKey
StockDate
TerritoryKey
Collapse
1
*
Properties
Relationship
Table
Column
Sales Data
ProductKey
Cardinality
Many to one (*:1)
Table
Column
Product Lookup
ProductKey
Make this relationship active
Yes
Cross-filter direction
Single
Apply security filter in both directions
No
Apply changes
Open relationship editor
Data
All tables
78%
22°C
Partly cloudy
Search
ENG
IN
10:40 PM
09-12-2024

7. MANAGING AND EDITING RELATIONSHIPS:

- Review the relationships between tables to ensure they are correct.
- Adjust keys or relationships if they are not working as expected.
- Check relationship types (example: one-to-Many, Many-to-Many) to ensure accurate data connections.
- Update table connections to maintain accurate and meaningful analysis.
- Test and validate the relationships after editing to confirm the data is linked properly.


AdventureWorks Report • Last
Sign in
File
Home
Help
Share
Paste
Cut
Copy
Get data
Excel workbook
OneLake data hub
Clipboard
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
All tables
Data
Manage relationships
New relationship
Autodetect
Edit
Delete
Filter
From: table (column)
Relationship
To: table (column)
Status
Sales Data (CustomerKey)
Customer Lookup (CustomerK...
Active
Sales Data (OrderDate)
Calendar Lookup (Date)
Active
Sales Data (ProductKey)
Product Lookup (ProductKey)
Active
Sales Data (TerritoryKey)
Territory Lookup (SalesTerritor...
Active
Close
78%
22°C
Partly cloudy
Search
ENG
IN
10:41 PM
09-12-2024


AdventureWorks Report • Last saved: Today
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Clipboard
Data
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Edit relationship
Select tables and columns that are related.
From table
Sales Data
ate
OrderLineItem
OrderNumber
OrderQuantity
ProductKey
StockDate
TerritoryKey
2020 1 SO46718 1 360 03 June 2020 9
2020 1 SO46736 1 360 22 April 2020 9
2020 1 SO46776 1 360 05 May 2020 9
To table
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Start of Quarter
Start of W
01 July 2020 Wednesday 7 July 01 July 2020 01 July 2020 29-06-2
02 July 2020 Thursday 7 July 01 July 2020 01 July 2020 29-06-2
03 July 2020 Friday 7 July 01 July 2020 01 July 2020 29-06-2
Cardinality
Many to one (*:1)
Cross-filter direction
Single
Make this relationship active
Apply security filter in both directions
Assume referential integrity
Save
Cancel
Properties
Cards
Show the database in the header when applicable
No
Show related fields when card is collapsed
Yes
Pin related fields to top of card
No
Data
All tables
78%
21°C
Partly cloudy
Search
ENG
IN
10:51 PM
09-12-2024

