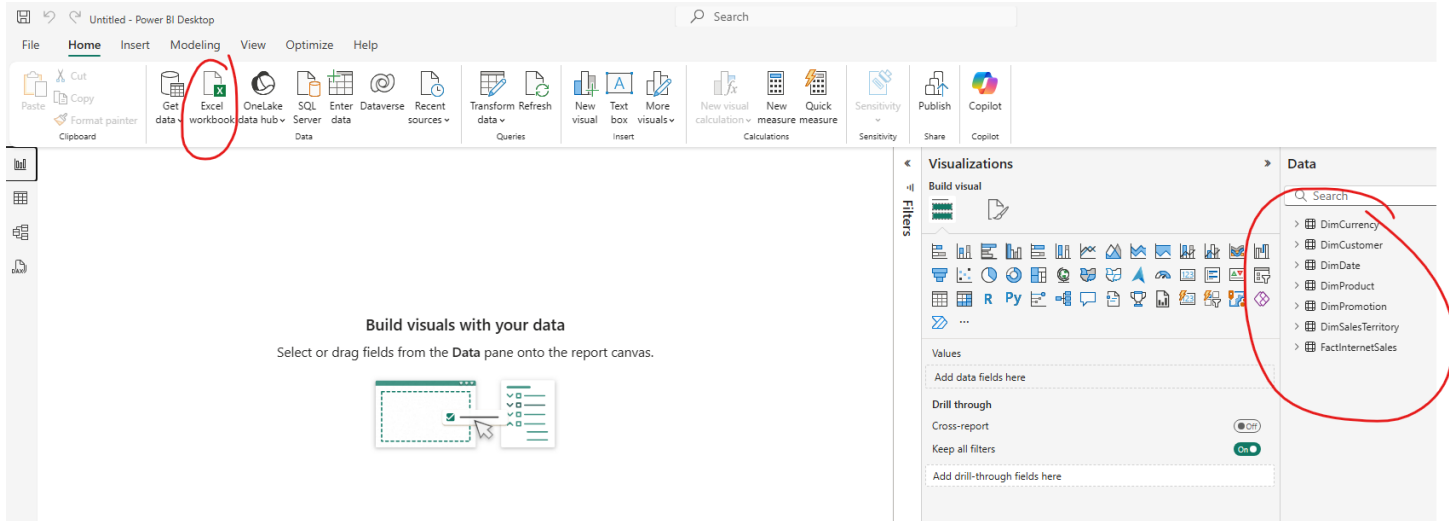
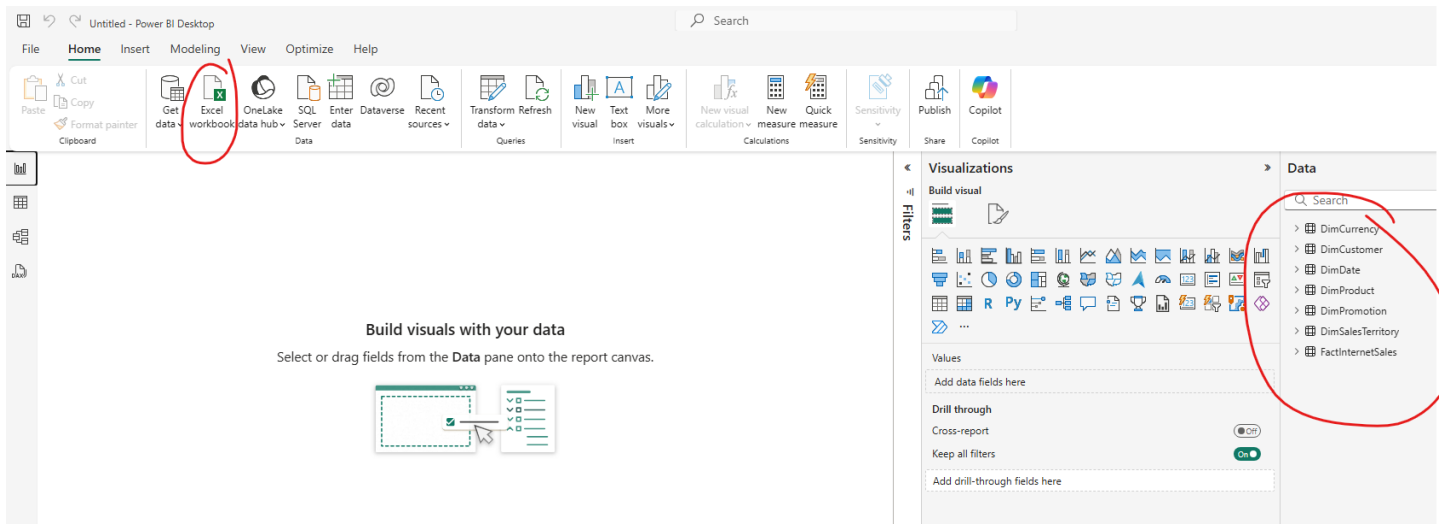


You have been asked to:

a) In Power BI Desktop, connect to AdventureWorks Sales Data.xlsx.



b) Import DimCurrency, DimCustomer, DimDate, DimProduct, DimPromotion, DimSalesTerritory, and FactInternetSales worksheets.



c) Create a new relationship between the FactInternetSales table's OrderDateKey column and the DateKey column in DimDate. Set the cardinality

as Many to One (*:1), the cross-filter direction as Single, and make this relationship Active.

New relationship

Select tables and columns that are related.

