

Advanced Query with Data modelling

Group By

Specify the columns to group by and one or more outputs.

☐ Basic ☒ Advanced

Bowlers

Add grouping

New column name	Operation	Column
Total Overs	Sum	Overs
Total Maiden Overs	Sum	Maiden
Total Runs	Sum	Runs
Total Wicket	Sum	Wicket
Economy	Average	Economy
Extras	Sum	Extras

Add aggregation

OK Cancel

fx = Table.Group(#"Appended Query", {"Bowlers"}, {"Total Overs", each List.Sum([Overs]), type nullable number}, {"Total Maiden", each List.Sum([Maiden]), type nullable number}, {"Total Runs", each List.Sum([Runs]), type nullable number}, {"Total Wickets", each List.Sum([Wickets]), type nullable number}, {"Economy", each List.Average([Economy]), type nullable number}, {"Extras", each List.Sum([Extras]), type nullable number})

	Bowlers	1.2 Total Overs	1.2 Total Maiden	1.2 Total Runs	1.2 Total Wickets	1.2 Economy	1.2 Extras
	Valid 100%, Error 0%, Empty 0%	Valid 100%, Error 0%, Empty 0%	Valid 100%, Error 0%, Empty 0%	Valid 100%, Error 0%, Empty 0%	Valid 100%, Error 0%, Empty 0%	Valid 100%, Error 0%, Empty 0%	Valid 100%, Error 0%, Empty 0%
	6 distinct, 6 unique	6 distinct, 6 unique	5 distinct, 4 unique	6 distinct, 6 unique	4 distinct, 3 unique	6 distinct, 6 unique	5 distinct, 4 unique
1	Akash Deep	41.1	4	187	10	4.54	8
2	Mohammed Siraj	31.3	6	127	7	4.17	6
3	Prasidh Krishna	27	3	111	1	4.165	3
4	Nitish Kumar Reddy	6	0	29	0	4.83	0
5	Ravindra Jadeja	32	6	110	1	3.395	2
6	Washington Sundar	20	2	101	1	4.94	0

Custom Column

Add a column that is computed from the other columns.

New column name

Total Sales

Custom column formula

= [Qty bought] * [Price per item]

Available columns

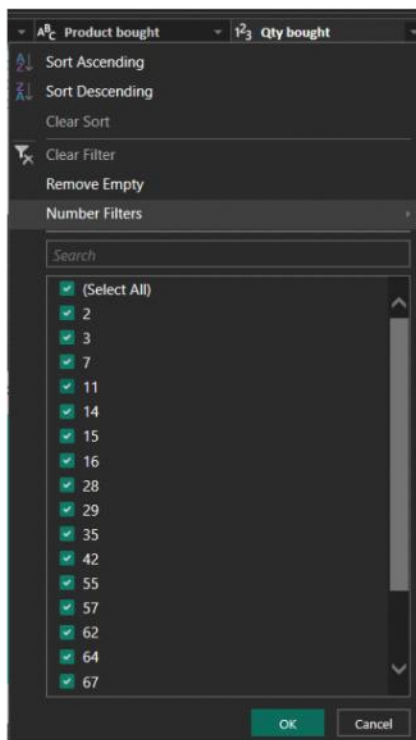
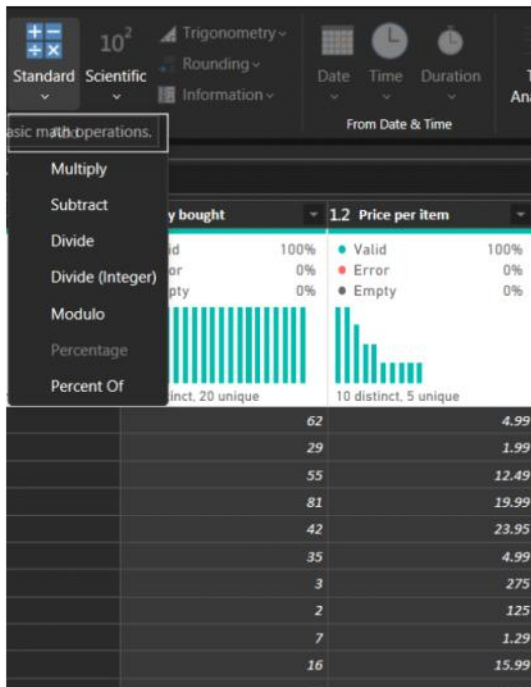
- Customer ID
- Product ID
- Product bought
- Qty bought
- Price per item

<< Insert

Learn about Power Query formulas

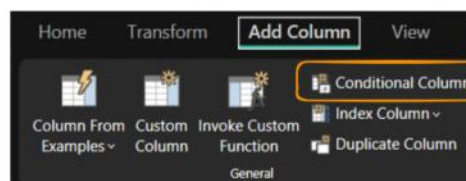
✓ No syntax errors have been detected.