AdventureWorks Report • Last saved: Today at 10:07 PM

Search

Sign in

File Home Help

Share

Cut Copy Paste

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Transform data Refresh

Manage relationships

New measure New column New table Calculation group

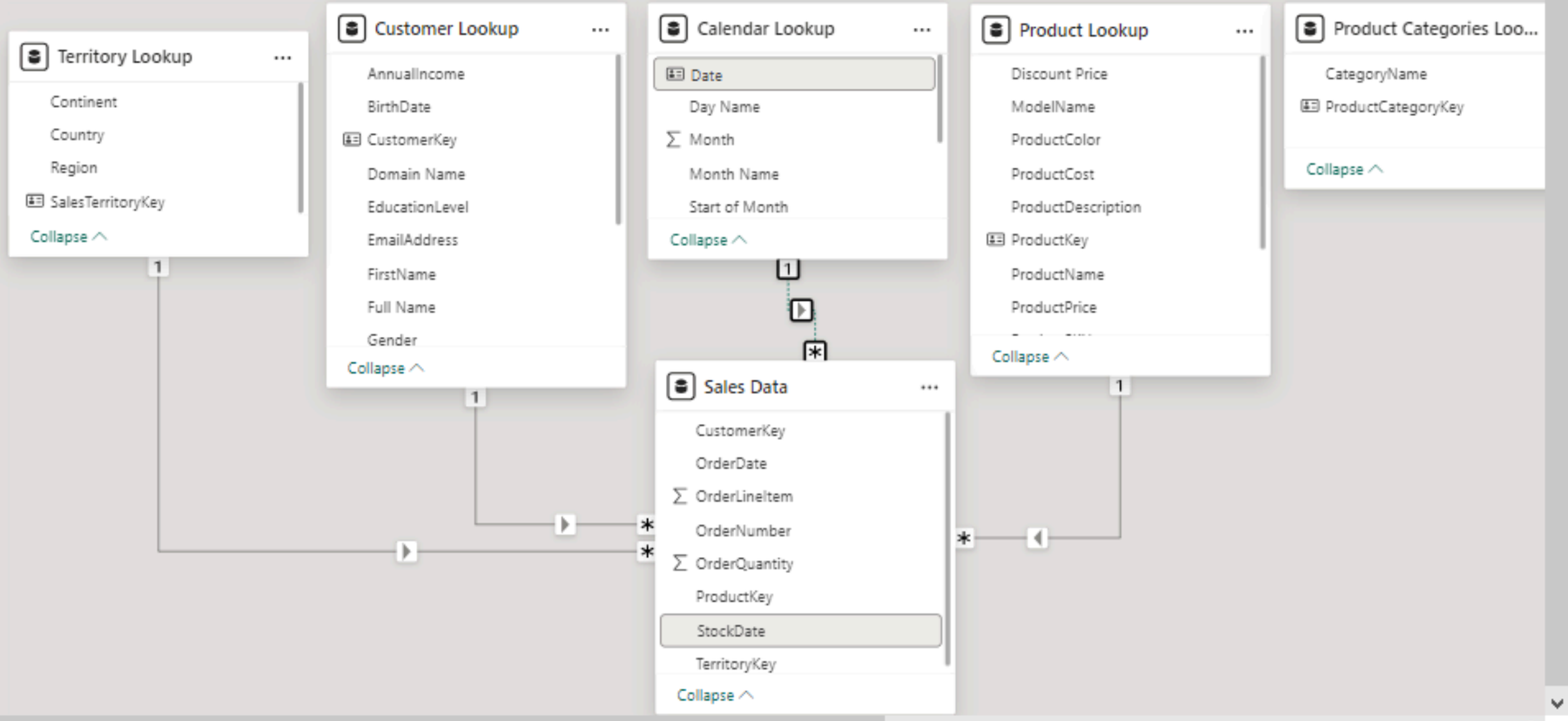
Manage roles View as

Q&A setup Language Linguistic schema

Sensitivity

Publish

Clipboard Data Queries Relationships Calculations Security Q&A Sensitivity Share



All tables +

Properties

Relationship

Table: Sales Data — Column: StockDate

Cardinality: Many to one (*:1)