From table
FactInternetSales

OrderDateKey	ExtendedAm...	Freight	OrderDate	OrderDateKey	OrderQuantity	ProductKey
20050714	3578.27	89.4568	Saturday, July...	20050702	1	310
20050715	3578.27	89.4568	Sunday, July ...	20050703	1	313
20050715	3578.27	89.4568	Sunday, July ...	20050703	1	314

To table
DimDate

CalendarQuar...	CalendarSem...	CalendarYear	DateKey	DayNumberO...	DayNumberO...	DayNumb
3	2	2005	20050701	1	6	182
3	2	2005	20050702	2	7	183
3	2	2005	20050703	3	1	184

Cardinality
Many to one (*:1)

Cross-filter direction
Single

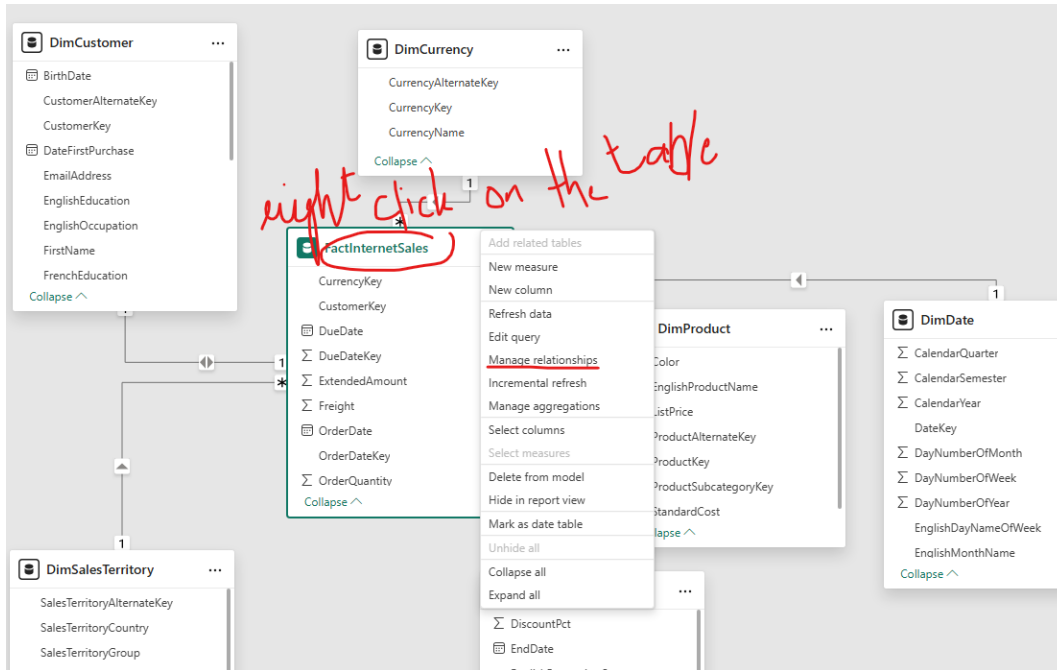
☒ Make this relationship active

☐ Assume referential integrity

☐ Apply security filter in both directions

Save **Cancel**

d) Create a relationship from FactInternetSales [DueDateKey] to DimDate [DateKey].