OK Cancel



Conditional Statement

value \geq 50 -> Bulk Order
 value \geq 30 -> Medium Order
 value $<$ 30 -> Regular Order



Add Conditional Column

Add a conditional column that is computed from the other columns or values.

New column name:

Column Name	Operator	Value	Output
If Qty bought	is greater than or...	50	Bulk Order
Else If Qty bought	is greater than or...	30	Medium Order
Else			Regular Order

Sort Ascending
Sort Descending
Clear Sort

Clear Filter
Remove Empty

Text Filters

Search

☒ (Select All)
☒ Bulk Order
☒ Medium Order
☒ Regular Order

OK Cancel

Group By

Specify the column to group by and the desired output.

☒ Basic ☐ Advanced

Order Type

New column name: Total Qty Operation: Sum Column: Qty bought

OK Cancel

Order Type	Total Qty
Valid 100%	Valid 100%
Error 0%	Error 0%
Empty 0%	Empty 0%
3 distinct, 3 unique	
Bulk Order	652
Regular Order	125
Medium Order	77

Create Table

Add Column

Enter Data

Column1

1

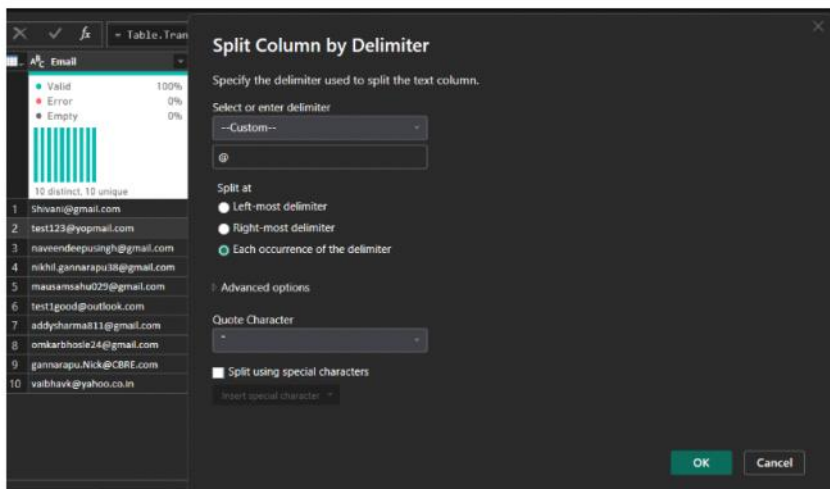
+

Name: Table

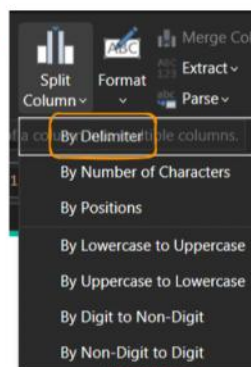
OK Cancel

Create Table

	Email	cityState	nonDigit-Digit	+
1	Shivani@gmail.com	delhiDelhi	text123	
2	test123@yopmail.com	puneMaharashtra	best7890	
3	naveendeeppusingh@gmail.com	faridabadHaryana	Nick786	
4	nikhil.gannarapu38@gmail.com	hyderabadTelangana	mango456	
5	mausamsahu029@gmail.com	mumbaiMaharashtra	Spain456	
6	test1good@outlook.com	gurugramHaryana	windows36	
7	addysharma811@gmail.com	amaravathiAndhrapradesh	Mum486	
8	omkarbhosle24@gmail.com	patnaBihar	Addy811	
9	gannarapu.Nick@CBRE.com	kochiKerala	Rest123	
10	vaibhavk@yahoo.co.in	panjiGoa	Tax555	
+				