Table: Calendar Look... — Column: Date

Make this relationship active: No

Cross-filter direction: Single

Apply security filter in both directions: No

Apply changes

Open relationship editor

Data

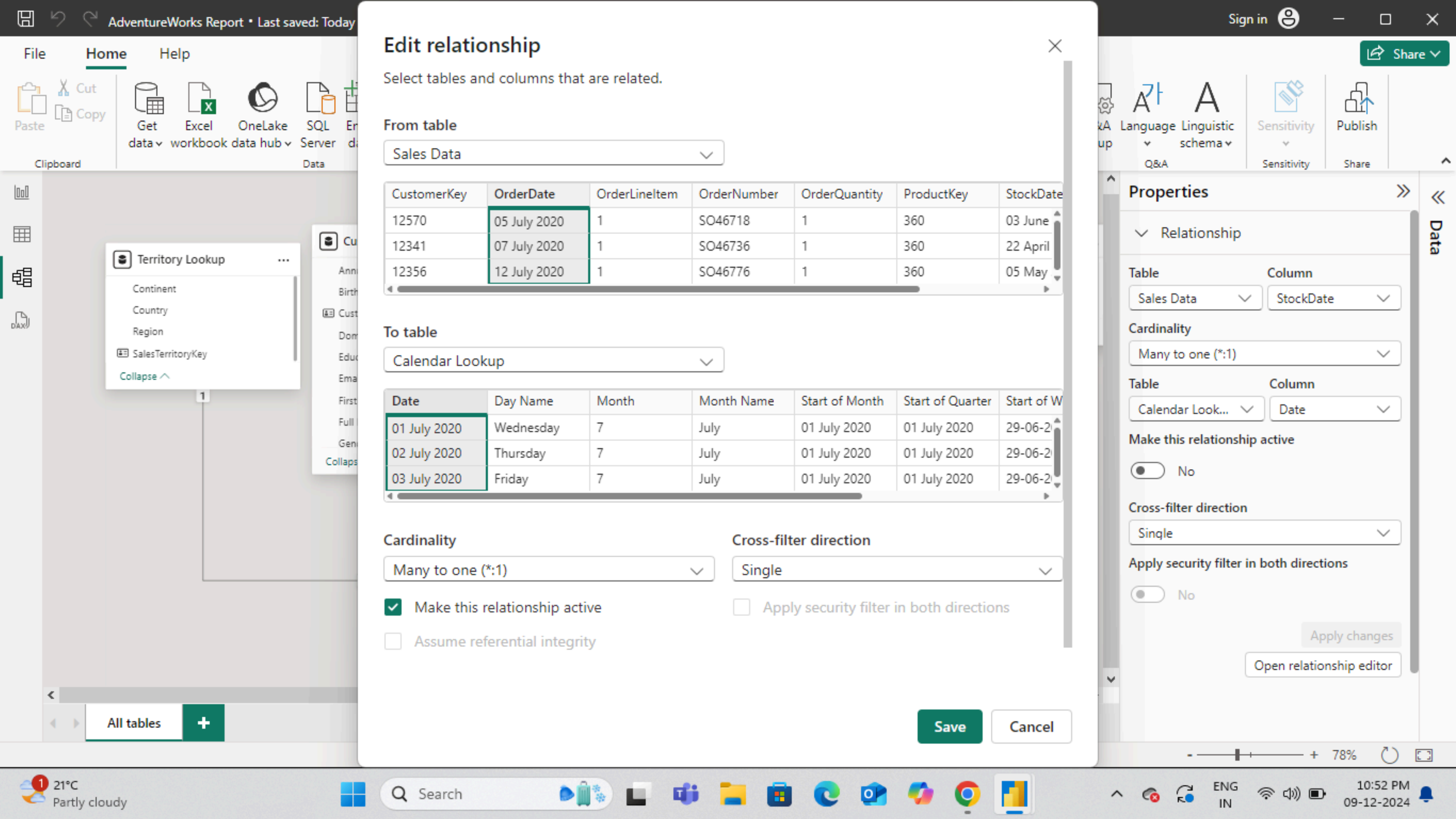
78%

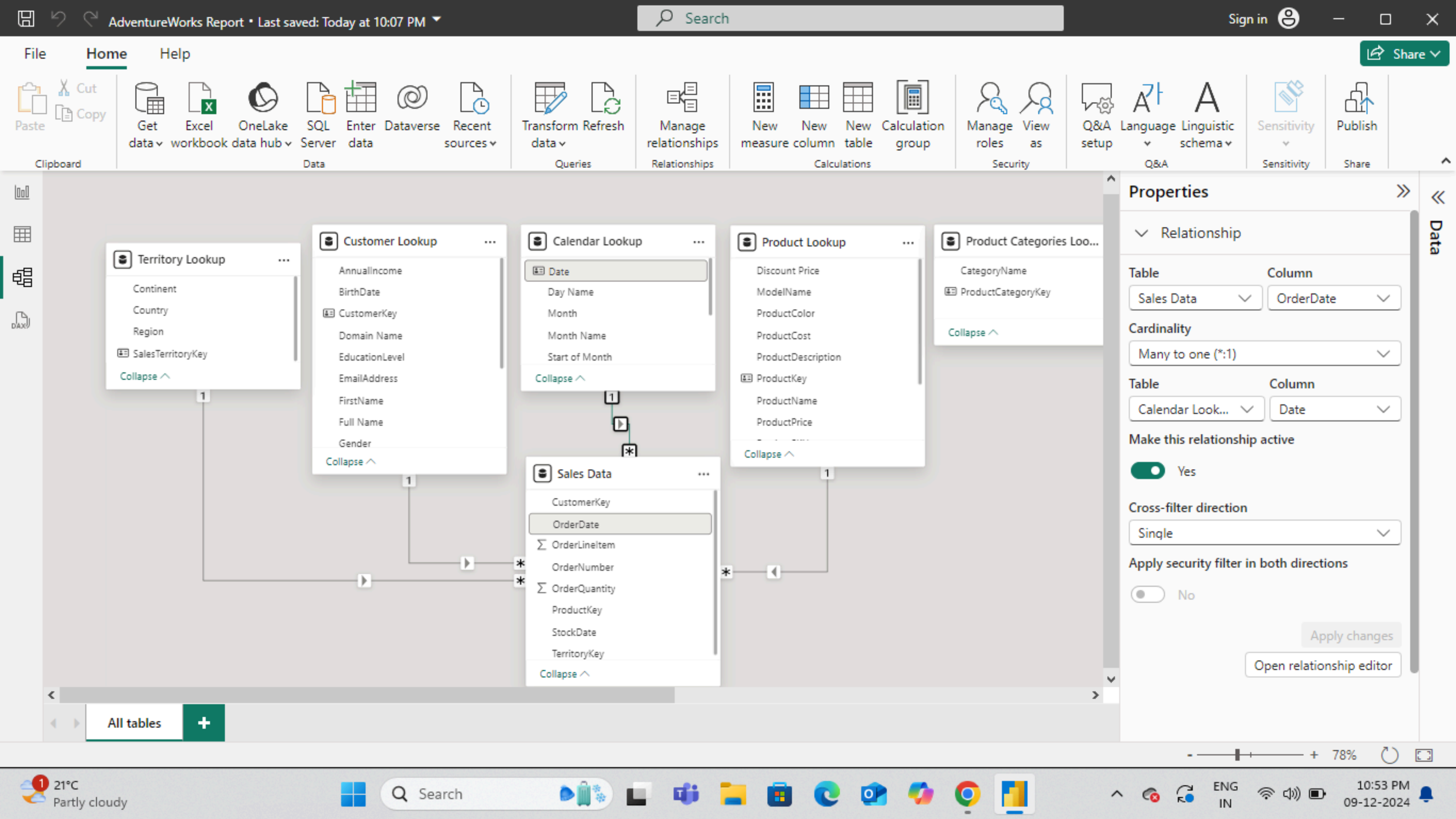
21°C Partly cloudy

Search

ENG IN

10:52 PM 09-12-2024


AdventureWorks Report • Last saved: Today
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Get data
Excel workbook
OneLake data hub
SQL Server
Clipboard
Data
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
1
All tables
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
Day Name
Month
Month Name
Start of Month
Start of Quarter
Start of W
01 July 2020
Wednesday
7
July
01 July 2020
01 July 2020
02 July 2020
Thursday
7
July
01 July 2020
01 July 2020
03 July 2020
Friday
7
July
01 July 2020
01 July 2020
Cardinality
Many to one (*:1)
Cross-filter direction
Single
Make this relationship active
Apply security filter in both directions
Assume referential integrity
Save
Cancel
Properties
Relationship
Table
Column
Sales Data
StockDate
Cardinality
Many to one (*:1)
Table
Column
Calendar Look...
Date
Make this relationship active
No
Cross-filter direction
Single
Apply security filter in both directions
No
Apply changes
Open relationship editor
Data
78%
21°C
Partly cloudy
Search
ENG
IN
10:52 PM
09-12-2024