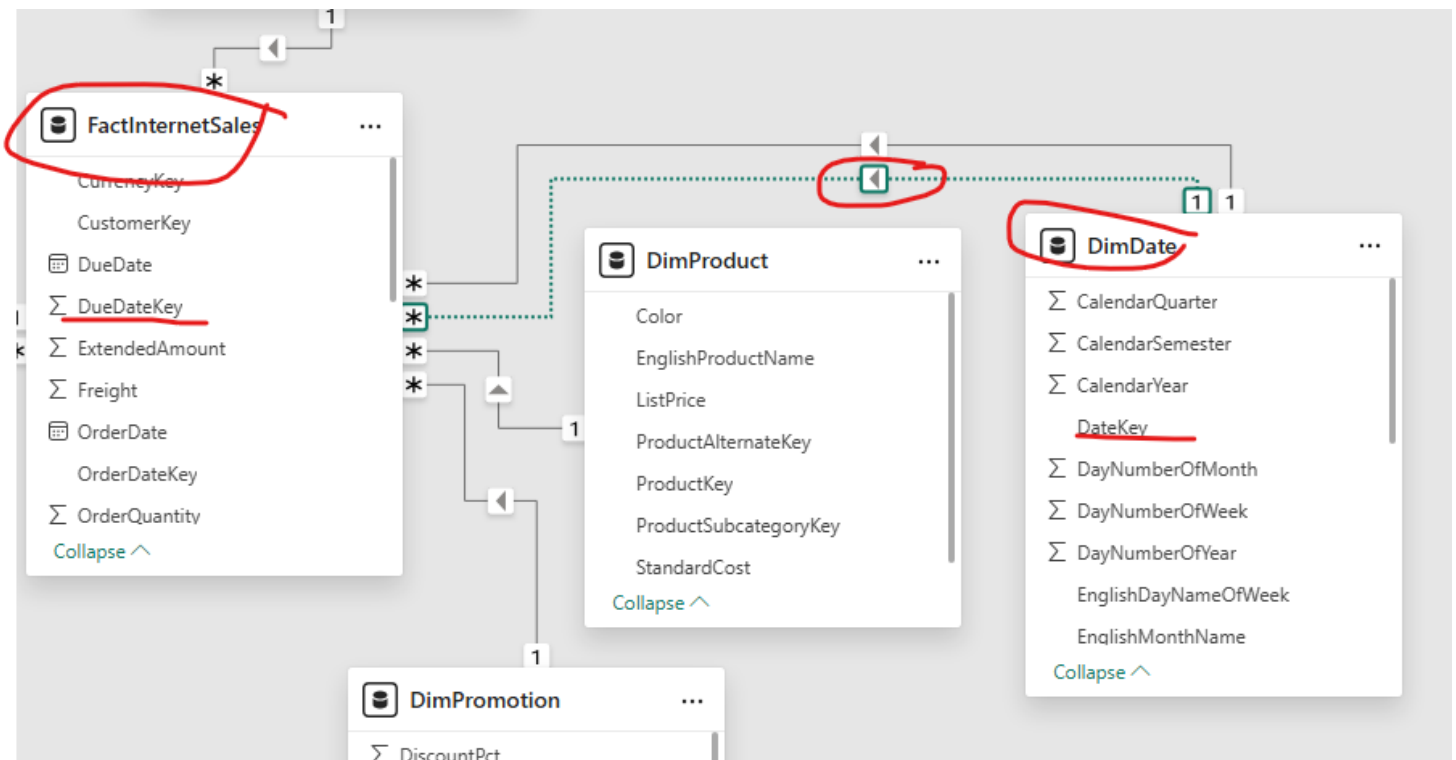


Manage relationships

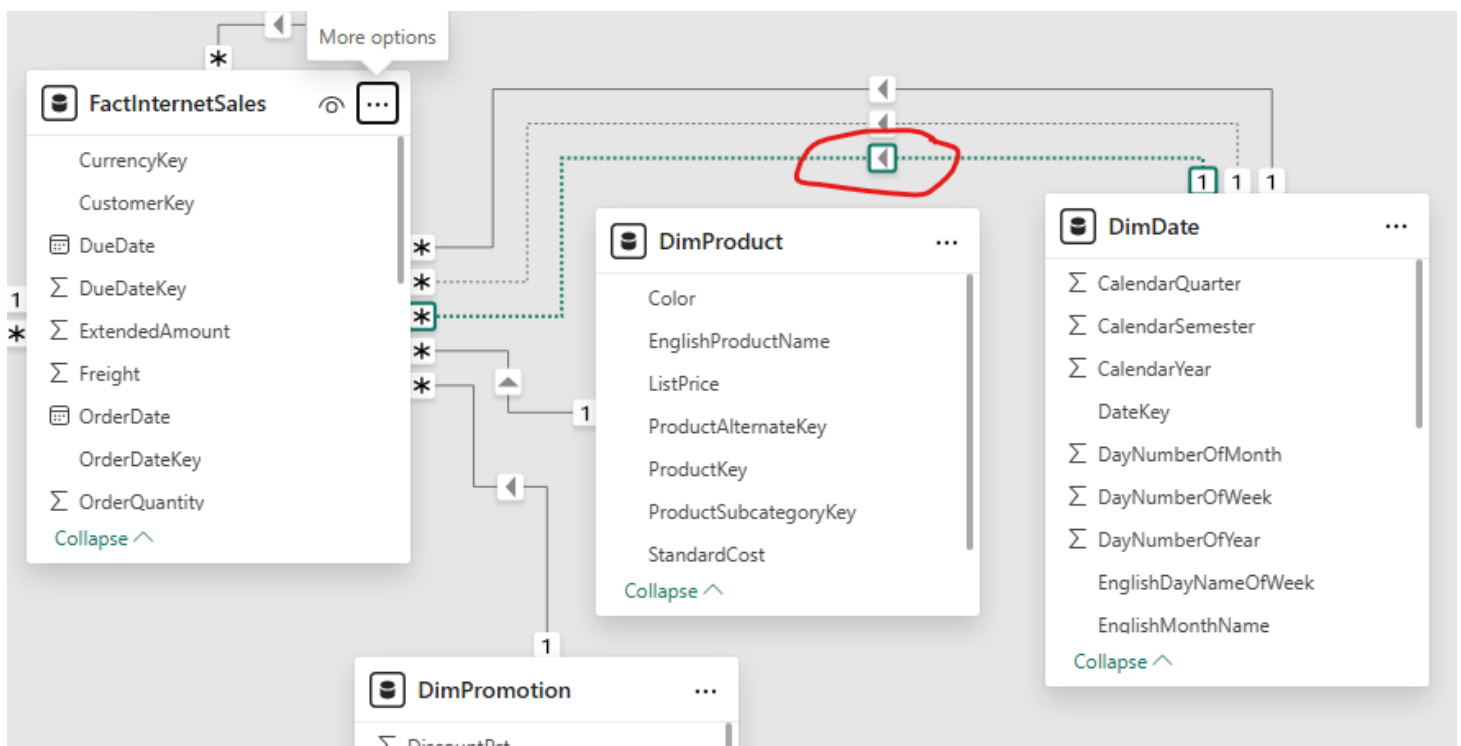
+ New relationship Autodetect Edit Delete Filter

<input type="checkbox"/>	From: table (column) ↑	Relationship	To: table (column)	Status	
<input type="checkbox"/>	DimCustomer (CustomerKey)	1 — 1	FactInternetSales (CustomerKey)	Active	...
<input type="checkbox"/>	FactInternetSales (CurrencyKey)	* — 1	DimCurrency (CurrencyKey)	Active	...
<input type="checkbox"/>	FactInternetSales (OrderDateKey)	* — 1	DimDate (DateKey)	Active	...
<input type="checkbox"/>	FactInternetSales (ProductKey)	* — 1	DimProduct (ProductKey)	Active	...
<input type="checkbox"/>	FactInternetSales (PromotionKey)	* — 1	DimPromotion (PromotionKey)	Active	...
<input type="checkbox"/>	FactInternetSales (SalesTerritoryKey)	* — 1	DimSalesTerritory (SalesTerritoryKey)	Active	...

Close

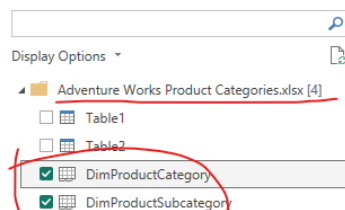


e) Create a relationship between FactInternetSales [ShipDateKey] and DimDate [DateKey].