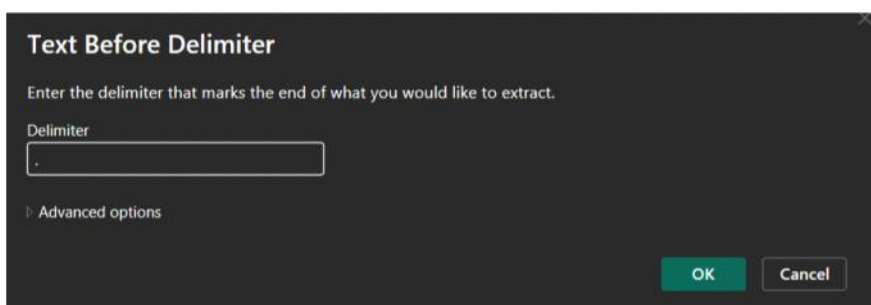


UserName	Domain Name
Shivani	gmail.com
test123	yopmail.com
naveendeeppusingh	gmail.com
nikhil.gannarapu38	gmail.com
mausamsahu029	gmail.com
test1good	outlook.com
addysharma811	gmail.com
omkarbhosle24	gmail.com
gannarapu.Nick	CBRE.com
vaibhavk	yahoo.co.in



Domain Name	citystate	nor
gmail.com	delhiDelhi	test123
yopmail.com	puneMaharashtra	best7890
gmail.com	faridabadHaryana	Nick786
gmail.com	hyderabadTelangana	mango456
gmail.com	mumbaiMaharashtra	Spain456
outlook.com	eureramHarvana	windows36

Domain Name
gmail
yopmail
gmail
gmail
gmail
outlook
gmail
gmail
CBRE
yahoo



delhiDelhi

LowerCase to UpperCase

AB cityState

Valid 100%
Error 0%
Empty 0%

10 distinct, 10 unique

delhiDelhi
puneMaharashtra
faridabadHaryana
hyderabadTelangana
mumbaiMaharashtra
gurugramHaryana
amaravathiAndhrapradesh
patnaBihar
kochiKerala
panjiGoa

Split Column

Format

By Delimiter

By Number of Characters

By Positions

By Lowercase to Uppercase

By Uppercase to Lowercase

By Digit to Non-Digit

By Non-Digit to Digit

AB city

Valid 100%
Error 0%
Empty 0%

10 distinct, 10 unique

AB state

Valid 100%
Error 0%
Empty 0%

8 distinct, 6 unique

delhi	Delhi
pune	Maharashtra
faridabad	Haryana
hyderabad	Telangana
mumbai	Maharashtra
gurugram	Haryana
amaravathi	Andhrapradesh
patna	Bihar
kochi	Kerala
panji	Goa

AB nonDigit-Digit

Valid 100%
Error 0%
Empty 0%

10 distinct, 10 unique

text123text
best7890best
Nick786Nick
mango456mango
Spain456Spain
windows36windows
Mum486Mum
Addy811Addy
Rest123Rest
Tax555Tax

Spain456Spain

non-digit digit non-digit

AB nonDigit-Digit.1

Valid 100%
Error 0%
Empty 0%

10 distinct, 10 unique

AB nonDigit-Digit.2

Valid 100%
Error 0%
Empty 0%

10 distinct, 10 unique

text	123text
best	7890best
Nick	786Nick
mango	456mango
Spain	456Spain
windows	36windows
Mum	486Mum
Addy	811Addy
Rest	123Rest
Tax	555Tax

AB nonDigit-Digit.2.1

Valid 100%
Error 0%
Empty 0%

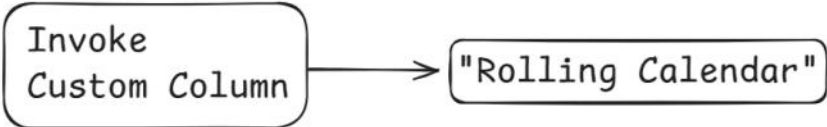
8 distinct, 6 unique

AB nonDigit-Digit.2.2

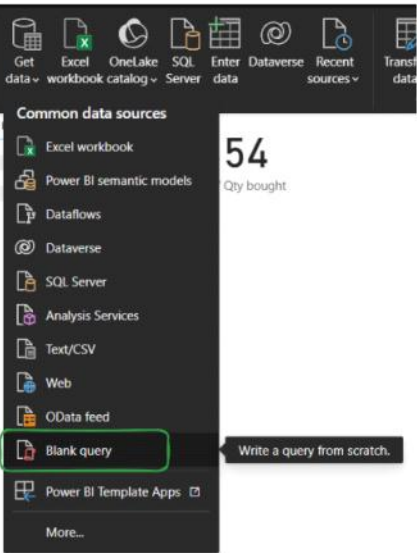
Valid 100%
Error 0%
Empty 0%

10 distinct, 10 unique

123	text
7890	best
786	Nick
456	mango
456	Spain
36	windows
486	Mum
811	Addy
123	Rest
555	Tax