AdventureWorks Report • Last saved: Today at 10:07 PM
Search
Sign in
File
Home
Help
Share
Cut
Copy
Paste
Clipboard
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
Manage relationships
Relationships
New measure
New column
New table
Calculation group
Calculations
Manage roles
View as
Security
Q&A setup
Language
Linguistic schema
Q&A
Sensitivity
Publish
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Day Name
Month
Month Name
Start of Month
Collapse
Product Lookup
Discount Price
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
Collapse
Product Categories Loo...
CategoryName
ProductCategoryKey
Collapse
Sales Data
CustomerKey
OrderDate
OrderLineItem
OrderNumber
OrderQuantity
ProductKey
StockDate
TerritoryKey
Collapse
1
*
Properties
Relationship
Table
Column
Sales Data
OrderDate
Cardinality
Many to one (*:1)
Table
Column
Calendar Look...
Date
Make this relationship active
Yes
Cross-filter direction
Single
Apply security filter in both directions
No
Apply changes
Open relationship editor
Data
All tables
78%
21°C
Partly cloudy
Search
ENG
IN
10:53 PM
09-12-2024

AdventureWorks Report • Last saved: Today at 10:07 PM

Search

Sign in

File Home Help

Share

Paste Cut Copy

Clipboard

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Data

Transform data Refresh

Queries

Manage relationships

Relationships

New measure New column New table Calculation group

Calculations

Manage roles View as

Security

Q&A setup Language Linguistic schema

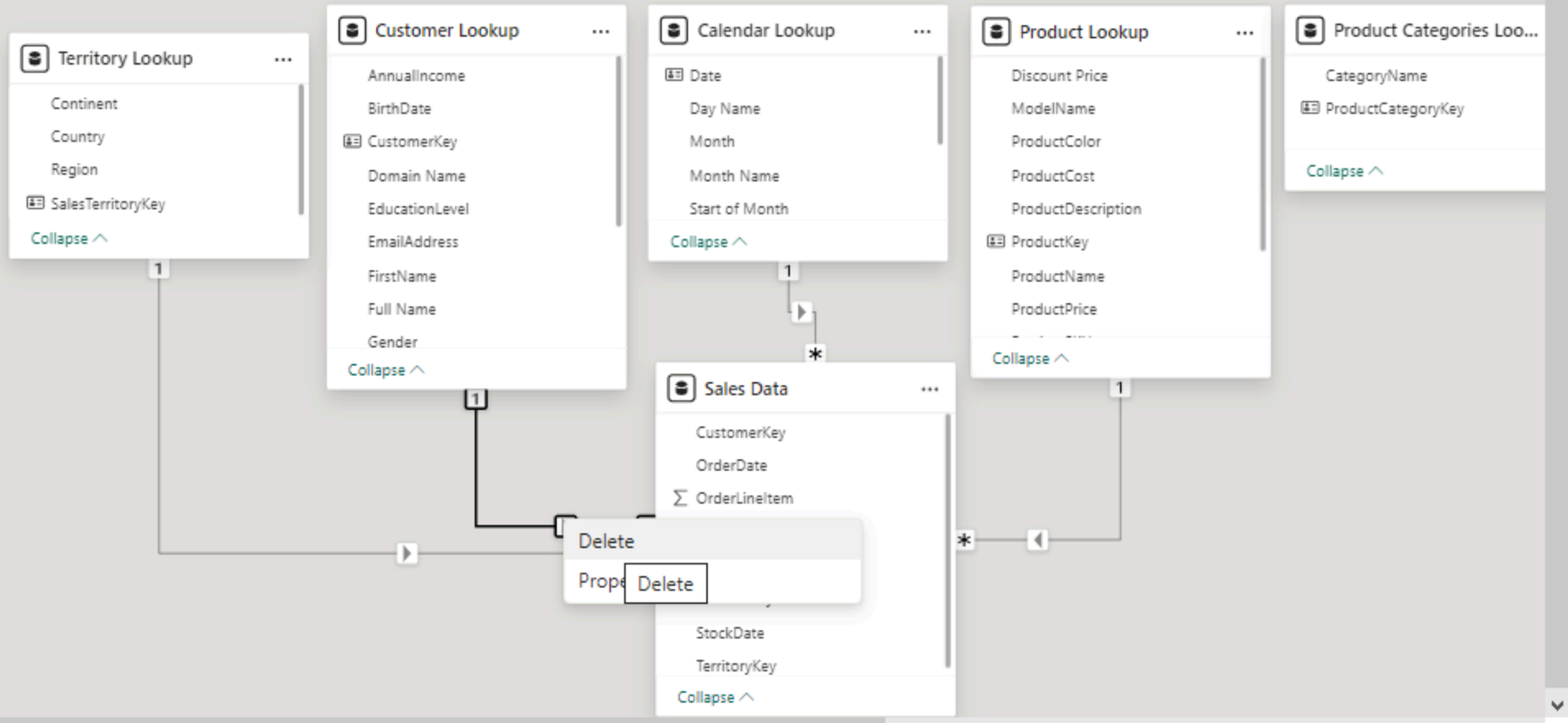
Q&A

Sensitivity

Sensitivity

Publish

Share



Properties

Relationship

Table Column

Sales Data CustomerKey

Cardinality

Many to one (*:1)