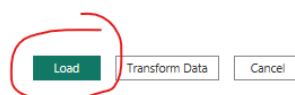
f) In Power BI Desktop, load the DimProductCategory and DimProductSubcategory data from the AdventureWorks Product Categories.xlsx file.

Navigator

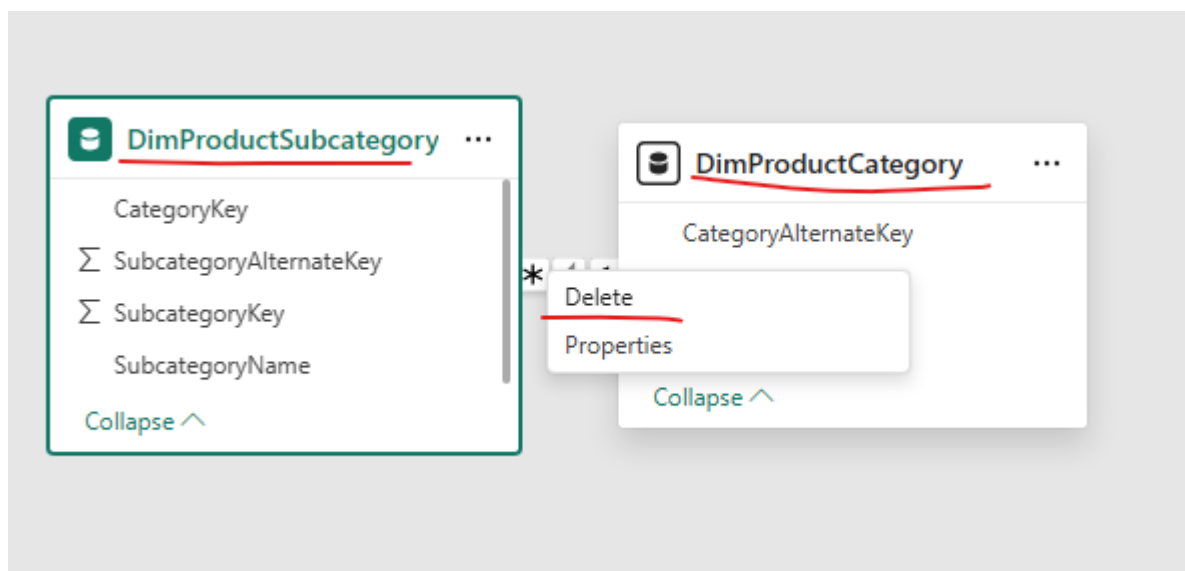


DimProductCategory

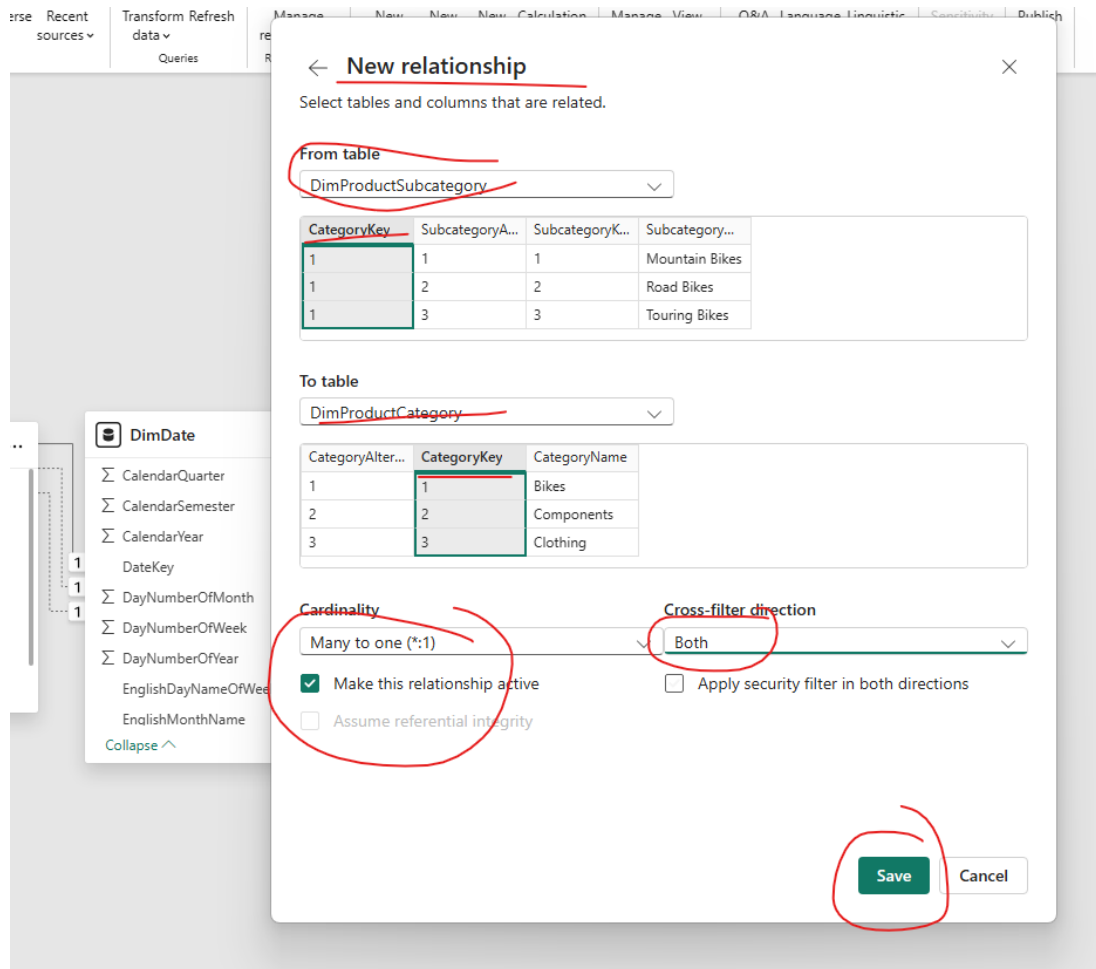
CategoryKey	CategoryAlternateKey	CategoryName
1	1	Bikes
2	2	Components
3	3	Clothing
4	4	Accessories



g) Delete the relationship between DimProductCategory and DimProductSubcategory.