Steps to build Rolling Calendar:



starting date: "Source"

`=#date(2022,1,1)`
(yyyy,mm,dd)

Query Settings

- PROPERTIES
 - Name: Query1
- APPLIED STEPS
 - Source
 - custom

source Manage Parameters

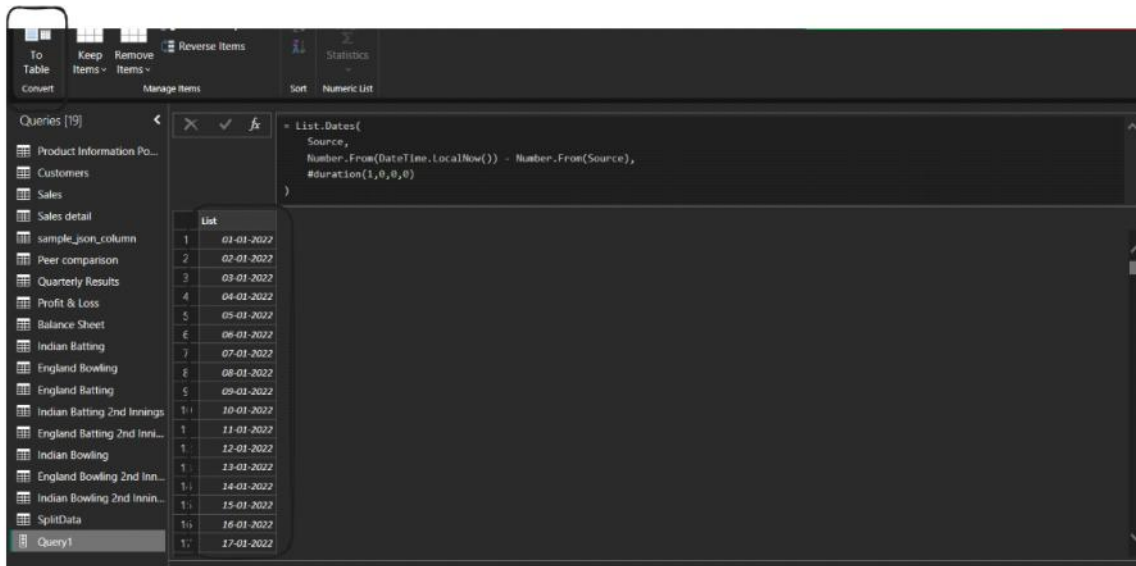
Parameters

Generates a list of date values given an initial value, count, and incremental duration value.