Table Column

Customer Loo... CustomerKey

Make this relationship active

Yes

Cross-filter direction

Single

Apply security filter in both directions

No

Apply changes

Open relationship editor

Data

All tables +

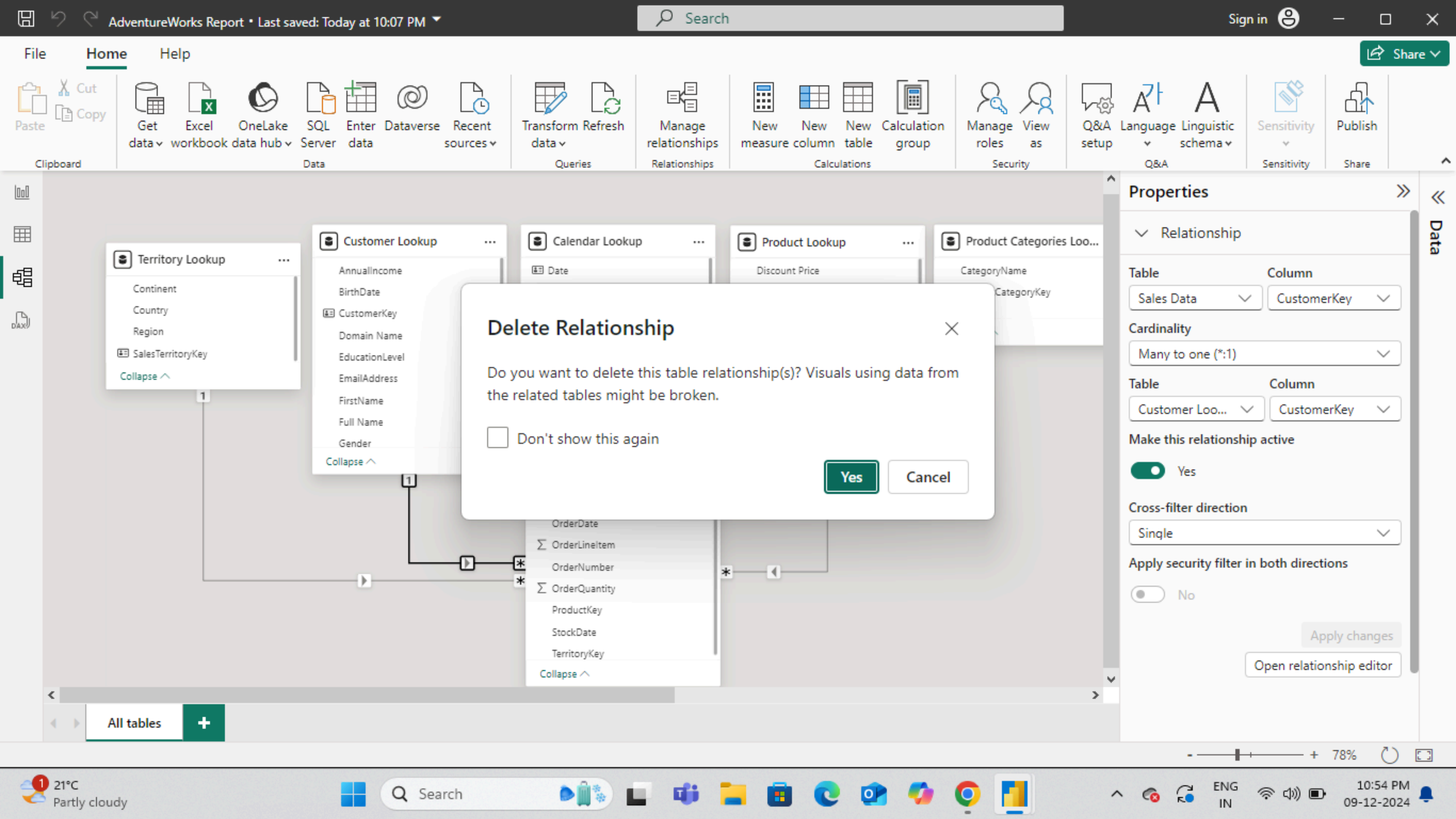
78%

21°C Partly cloudy

Search

ENG IN

10:53 PM 09-12-2024


AdventureWorks Report • Last saved: Today at 10:07 PM
Search
Sign in
File
Home
Help
Share
Paste
Cut
Copy
Get data
Excel workbook
OneLake data hub
SQL Server
Enter data
Dataverse
Recent sources
Transform data
Refresh
Manage relationships
New measure
New column
New table
Calculation group
Manage roles
View as
Q&A setup
Language
Linguistic schema
Sensitivity
Publish
Clipboard
Data
Queries
Relationships
Calculations
Security
Q&A
Sensitivity
Share
Territory Lookup
Continent
Country
Region
SalesTerritoryKey
Collapse
Customer Lookup
AnnualIncome
BirthDate
CustomerKey
Domain Name
EducationLevel
EmailAddress
FirstName
Full Name
Gender
Collapse
Calendar Lookup
Date
Product Lookup
Discount Price
Product Categories Loo...
CategoryName
CategoryKey
OrderDate
OrderLineItem
OrderNumber
OrderQuantity
ProductKey
StockDate
TerritoryKey
Collapse
Delete Relationship
Do you want to delete this table relationship(s)? Visuals using data from the related tables might be broken.
Don't show this again
Yes
Cancel
Properties
Relationship
Table
Column
Sales Data
CustomerKey
Cardinality
Many to one (*:1)
Table
Column
Customer Loo...
CustomerKey
Make this relationship active
Yes
Cross-filter direction
Single
Apply security filter in both directions
No
Apply changes
Open relationship editor
Data
All tables
78%
21°C
Partly cloudy
Search
ENG
IN
10:54 PM
09-12-2024