h) Create a Many to One (*:1) between DimProductSubcategory [CategoryKey] and DimProductCategory [CategoryKey] and make the cross-filter direction to both.



i) Create a Many to One (*:1) between DimProduct [ProductSubcategoryKey] and DimProductSubcategory [SubcategoryKey] and make the cross-filter direction to both

Manage relationships



+ New relationship		Autodetect	Edit	Delete	Filter
<input type="checkbox"/>	From: table (column) ↑	Relationship	To: table (column)	Status	
<input type="checkbox"/>	DimCustomer (CustomerKey)	1 — 1	FactInternetSales (CustomerKey)	Active	...
<input type="checkbox"/>	<u>DimProduct (ProductSubcategoryKey)</u>	<u>* — 1</u>	<u>DimProductSubcategory (SubcategoryKey)</u>	Active	...
<input type="checkbox"/>	DimProductSubcategory (CategoryKey)	* — 1	DimProductCategory (CategoryKey)	Active	...
<input type="checkbox"/>	FactInternetSales (CurrencyKey)	* — 1	DimCurrency (CurrencyKey)	Active	...
<input type="checkbox"/>	Σ FactInternetSales (DueDateKey)	* — 1	DimDate (DateKey)	Inactive	...
<input type="checkbox"/>	FactInternetSales (OrderDateKey)	* — 1	DimDate (DateKey)	Active	...
<input type="checkbox"/>	FactInternetSales (ProductKey)	* — 1	DimProduct (ProductKey)	Active	...
<input type="checkbox"/>	FactInternetSales (PromotionKey)	* — 1	DimPromotion (PromotionKey)	Active	...
<input type="checkbox"/>	FactInternetSales (SalesTerritoryKey)	* — 1	DimSalesTerritory (SalesTerritoryKey)	Active	...

j) Add a calculated column named IncomeStatus to the DimCustomer table based on the Yearly Income column. Income should be classified as follows:

- ☐ Lower than 25,000: Lower Income
- ☐ Between 25,000 and 60,000: Middle Income
- ☐ Between 60,000 and 100,000: Higher Income
- ☐ 100,000 and upward: Very High Income.

Dax Query:

```
IncomeStatus = IF(DimCustomer[YearlyIncome] < 25000, "Lower Income", IF(DimCustomer[YearlyIncome] >= 25000 && DimCustomer[YearlyIncome] <= 60000, "Middle Income", IF(DimCustomer[YearlyIncome] > 60000 && DimCustomer[YearlyIncome] < 100000, "Higher Income", "Very High Income"))
```

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name: IncomeStatus Format: Text Summarization: Don't summarize Data type: Text Data category: Uncategorized

Structure: DimCustomer

Formatting: IncomeStatus

Properties: Don't summarize

Sort: Sort by column

Groups: Data groups

Relationships: Manage relationships

Calculations: New column

```

1 IncomeStatus = IF(
2   DimCustomer[YearlyIncome] < 25000, "Lower Income",
3   IF(
4     DimCustomer[YearlyIncome] >= 25000 && DimCustomer[YearlyIncome] <= 60000, "Middle Income",
5     IF(
6       DimCustomer[YearlyIncome] > 60000 && DimCustomer[YearlyIncome] < 100000, "Higher Income",
7       "Very High Income"
8     )
9   )
10 )

```

Children	NumberChildrenAtHome	EnglishEducation	SpanishEducation	FrenchEducation	EnglishOccupation	SpanishOccupation	FrenchOccupation	HouseOwnerFlag	NumberCarsOwned	DateFirstPurchase	IncomeStatus
2	0	Bachelors	Licenciatura	Bac + 4	Management	Gestión	Direction	1	2	Monday, September 17, 2007	Very High Income
4	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, July 15, 2005	Lower Income
2	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, July 20, 2005	Middle Income
0	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Thursday, August 16, 2007	Middle Income
0	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Monday, July 2, 2007	Middle Income
0	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, December 29, 2007	Middle Income
2	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	0	2	Tuesday, July 26, 2005	Middle Income
2	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Tuesday, July 19, 2005	Middle Income
2	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 29, 2005	Middle Income
2	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 22, 2005	Middle Income
4	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income
4	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Sunday, August 21, 2005	Lower Income
4	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 18, 2005	Lower Income
4	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income
0	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, July 26, 2007	Middle Income
0	0	Partial High School	Educación secundaria (en curso)	Niveau bac	Clerical	Administrativo	Employé	0	2	Tuesday, July 24, 2005	Middle Income
3	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, August 10, 2005	Middle Income
0	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, October 5, 2007	Middle Income
0	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 18, 2007	Middle Income
0	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 25, 2007	Higher Income
0	0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, November 9, 2007	Middle Income
3	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Friday, October 12, 2007	Middle Income
3	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Tuesday, August 9, 2005	Middle Income
3	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Saturday, August 6, 2005	Middle Income
3	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, August 13, 2005	Middle Income
0	0	Partial High School	Educación secundaria (en curso)	Niveau bac	Clerical	Administrativo	Employé	1	2	Monday, September 10, 2007	Middle Income
3	0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Tuesday, August 23, 2005	Middle Income

j) Add a calculated column named DaysSinceFirstPurchase to the DimCustomer table to show the number of days since a customer made the first purchase.