`List.Dates(start as date, count as number, step as duration)`

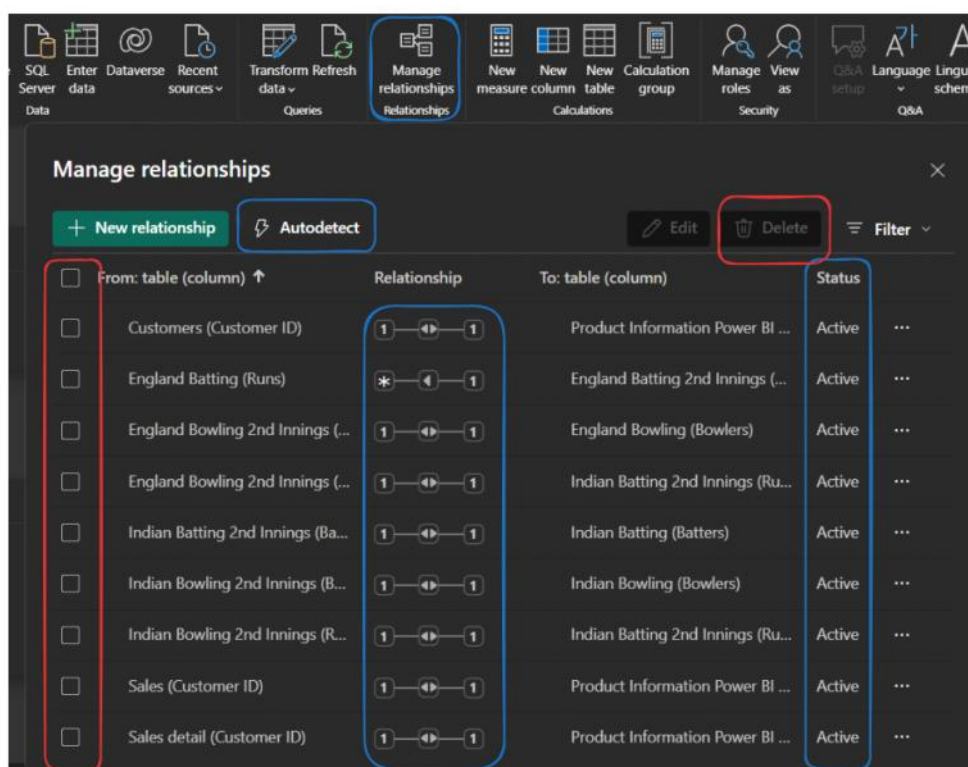
`= List.Dates`

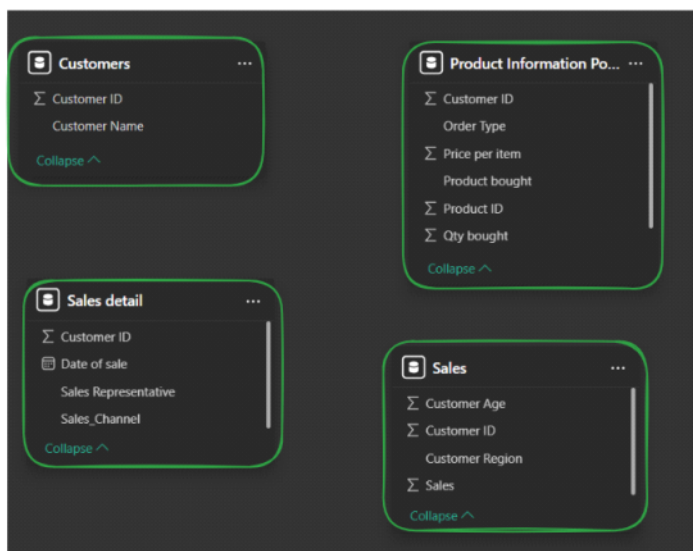
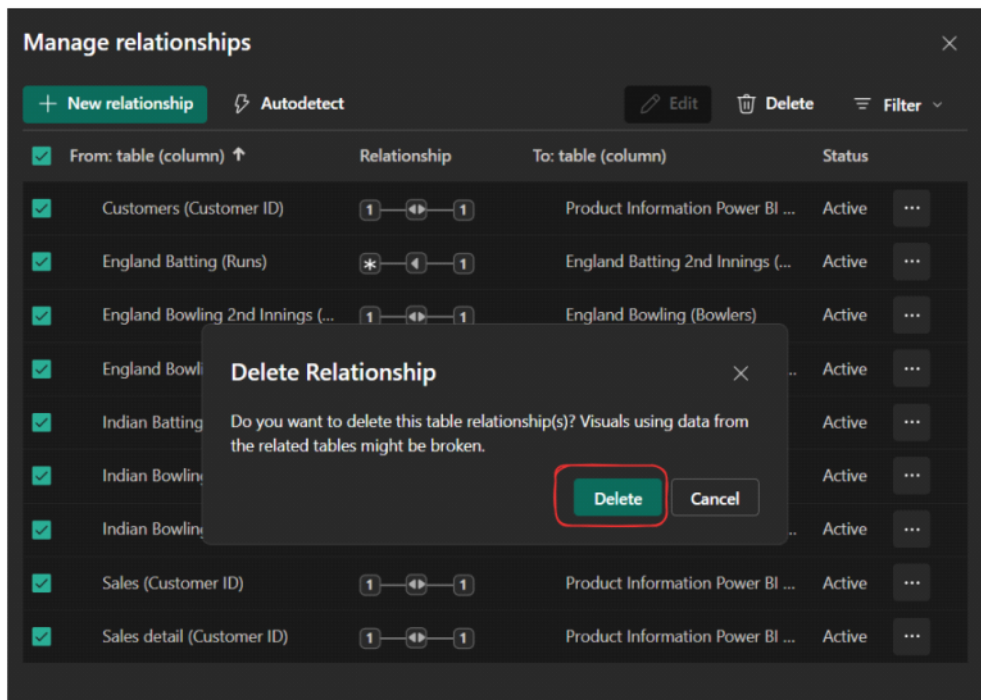
```
= List.Dates(
    Source,
    2025-07-27,
    2022-01-01
    Number.From(DateTime.LocalNow()) - Number.From(Source),
    #duration(1,0,0,0)
)
```



Data Modelling

What is Data Model?