AdventureWorks Report • Last saved: Today at 10:07 PM

Search

Sign in

File Home Help

Share

Paste Cut Copy

Clipboard

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources

Data

Transform data Refresh

Queries

Manage relationships

Relationships

New measure New column New table Calculation group

Calculations

Manage roles View as

Security

Q&A setup Language Linguistic schema

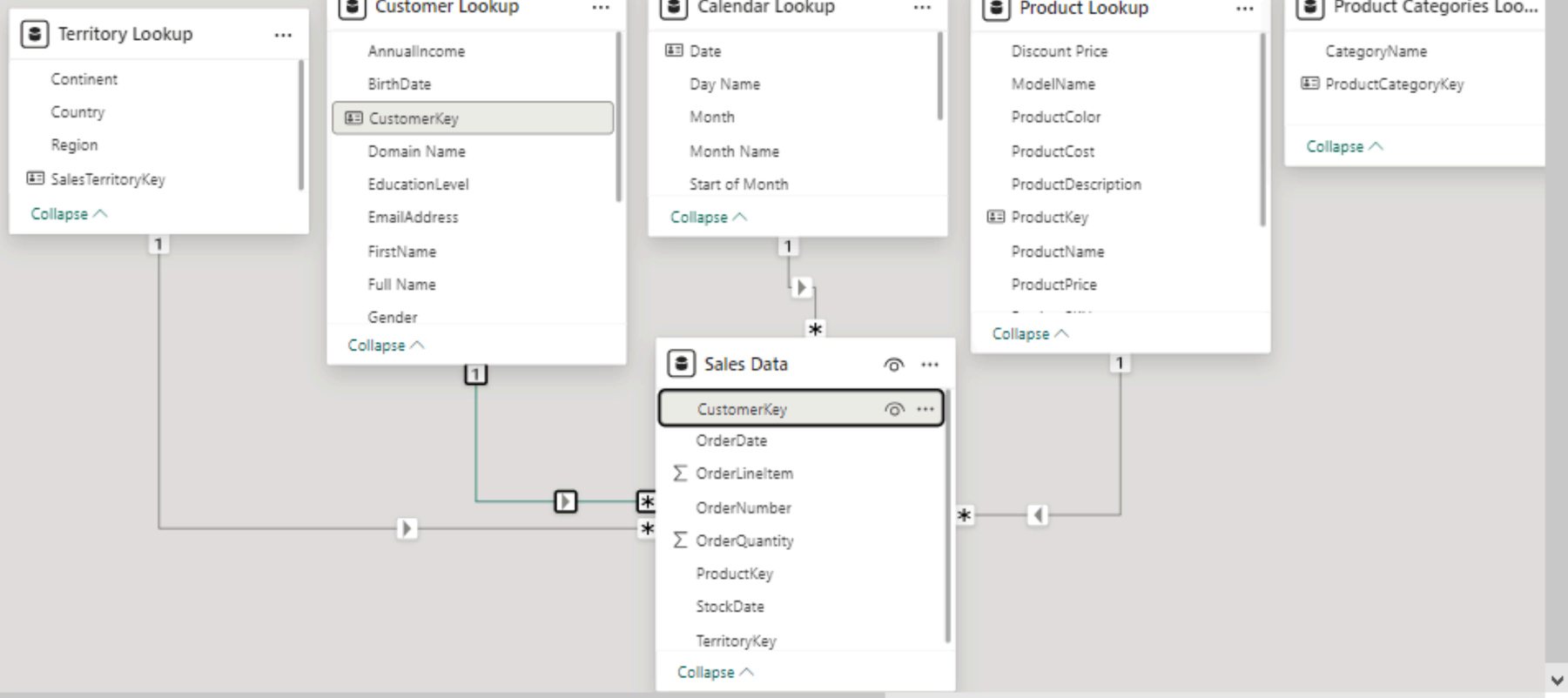
Q&A

Sensitivity

Sensitivity

Publish

Share



All tables +

Properties

Relationship

Table: Sales Data — Column: CustomerKey

Cardinality: Many to one (*:1)

Table: Customer Loo... — Column: CustomerKey

Make this relationship active: Yes

Cross-filter direction: Single

Apply security filter in both directions: No

Apply changes

Open relationship editor

Data

78%

21°C Partly cloudy

Search

ENG IN

10:54 PM 09-12-2024

THANK YOU!

@ BHUPAL MARUCHETTY