Dax Query: DaysSinceFirstPurchase =

DATEDIFF(DimCustomer[DateFirstPurchase],TODAY(),DAY)

Untitled - Power BI Desktop

Home Help Table tools Column tools

Name: DaysSinceFirstPurchase Format: Whole number Summarization: Sum Data type: Whole number Data category: Uncategorized

Structure: DimCustomer

Formatting: DaysSinceFirstPurchase

Properties: Sum

Sort: Sort by column

Groups: Data groups

Relationships: Manage relationships

Calculations: New column

```

1 DaysSinceFirstPurchase =
2 DATEDIFF(DimCustomer[DateFirstPurchase],TODAY(),DAY)

```

Home	EnglishEducation	SpanishEducation	FrenchEducation	EnglishOccupation	SpanishOccupation	FrenchOccupation	HouseOwnerFlag	NumberCarsOwned	DateFirstPurchase	IncomeStatus	DaysSinceFirstPurchase
0	Bachelors	Licenciatura	Bac + 4	Management	Gestión	Direction	1	2	Monday, September 17, 2007	Very High Income	6542
0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, July 15, 2005	Lower Income	7336
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, July 20, 2005	Middle Income	7331
0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Thursday, August 16, 2007	Middle Income	6574
0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Monday, July 2, 2007	Middle Income	6619
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, December 29, 2007	Middle Income	6439
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	0	2	Tuesday, July 26, 2005	Middle Income	7325
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Tuesday, July 19, 2005	Middle Income	7332
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Tuesday, July 29, 2005	Middle Income	7322
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 22, 2005	Middle Income	7329
0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316
0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Sunday, August 21, 2005	Lower Income	7299
0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 18, 2005	Lower Income	7302
0	High School	Educación secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, July 26, 2007	Middle Income	6595
0	Partial High School	Educación secundaria (en curso)	Niveau bac	Clerical	Administrativo	Employé	0	2	Tuesday, July 24, 2005	Middle Income	6597
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, August 10, 2005	Middle Income	7310
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, October 5, 2007	Middle Income	6524
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 18, 2007	Middle Income	6603
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 25, 2007	Higher Income	6596
0	Partial College	Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, November 9, 2007	Middle Income	6400

k) Add a calculated column named FullName to DimCustomer, which concatenates the FirstName and the LastName.

Dax Query: Full Name = DimCustomer[FirstName] & " " & DimCustomer[LastName]

SpanishEducation	FrenchEducation	EnglishOccupation	SpanishOccupation	FrenchOccupation	HouseOwnerFlag	NumberCarsOwned	DateFirstPurchase	IncomeStatus	DaysSinceFirstPurchase	Full Name
Licenciatura	Bac + 4	Management	Gestión	Direction	1	2	Monday, September 17, 2007	Very High Income	6542	Lauren Walker
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, July 15, 2005	Lower Income	7336	Shannon Wang
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, July 20, 2005	Middle Income	7331	Clarence Rai
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Thursday, August 16, 2007	Middle Income	6574	Luke Lal
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Monday, July 2, 2007	Middle Income	6619	Jordan King
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, December 29, 2007	Middle Income	6439	Russell Xie
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	0	2	Tuesday, July 26, 2005	Middle Income	7325	Harold Sai
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Tuesday, July 19, 2005	Middle Income	7332	Jessie Zhao
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 29, 2005	Middle Income	7322	Jill Jimenez
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 22, 2005	Middle Income	7329	Jimmy Moreno
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316	Theresa Ramos
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Sunday, August 21, 2005	Lower Income	7299	Denise Stone
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 18, 2005	Lower Income	7302	Jaime Nath
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316	Ebony Gonzalez
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, July 26, 2007	Middle Income	6595	Jennifer Russell
Education secundaria (en curso)	Niveau bac	Clerical	Administrativo	Employé	0	2	Tuesday, July 24, 2007	Middle Income	6597	Chloe Garcia
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, August 10, 2005	Middle Income	7310	Marc Martin
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, October 5, 2007	Middle Income	6524	Jesse Murphy
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 18, 2007	Middle Income	6603	Amanda Carter
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 25, 2007	Higher Income	6596	Megan Sanchez
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, November 9, 2007	Middle Income	6489	Nathan Simmons
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Friday, October 12, 2007	Middle Income	6517	Leonard Nara
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Tuesday, August 9, 2005	Middle Income	7311	Christine Yuan
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Saturday, August 6, 2005	Middle Income	7314	Jaclyn Lu
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, August 13, 2005	Middle Income	7307	Jeremy Powell
Education secundaria (en curso)	Niveau bac	Clerical	Administrativo	Employé	1	2	Monday, September 10, 2007	Middle Income	6549	Carol Rai
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Tuesday, August 23, 2005	Middle Income	7297	Alan Zheng
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Tuesday, July 1, 2008	Middle Income	6254	Daniel Johnson
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	0	2	Saturday, August 20, 2005	Middle Income	7300	Heidi Lopez
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	0	2	Saturday, July 21, 2007	Middle Income	6600	Ana Price
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, August 6, 2005	Middle Income	7314	Deanna Munoz

l) Add a calculated column named MaleFemale to DimCustomer, which converts the values of the Gender column to Male or Female.