This is not a Data Model

Independent Table ??

Because No Relationship Exist

No Filter possible because of no direct relationship between Customers & Product Info

Order Type	Sum of Total Sales
Bulk Order	\$6,926.08
Medium Order	\$1,180.55
Regular Order	\$2,022.1
Total	\$10,128.73

Customer Name	Sum of Total Sales
Alberta Fabela	\$10,128.73
Betty scruggs	\$10,128.73
Debbie Orone	\$10,128.73
Elvin Catron	\$10,128.73
Era Gassner	\$10,128.73
Grisede Mariscal	\$10,128.73
Gustano Primm	\$10,128.73
Jacinda Moffett	\$10,128.73
Juan Luker	\$10,128.73
Karisa Oquwndo	\$10,128.73
Lacresha Whitty	\$10,128.73
Laticia Crimi	\$10,128.73
Loralee Widell	\$10,128.73
Octavio Ricci	\$10,128.73
Ricky Cheshire	\$10,128.73
Total	\$10,128.73

New relationship

Select tables and columns that are related.

From table
Customers

Customer ID	Customer Na...
1	Elvin Catron
2	Gustano Primm
3	Lacresha Whit...

To table
Product Information Power BI

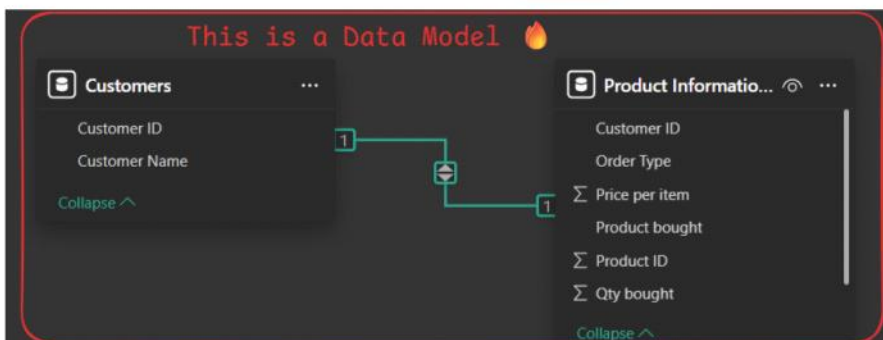
Customer ID	Order Type	Product boug...	Product ID	Qty bought
1	Bulk Order	Pen Set	1	62
2	Regular Order	Binder	2	29
3	Bulk Order	Pen Set	1	55

Cardinality
One to one (1:1)