Dax Query: MaleFemale = IF(DimCustomer[Gender] = "M", "Male", IF(DimCustomer[Gender] = "F", "Female", "Other"))

SpanishEducation	FrenchEducation	EnglishOccupation	SpanishOccupation	FrenchOccupation	HouseOwnerFlag	NumberCarsOwned	DateFirstPurchase	IncomeStatus	DaysSinceFirstPurchase	Full Name	MaleFemale
Licenciatura	Bac + 4	Management	Gestión	Direction	1	2	Monday, September 17, 2007	Very High Income	6542	Lauren Walker	Female
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, July 15, 2005	Lower Income	7336	Shannon Wang	Female
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 20, 2005	Middle Income	7331	Clarence Rai	Male
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Thursday, August 16, 2007	Middle Income	6574	Luke Lal	Male
Education secundaria (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Monday, July 2, 2007	Middle Income	6619	Jordan King	Male
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, December 29, 2007	Middle Income	6439	Russell Xie	Male
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	0	2	Tuesday, July 26, 2005	Middle Income	7325	Harold Sai	Male
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Tuesday, July 19, 2005	Middle Income	7332	Jessie Zhao	Male
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 29, 2005	Middle Income	7322	Jill Jimenez	Female
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 22, 2005	Middle Income	7329	Jimmy Moreno	Male
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316	Theresa Ramos	Female
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Sunday, August 21, 2005	Lower Income	7299	Denise Stone	Female
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 18, 2005	Lower Income	7302	Jaime Nath	Male
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316	Ebony Gonzalez	Female
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, July 26, 2007	Middle Income	6595	Jennifer Russell	Female
Education secundaria (en curso)	Niveau bac	Clerical	Administrativo	Employé	0	2	Tuesday, July 24, 2007	Middle Income	6597	Chloe Garcia	Female
Estudios universitarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, August 10, 2005	Middle Income	7310	Marc Martin	Male
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, October 5, 2007	Middle Income	6524	Jesse Murphy	Female
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 18, 2007	Middle Income	6603	Amanda Carter	Female
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 25, 2007	Higher Income	6596	Megan Sanchez	Female
Estudios universitarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, November 9, 2007	Middle Income	6489	Nathan Simmons	Male
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Friday, October 12, 2007	Middle Income	6517	Leonard Nara	Male
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Tuesday, August 9, 2005	Middle Income	7311	Christine Yuan	Female
Education secundaria	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Saturday, August 6, 2005	Middle Income	7314	Jaclyn Lu	Female

m) Add a calculated column to DimCustomer, called Relationship, which converts the value of the MaritalStatus column to Married or Single.

Query: Relationship = IF(DimCustomer[MaritalStatus] = "M", "Married", "Single")

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Name: Relationship Format: Text Summarization: Don't summarize Data type: Text Data category: Uncategorized

1 Relationship = IF(DimCustomer[MaritalStatus] = "M", "Married", "Single")

Location	FrenchEducation	EnglishOccupation	SpanishOccupation	FrenchOccupation	HouseOwnerFlag	NumberCarsOwned	DateFirstPurchase	IncomeStatus	DaysSinceFirstPurchase	Full Name	MaleFemale	Relationship
dania	Bac + 4	Management	Gestión	Direction	1	2	Monday, September 17, 2007	Very High Income	6542	Lauren Walker	Female	Married
dania	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, July 15, 2005	Lower Income	7336	Shannon Wang	Female	Single
tarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, July 20, 2005	Middle Income	7331	Clarence Rai	Male	Single
dania	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Thursday, August 16, 2007	Middle Income	6574	Luke Lal	Male	Single
dania	Bac + 2	Skilled Manual	Obrero especializado	Technicien	0	2	Monday, July 2, 2007	Middle Income	6619	Jordan King	Male	Single
tarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Saturday, December 29, 2007	Middle Income	6439	Russell Xie	Male	Married
tarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	0	2	Tuesday, July 26, 2005	Middle Income	7325	Harold Sai	Male	Single
tarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Tuesday, July 19, 2005	Middle Income	7332	Jessie Zhao	Male	Married
tarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 29, 2005	Middle Income	7322	Jill Jimenez	Female	Married
tarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Friday, July 22, 2005	Middle Income	7329	Jimmy Moreno	Male	Married
dania	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316	Theresa Ramos	Female	Married
dania	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Sunday, August 21, 2005	Lower Income	7299	Denise Stone	Female	Married
dania	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 18, 2005	Lower Income	7302	Jaime Nath	Male	Married
dania	Bac + 2	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, August 4, 2005	Lower Income	7316	Ebony Gonzalez	Female	Married
tarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Thursday, July 26, 2007	Middle Income	6595	Jennifer Russell	Female	Married
dania (en curso)	Niveau bac	Clerical	Administrativo	Employé	0	2	Tuesday, July 24, 2007	Middle Income	6597	Chloe Garcia	Female	Single
tarios (en curso)	Baccalauréat	Clerical	Administrativo	Employé	1	2	Wednesday, August 10, 2005	Middle Income	7310	Marc Martin	Male	Married
tarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Friday, October 5, 2007	Middle Income	6524	Jesse Murphy	Male	Married
tarios (en curso)	Baccalauréat	Skilled Manual	Obrero especializado	Technicien	1	2	Wednesday, July 18, 2007	Middle Income	6603	Amanda Carter	Female	Married

n) Add a calculated column called MainCategory to the DimProductSubcategory table, which gets the category name from DimProductCategory.

Query:

MainCategory = RELATED(DimProductCategory[CategoryName])

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Name: MainCategory
Data type: Text
Format: Text
Summarization: Don't summarize
Data category: Uncategorized

1 MainCategory = RELATED(DimProductCategory[CategoryName])

SubcategoryKey	SubcategoryAlternateKey	SubcategoryName	CategoryKey	MainCategory
1		Mountain Bikes	1	Bikes
2		Road Bikes	1	Bikes
3		Touring Bikes	1	Bikes
4		Handlebars	2	Components
5		Bottom Brackets	2	Components
6		Brakes	2	Components
7		Chains	2	Components
8		Cranksets	2	Components
9		Deraileurs	2	Components
10		Forks	2	Components
11		Headsets	2	Components
12		Mountain Frames	2	Components
13		Pedals	2	Components
14		Road Frames	2	Components
15		Saddles	2	Components
16		Touring Frames	2	Components
17		Wheels	2	Components
18		Bib-Shorts	3	Clothing
19		Caps	3	Clothing
20		Gloves	3	Clothing
21		Jerseys	3	Clothing
22		Shorts	3	Clothing
23		Socks	3	Clothing
24		Tights	3	Clothing
25		Vests	3	Clothing
26		Bike Racks	4	Accessories
27		Bike Stands	4	Accessories
28		Bottles and Cages	4	Accessories
29		Cleaners	4	Accessories
30		Fenders	4	Accessories
31		Helmets	4	Accessories
32		Hydration Packs	4	Accessories
33		Lights	4	Accessories
34		Locks	4	Accessories
35		Panniers	4	Accessories
36		Pumps	4	Accessories

Table: DimProductSubcategory (37 rows) Column: MainCategory (4 distinct values)

o) Add a calculated column called PromotionLengthDays to the DimPromotion table, which is the difference between StartDate and EndDate.

Query: PromotionLengthDays

=DATEDIFF(DimPromotion[StartDate],DimPromotion[EndDate],DAY)

inKey	PromotionAlternateKey	EnglishPromotionName	DiscountPct	EnglishPromotionCategory	StartDate	EndDate	MinQty	MaxQty	PromotionLengthDays
1	1	No Discount	0	No Discount	Wednesday, June 1, 2005	Wednesday, December 31, 2008	0	NULL	1309
2	2	Volume Discount 11 to 14	0.02	Reseller	Friday, July 1, 2005	Monday, June 30, 2008	11	14	1095
3	3	Volume Discount 15 to 24	0.05	Reseller	Friday, July 1, 2005	Monday, June 30, 2008	15	24	1095
4	4	Volume Discount 25 to 40	0.1	Reseller	Friday, July 1, 2005	Monday, June 30, 2008	25	40	1095
5	5	Volume Discount 41 to 60	0.15	Reseller	Friday, July 1, 2005	Monday, June 30, 2008	41	60	1095
6	6	Volume Discount over 60	0.2	Reseller	Friday, July 1, 2005	Monday, June 30, 2008	61	NULL	1095
7	7	Mountain-100 Clearance Sale	0.35	Reseller	Monday, May 15, 2006	Friday, June 30, 2006	0	NULL	46
8	8	Sport Helmet Discount-2002	0.1	Reseller	Saturday, July 1, 2006	Monday, July 31, 2006	0	NULL	30
9	9	Road-650 Overstock	0.3	Reseller	Saturday, July 1, 2006	Thursday, August 31, 2006	0	NULL	61
10	10	Mountain Tire Sale	0.5	Customer	Friday, June 15, 2007	Thursday, August 30, 2007	0	NULL	76
11	11	Sport Helmet Discount-2003	0.15	Reseller	Sunday, July 1, 2007	Tuesday, July 31, 2007	0	NULL	30
12	12	LL Road Frame Sale	0.35	Reseller	Sunday, July 1, 2007	Wednesday, August 15, 2007	0	NULL	45
13	13	Touring-3000 Promotion	0.15	Reseller	Sunday, July 1, 2007	Sunday, September 30, 2007	0	NULL	91
14	14	Touring-1000 Promotion	0.2	Reseller	Sunday, July 1, 2007	Sunday, September 30, 2007	0	NULL	91
15	15	Half-Price Pedal Sale	0.5	Customer	Wednesday, August 15, 2007	Saturday, September 15, 2007	0	NULL	31
16	16	Mountain-500 Silver Clearance Sale	0.4	Reseller	Thursday, May 1, 2008	Monday, June 30, 2008	0	NULL	60

p) Add a calculated column called Profit to FactInternetSales, and show the difference between UnitPrice and ProductStandardCost formatted as currency.

Query: Profit = FactInternetSales[UnitPrice]-
FactInternetSales[ProductStandardCost]

LineNumber	RevisionNumber	OrderQuantity	UnitPrice	ExtendedAmount	ProductStandardCost	TotalProductCost	SalesAmount	TaxAmt	Freight	OrderDate	DueDate	ShipDate	Profit
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Saturday, July 2, 2005	Thursday, July 14, 2005	Saturday, July 9, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Sunday, July 3, 2005	Friday, July 15, 2005	Sunday, July 10, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Sunday, July 3, 2005	Friday, July 15, 2005	Sunday, July 10, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Tuesday, July 5, 2005	Sunday, July 17, 2005	Tuesday, July 12, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Tuesday, July 5, 2005	Sunday, July 17, 2005	Tuesday, July 12, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Thursday, July 7, 2005	Tuesday, July 19, 2005	Thursday, July 14, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Friday, July 8, 2005	Wednesday, July 20, 2005	Friday, July 15, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Saturday, July 9, 2005	Thursday, July 21, 2005	Saturday, July 16, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Sunday, July 10, 2005	Friday, July 22, 2005	Sunday, July 17, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Monday, July 11, 2005	Saturday, July 23, 2005	Monday, July 18, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Tuesday, July 12, 2005	Sunday, July 24, 2005	Tuesday, July 19, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Wednesday, July 13, 2005	Monday, July 25, 2005	Wednesday, July 20, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Wednesday, July 13, 2005	Monday, July 25, 2005	Wednesday, July 20, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Thursday, July 14, 2005	Tuesday, July 26, 2005	Thursday, July 21, 2005	\$1,406.9758
1	1	1	3578.27	3578.27	2171.2942	2171.2942	3578.27	286.2616	89.4568	Saturday, July 16, 2005	Thursday, July 28, 2005	Saturday, July 23, 2005	\$1,406.9758

q) Save the changes, and close Power BI Desktop