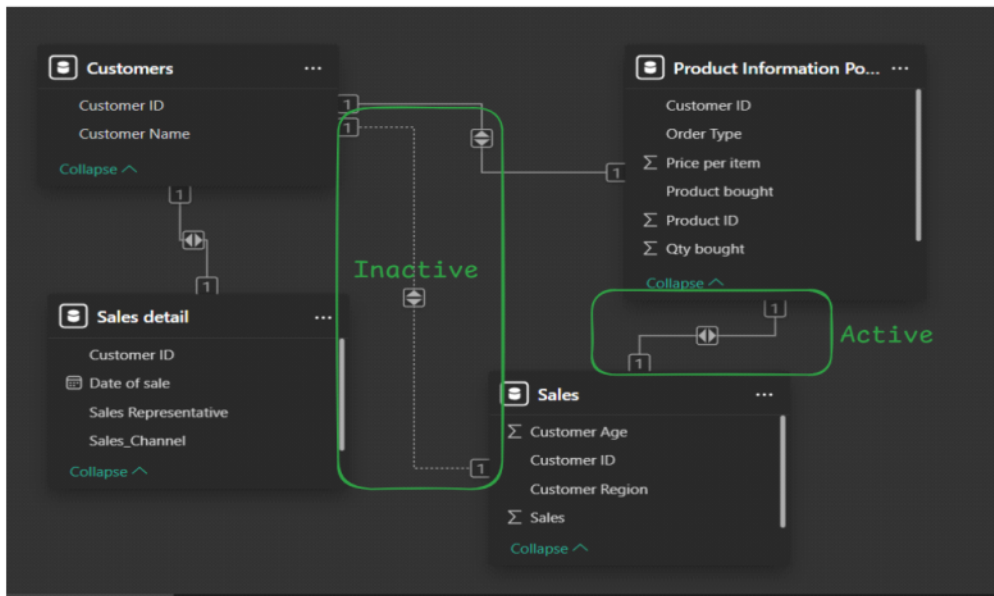
Cross-filter direction
Both

☒ Make this relationship active
☐ Assume referential integrity

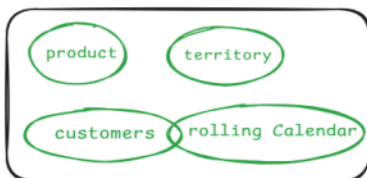
Save **Cancel**



Customer Name	Sum of Total Sales
Alberta Fabela	\$9.03
Betty scruggs	\$174.65
Debbie Orone	\$18.06
Elvin Catron	\$309.38
Era Gassner	\$825
Grisede Mariscal	\$151.24
Gustano Primm	\$57.71
Jacinda Moffett	\$1,005.9
Juan Luker	\$479.04
Karisa Oquwndo	\$575.36
Lacresha Whitty	\$686.95
Laticia Crimi	\$250
Loralee Widell	\$299.85
Octavio Ricci	\$1,619.19
Ricky Cheshire	\$1,139.43
Season Viers	\$54.89
Shan texeria	\$1,879.06
Sylvester Willbourn	\$251.72
Taylor Pogue	\$255.84
Yee Bordeaux	\$86.43
Total	\$10,128.73



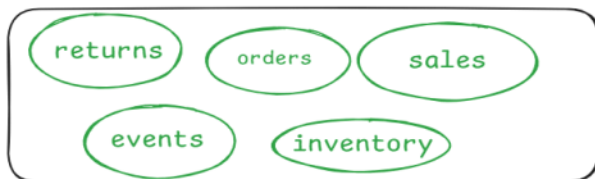
Dimension Table Vs Fact Table



Dimension Table

Dimension Table : It consist of primary Key [Unique + Not Null]

Fact Table : It consist of Foreign Key [Multiple repeated Values]
[Transactional Records]



Fact Table

Primary Key VS Foreign Key

Dimension Table - Product

1	101	- Apple
	102	- Samsung
	103	- Nokia
	104	- Vivo
	105	- Oppo

product_id P.K

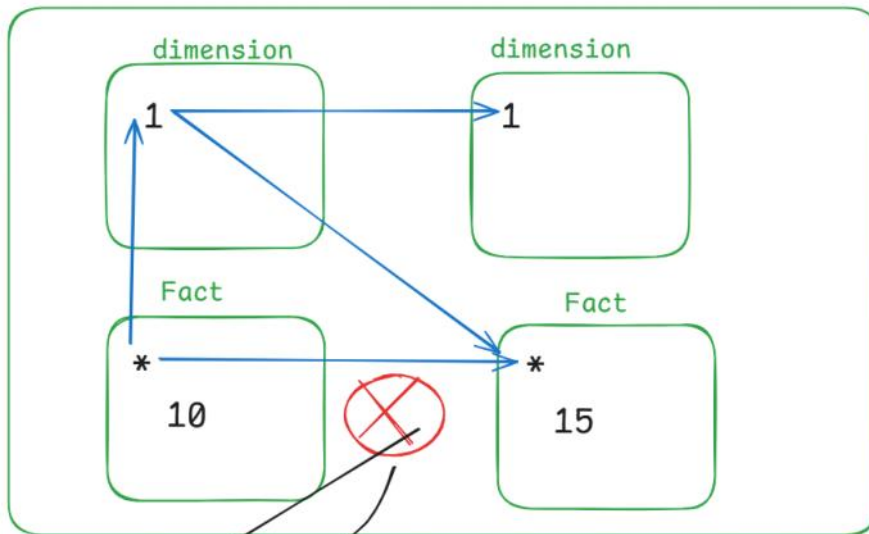
1 : M Relationship

Fact Table - Transaction
Product_id [F.K]

*	101	- Harisha
	101	- Shyam
	101	- Mausam
	102	- Aditya
	102	- Paramjeet
	103	- Deepak
	102	- Vaibhav
	101	- Rajdeep

transaction_id

RDBMS - Relational Database Management System



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Rule of Normalization: