MEASURES

SUMX

```
EAST REGION TOTAL SALE = SUMX(FILTER(Data,Data[Region]="East"),Data[Sales])
```

DISTINCTCOUNT

```
COUNT OF REGION = DISTINCTCOUNT(Data[Region])
```

PRODUCTX

```
jim sink qty product = PRODUCTX(FILTER(Data,Data[Customer Name]="Jim Sink"),Data[Quantity])
```

MAXX

```
MAX SALE OF OFFICE SUPPLIES = MAXX(FILTER(Data,Data[Category]="Office
Supplies"),Data[Sales])
```

COUNTX

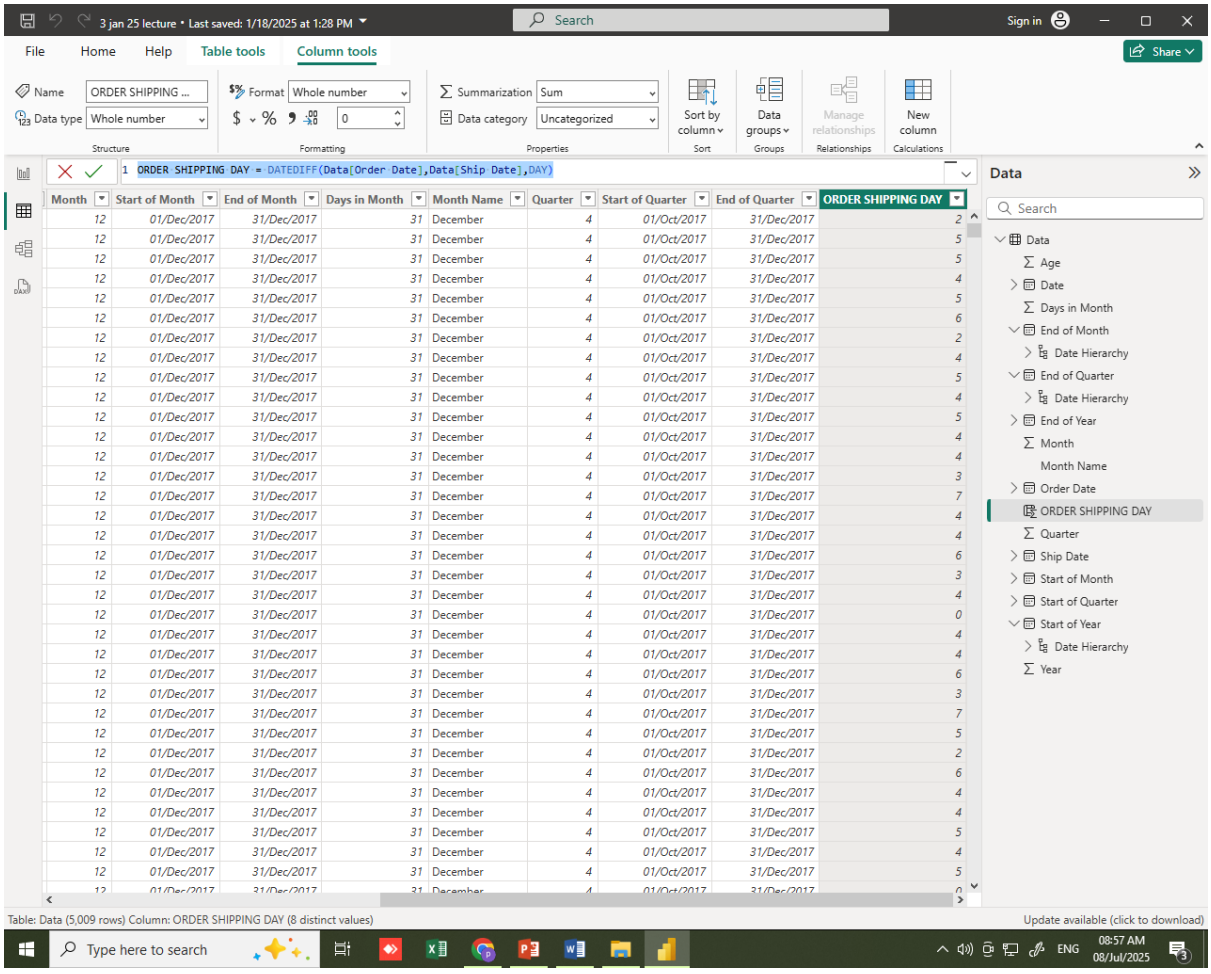
```
PROFIT CUST COUNT = COUNTX(FILTER(Data,Data[Profit]>0),Data[Customer ID])
```

NEW COLUMN

DATEDIFF

```
order shiping day = DATEDIFF(Data[Order Date],Data[Ship Date],DAY)
```

DIFFERENCE BETWEEN 2 DATES



NOW

```
now = UTCNOW()
```

ADD NEW COLUM IN DATA

EDATE

```
2 month add = EDATE(Data[Order Date],2)
```

DAY

```
days = DAY(Data[Order Date])
hour2 = HOUR("July 9, 2025 7:42 AM")
```

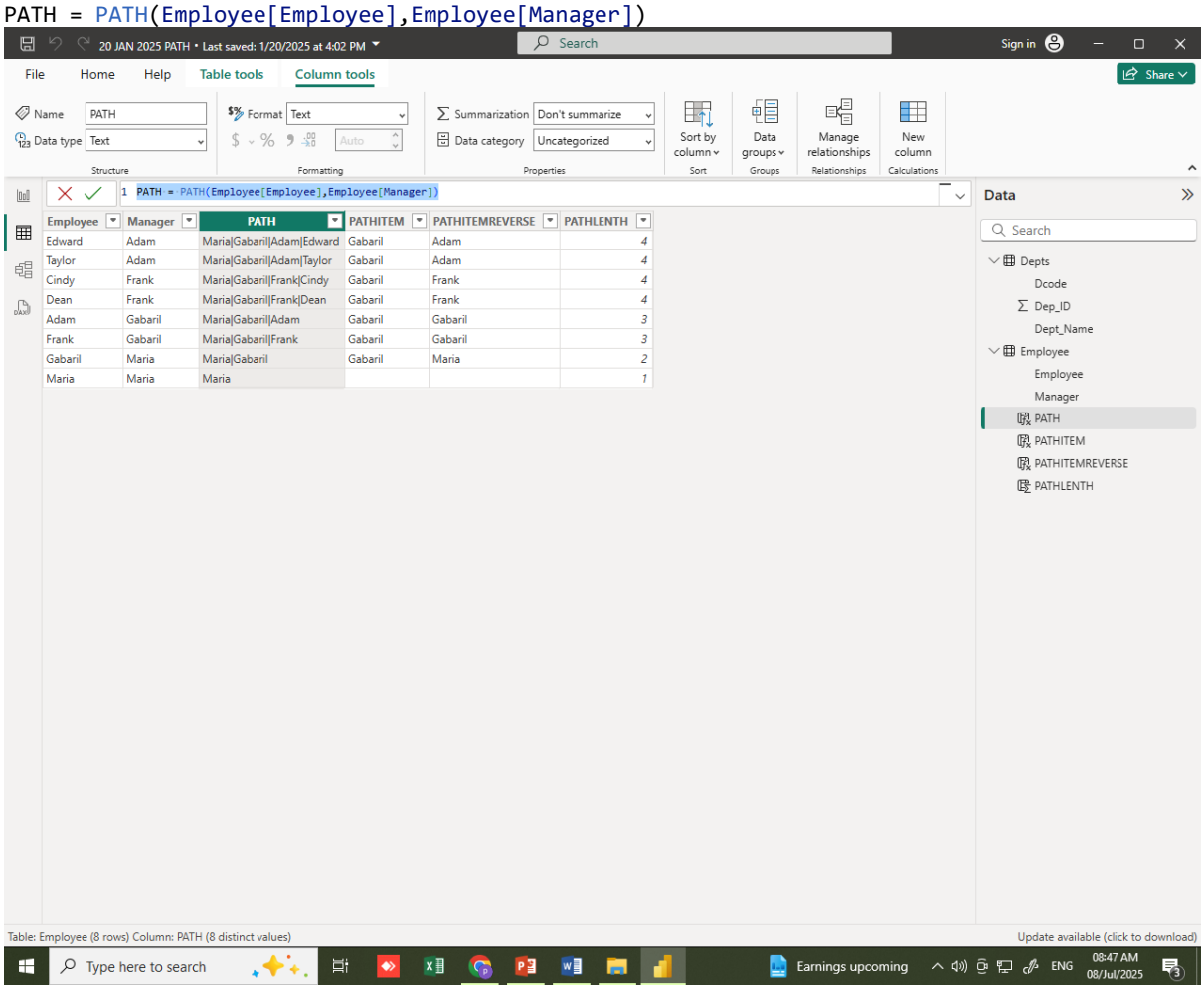
TABLE

CALENDER

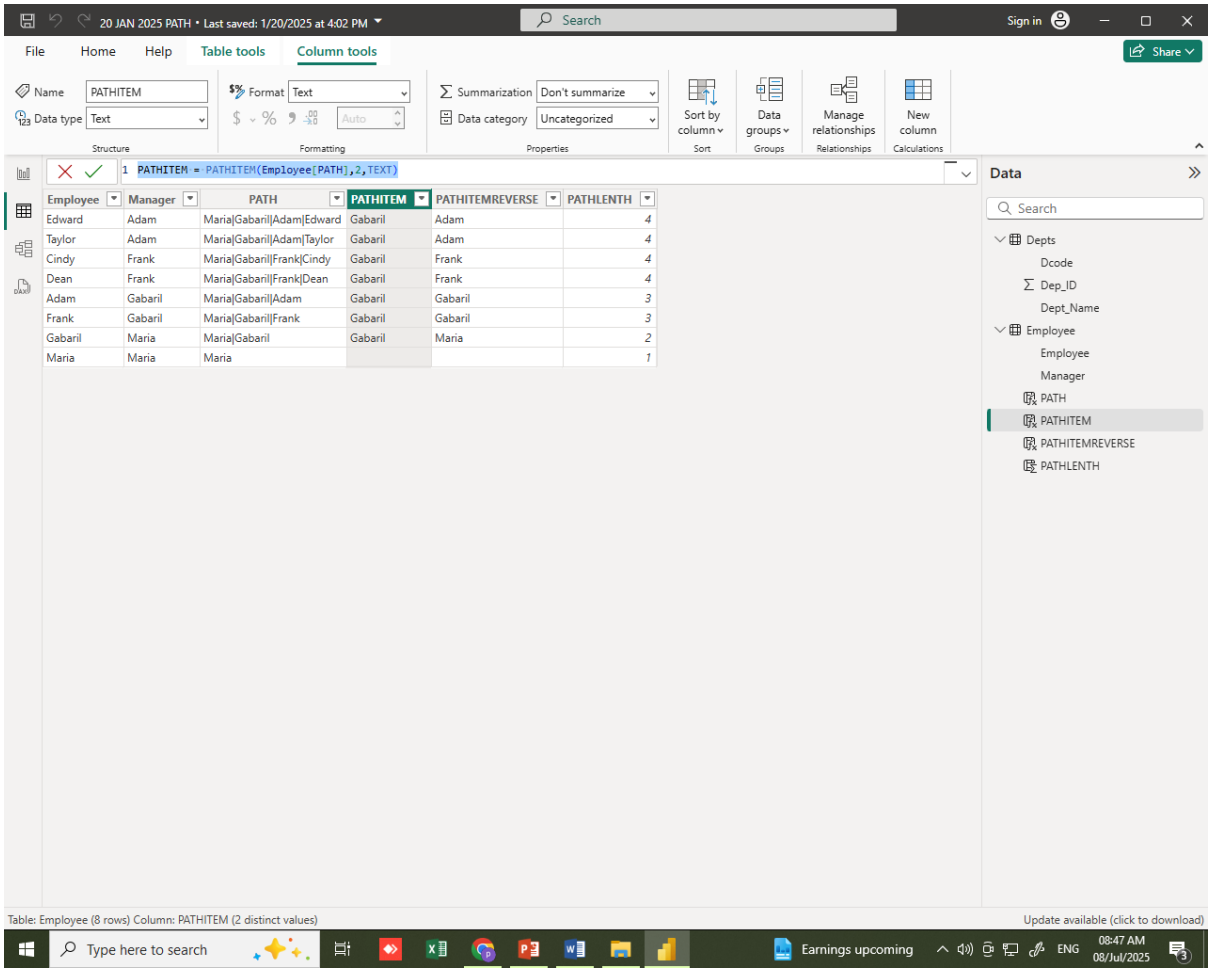
```
calender = CALENDAR(DATE(2024,1,1),DATE(2025,1,1))
```

RELATION

```
PROFIT = SUMX(RELATEDTABLE(Orders),Orders[Profit])
PERSON = RELATED(People[Person])
PATH = PATH(Employee[Employee],Employee[Manager])
```

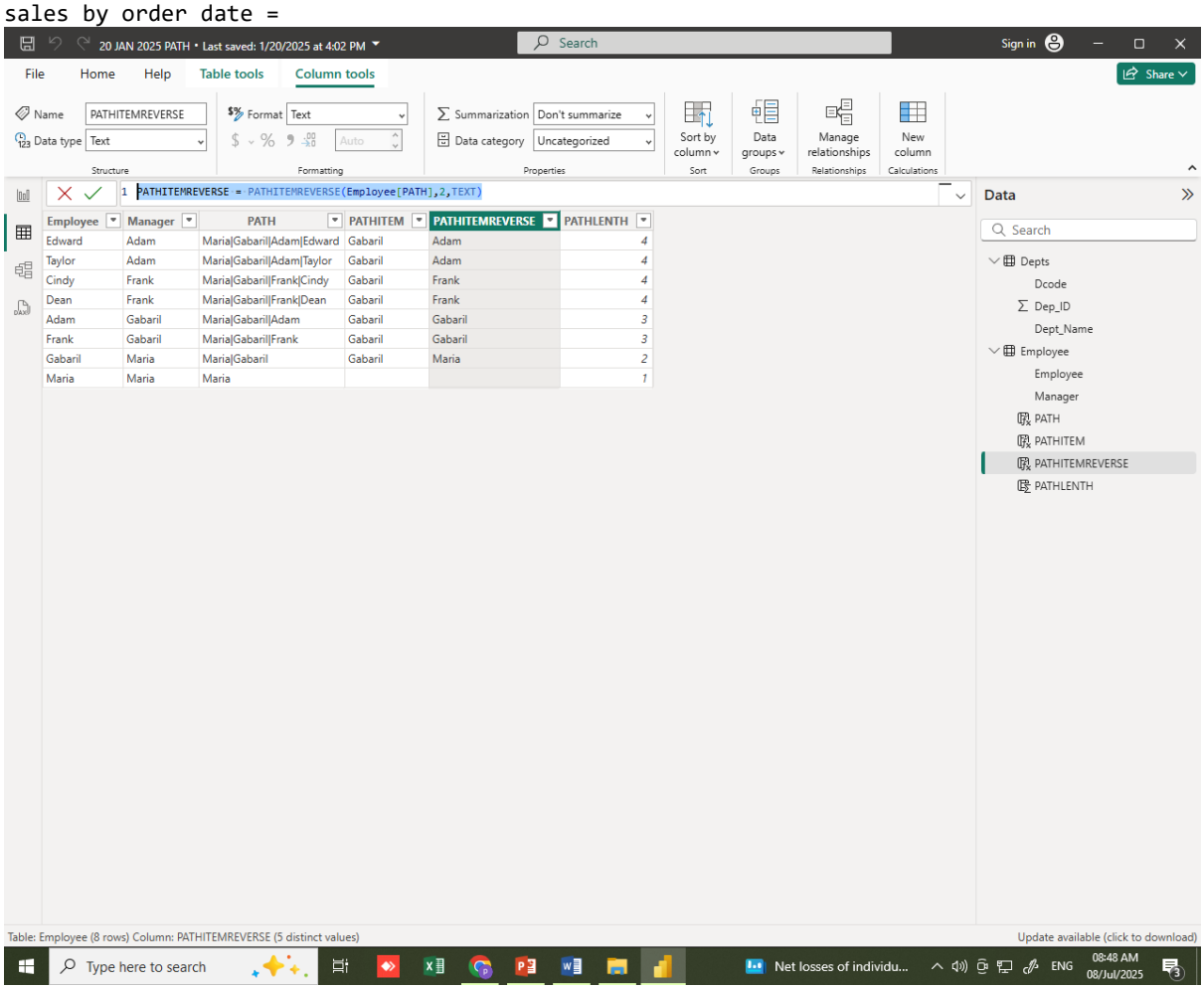



```
PATHITEM = PATHITEM(Employee[PATH],2,TEXT)
```

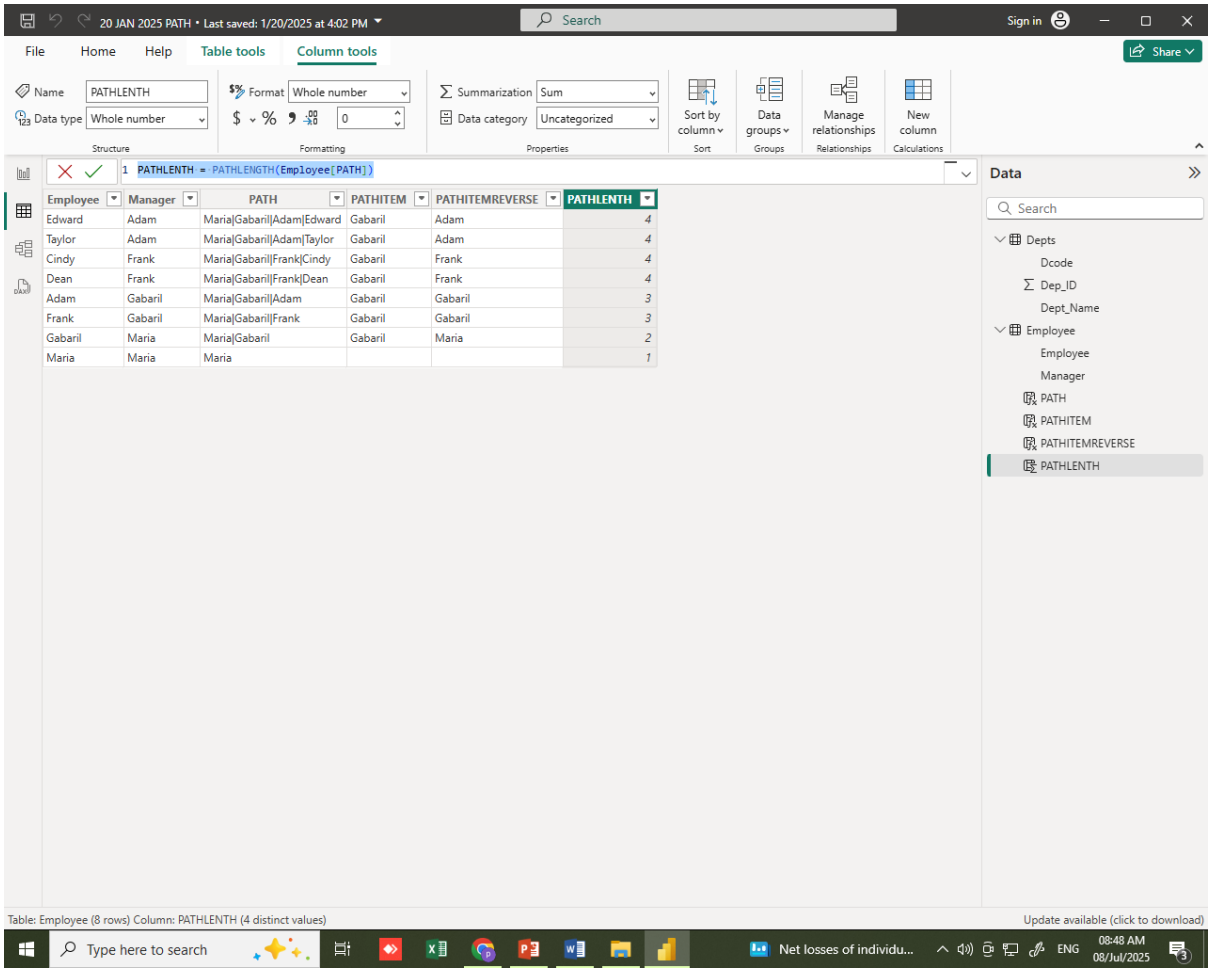



```
PATHITEMREVERSE = PATHITEMREVERSE(Employee[PATH],2,TEXT)


PATHLENTH = PATHLENGTH(Employee[PATH])

CALCULATE
MAKE MEASURES
```

sales by order date =




```
CALCULATE(SUM(Orders[Sales]),TREATAS(VALUES(CALENDER[Date]),Orders[Order Date]))
```

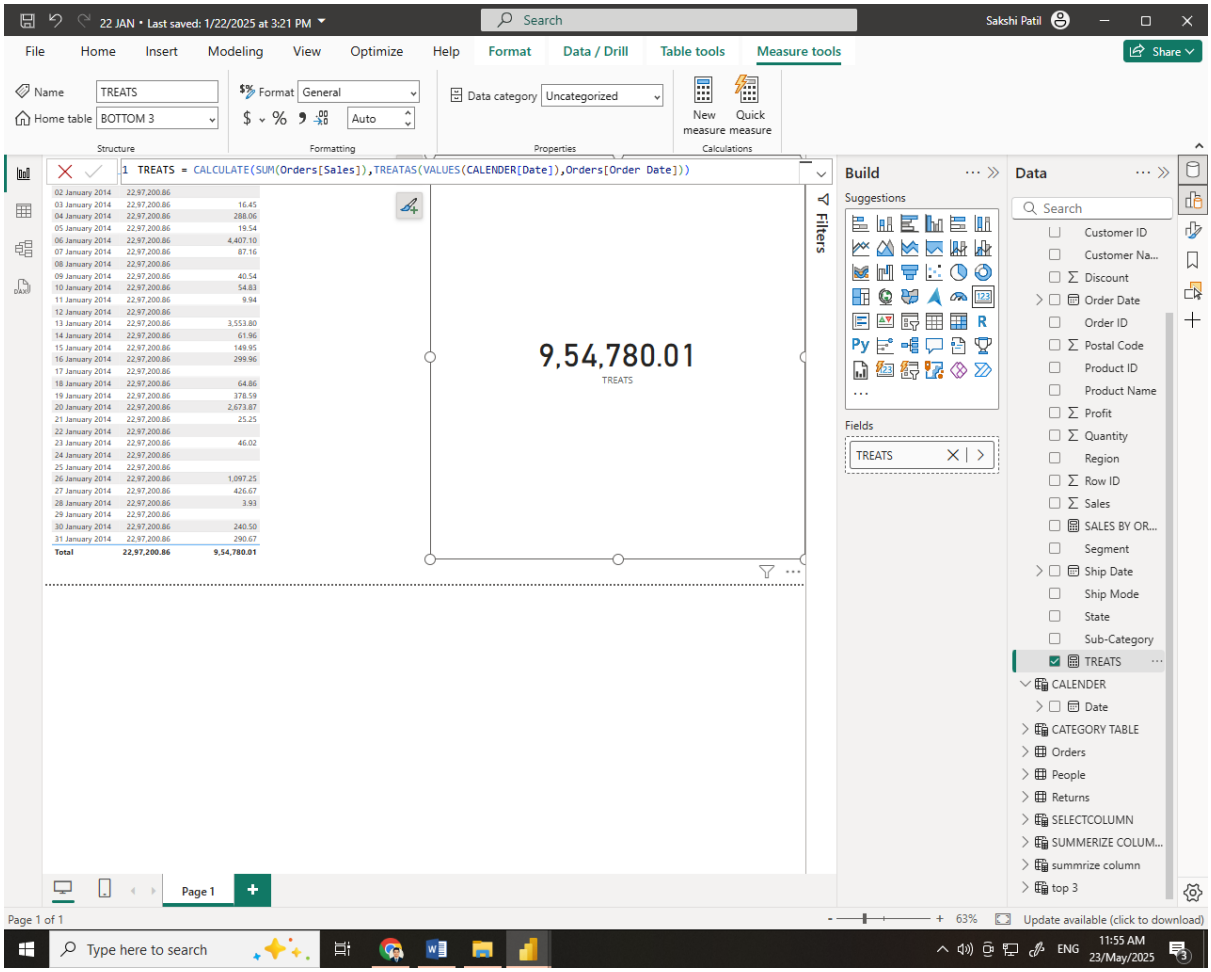


TREATS

MAKE MEASURES

```
TREATS = CALCULATE(SUM(Orders[Sales]),TREATAS(VALUES(CALENDER[Date]),Orders[Order Date]))
```

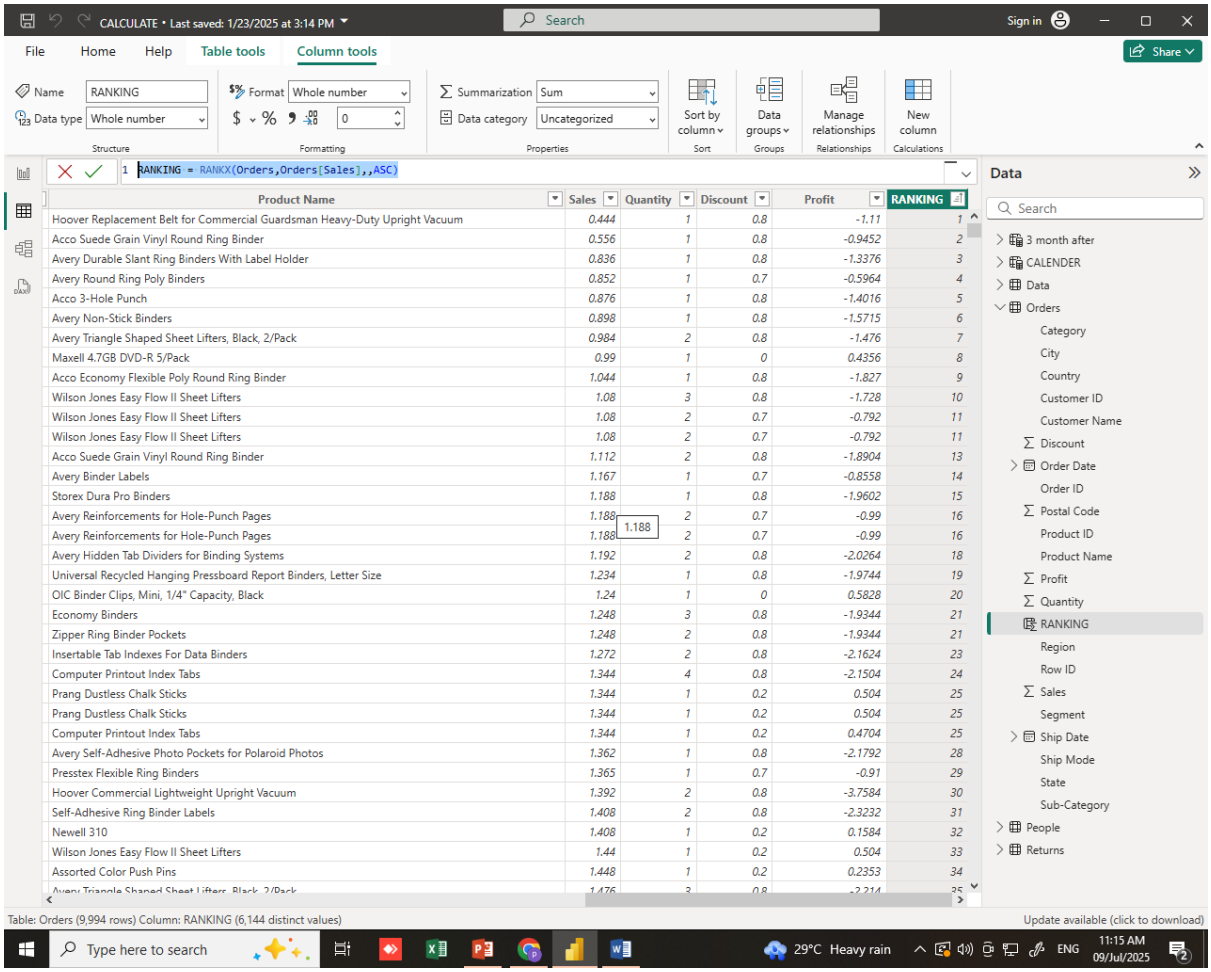
Calendar date and order date wise sale



RANKX

ADD NEW COLUMN

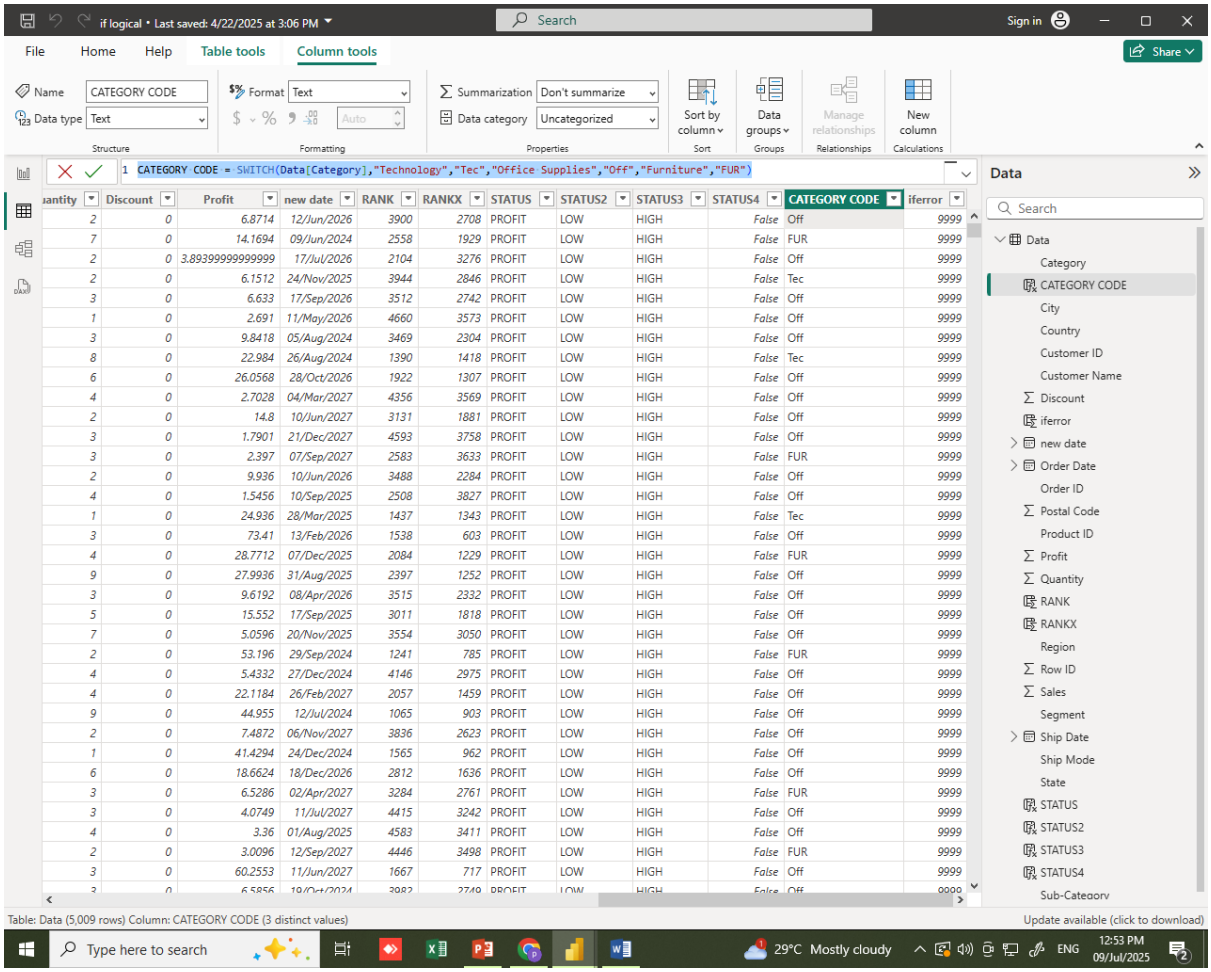
```
RANKING = RANKX(Orders,Orders[Sales],,ASC)
```



SWITCH

ADD NEW COLUMN

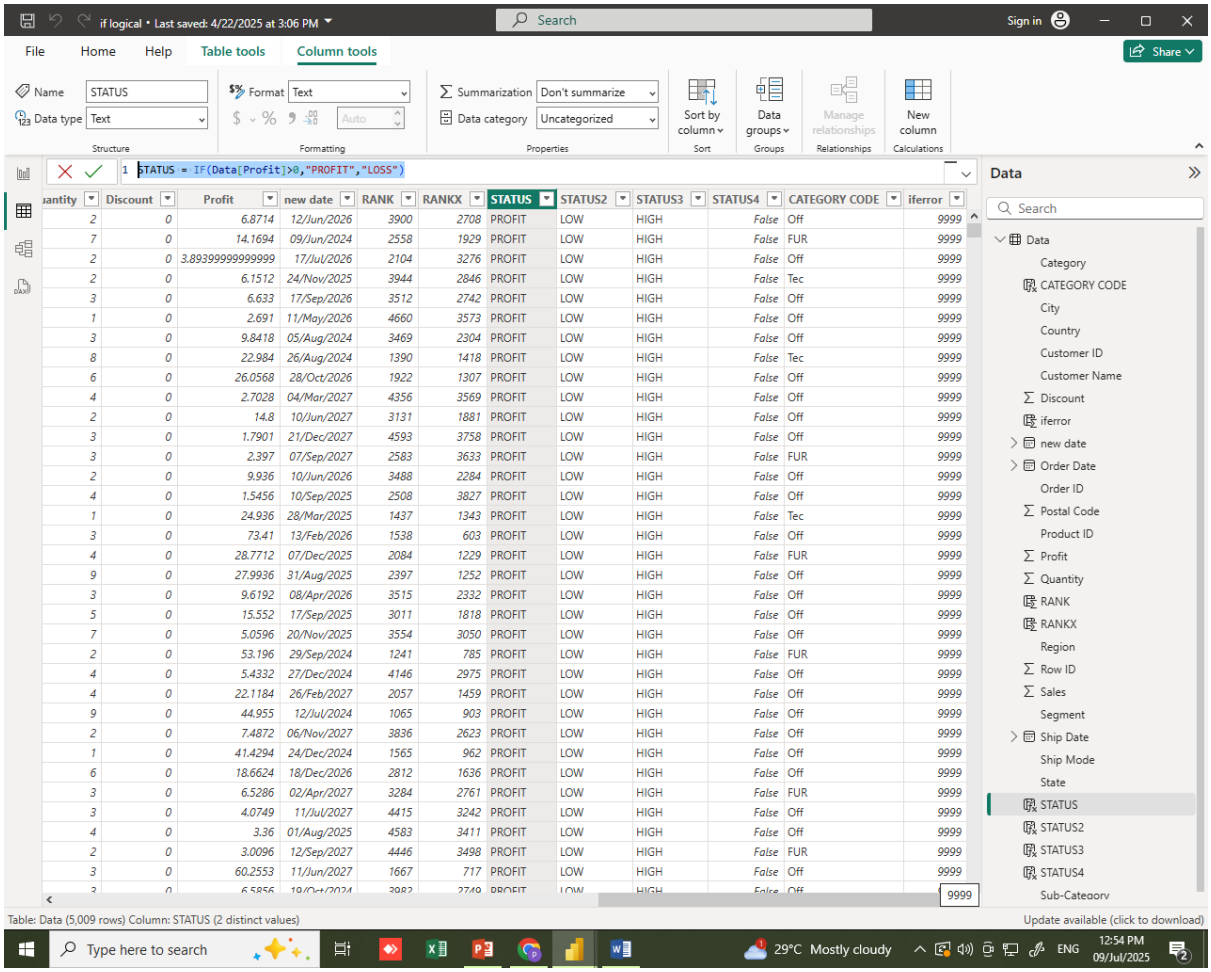
```
CATEGORY CODE = SWITCH(Data[Category],"Technology","Tec","Office
Supplies","Off","Furniture","FUR")
```



IF

ADD NEW COLUMN

```
STATUS = IF(Data[Profit]>0,"PROFIT","LOSS")
```

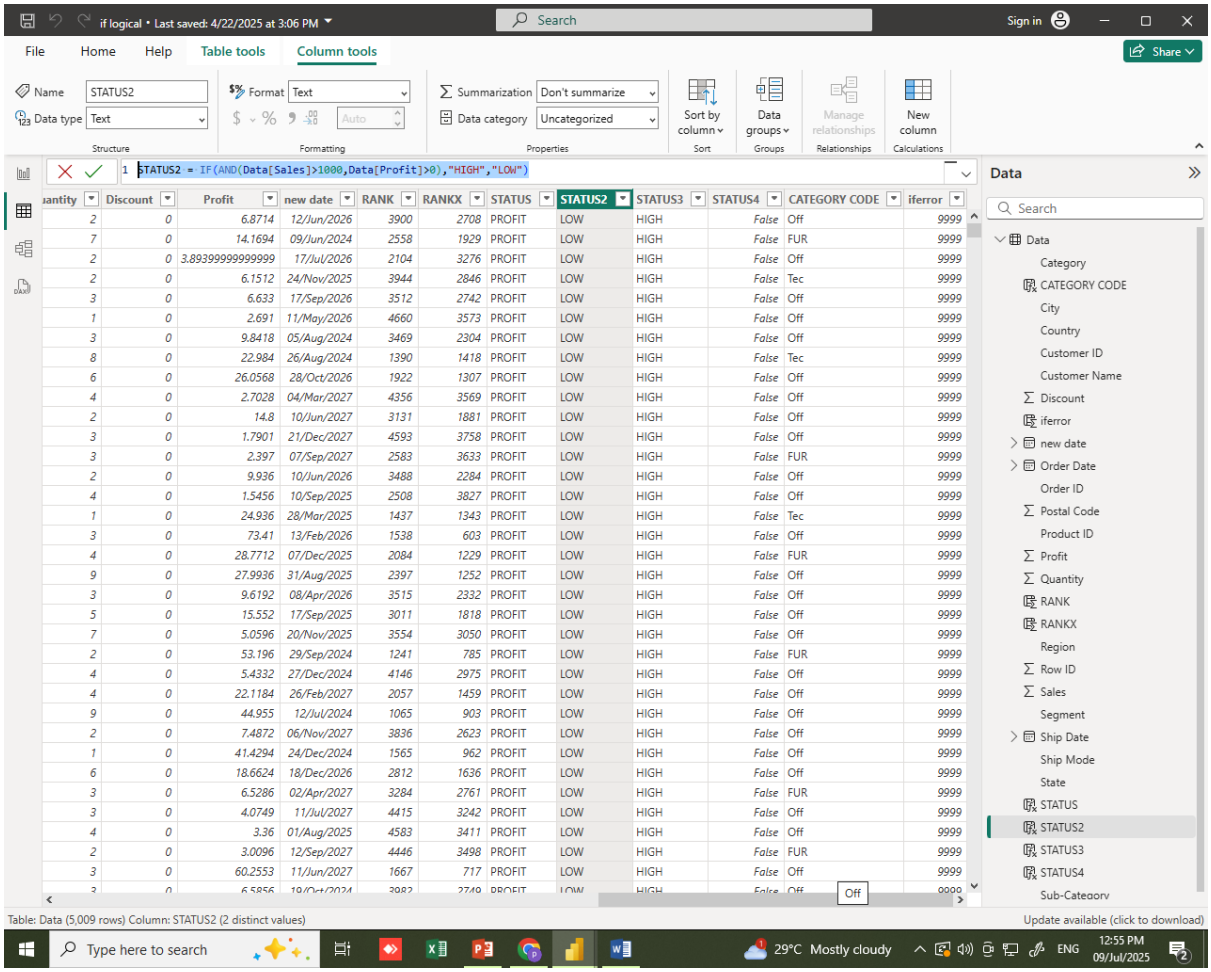


antity	Discount	Profit	new date	RANK	RANKX	STATUS	STATUS2	STATUS3	STATUS4	CATEGORY CODE	iferror
2	0	6.8714	12/Jun/2026	3900	2708	PROFIT	LOW	HIGH	False	Off	9999
7	0	14.1694	09/Jun/2024	2558	1929	PROFIT	LOW	HIGH	False	FUR	9999
2	0	3.89399999999999	17/Jul/2026	2104	3276	PROFIT	LOW	HIGH	False	Off	9999
2	0	6.1512	24/Nov/2025	3944	2846	PROFIT	LOW	HIGH	False	Tec	9999
3	0	6.633	17/Sep/2026	3512	2742	PROFIT	LOW	HIGH	False	Off	9999
1	0	2.691	11/May/2026	4660	3573	PROFIT	LOW	HIGH	False	Off	9999
3	0	9.8418	05/Aug/2024	3469	2304	PROFIT	LOW	HIGH	False	Off	9999
8	0	22.984	26/Aug/2024	1390	1418	PROFIT	LOW	HIGH	False	Tec	9999
6	0	26.0568	28/Oct/2026	1922	1307	PROFIT	LOW	HIGH	False	Off	9999
4	0	2.7028	04/Mar/2027	4356	3569	PROFIT	LOW	HIGH	False	Off	9999
2	0	14.8	10/Jun/2027	3131	1881	PROFIT	LOW	HIGH	False	Off	9999
3	0	1.7901	21/Dec/2027	4593	3758	PROFIT	LOW	HIGH	False	Off	9999
3	0	2.397	07/Sep/2027	2583	3633	PROFIT	LOW	HIGH	False	FUR	9999
2	0	9.936	10/Jun/2026	3488	2284	PROFIT	LOW	HIGH	False	Off	9999
4	0	1.5456	10/Sep/2025	2508	3827	PROFIT	LOW	HIGH	False	Off	9999
1	0	24.936	28/Mar/2025	1437	1343	PROFIT	LOW	HIGH	False	Tec	9999
3	0	73.41	13/Feb/2026	1538	603	PROFIT	LOW	HIGH	False	Off	9999
4	0	28.7712	07/Dec/2025	2084	1229	PROFIT	LOW	HIGH	False	FUR	9999
9	0	27.9936	31/Aug/2025	2397	1252	PROFIT	LOW	HIGH	False	Off	9999
3	0	9.6192	08/Apr/2026	3515	2332	PROFIT	LOW	HIGH	False	Off	9999
5	0	15.552	17/Sep/2025	3011	1818	PROFIT	LOW	HIGH	False	Off	9999
7	0	5.0596	20/Nov/2025	3554	3050	PROFIT	LOW	HIGH	False	Off	9999
2	0	53.196	29/Sep/2024	1241	785	PROFIT	LOW	HIGH	False	FUR	9999
4	0	5.4332	27/Dec/2024	4146	2975	PROFIT	LOW	HIGH	False	Off	9999
4	0	22.1184	26/Feb/2027	2057	1459	PROFIT	LOW	HIGH	False	Off	9999
9	0	44.955	12/Jul/2024	1065	903	PROFIT	LOW	HIGH	False	Off	9999
2	0	7.4872	06/Nov/2027	3836	2623	PROFIT	LOW	HIGH	False	Off	9999
1	0	41.4294	24/Dec/2024	1565	962	PROFIT	LOW	HIGH	False	Off	9999
6	0	18.6624	18/Dec/2026	2812	1636	PROFIT	LOW	HIGH	False	Off	9999
3	0	6.5286	02/Apr/2027	3284	2761	PROFIT	LOW	HIGH	False	FUR	9999
3	0	4.0749	11/Jul/2027	4415	3242	PROFIT	LOW	HIGH	False	Off	9999
4	0	3.36	01/Aug/2025	4583	3411	PROFIT	LOW	HIGH	False	Off	9999
2	0	3.0096	12/Sep/2027	4446	3498	PROFIT	LOW	HIGH	False	FUR	9999
3	0	60.2553	11/Jun/2027	1667	717	PROFIT	LOW	HIGH	False	Off	9999

IF AND

ADD NEW COLUMN

```
STATUS2 = IF(AND(Data[Sales]>1000,Data[Profit]>0),"HIGH","LOW")
```



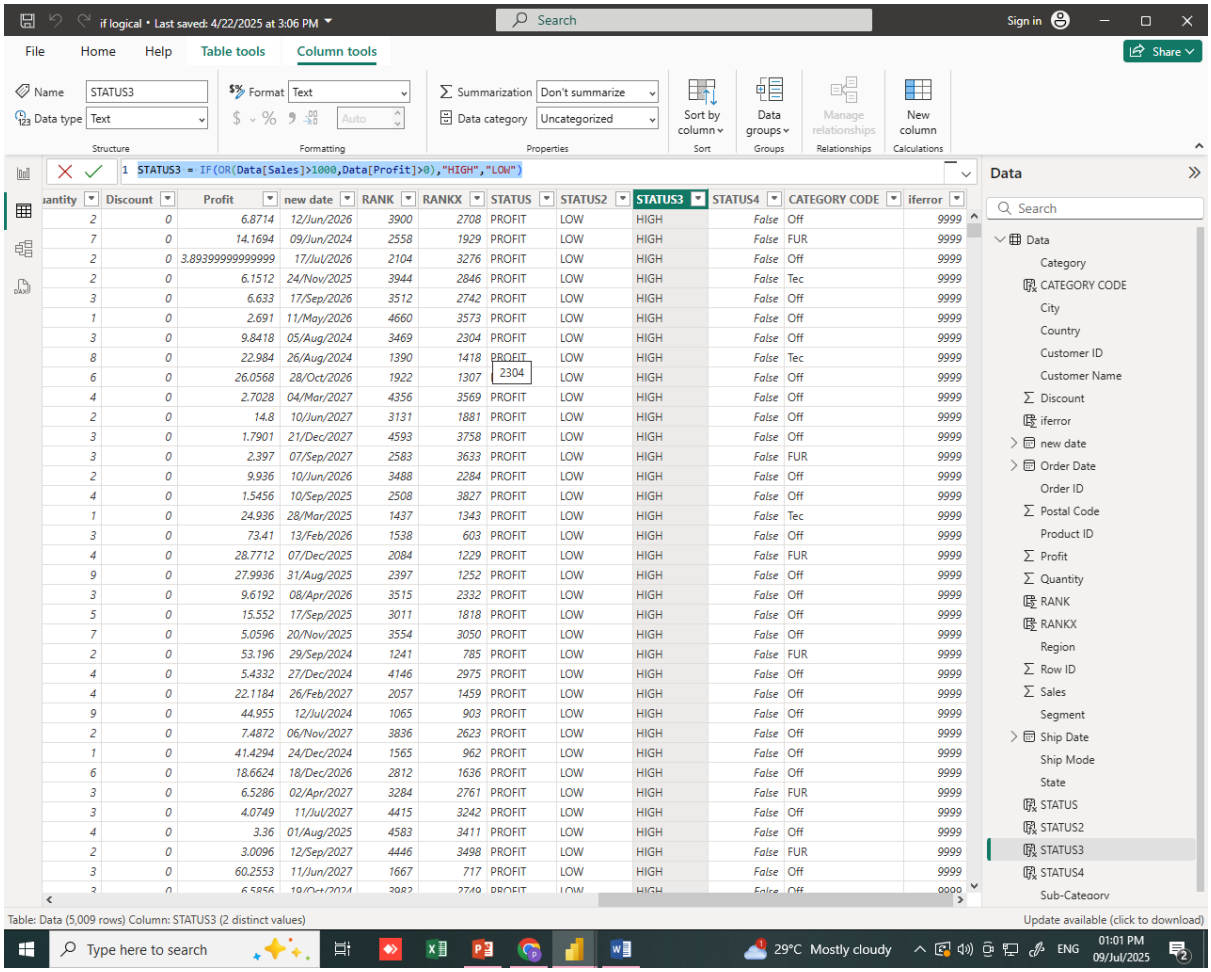
uantity	Discount	Profit	new date	RANK	RANKX	STATUS	STATUS2	STATUS3	STATUS4	CATEGORY CODE	iferror
2	0	6.8714	12/Jun/2026	3900	2708	PROFIT	LOW	HIGH	False	Off	9999
7	0	14.1694	09/Jun/2024	2558	1929	PROFIT	LOW	HIGH	False	FUR	9999
2	0	3.89399999999999	17/Jul/2026	2104	3276	PROFIT	LOW	HIGH	False	Off	9999
2	0	6.1512	24/Nov/2025	3944	2846	PROFIT	LOW	HIGH	False	Tec	9999
3	0	6.633	17/Sep/2026	3512	2742	PROFIT	LOW	HIGH	False	Off	9999
1	0	2.691	11/May/2026	4660	3573	PROFIT	LOW	HIGH	False	Off	9999
3	0	9.8418	05/Aug/2024	3469	2304	PROFIT	LOW	HIGH	False	Off	9999
8	0	22.984	26/Aug/2024	1390	1418	PROFIT	LOW	HIGH	False	Tec	9999
6	0	26.0568	28/Oct/2026	1922	1307	PROFIT	LOW	HIGH	False	Off	9999
4	0	2.7028	04/Mar/2027	4356	3569	PROFIT	LOW	HIGH	False	Off	9999
2	0	14.8	10/Jun/2027	3131	1881	PROFIT	LOW	HIGH	False	Off	9999
3	0	1.7901	21/Dec/2027	4593	3758	PROFIT	LOW	HIGH	False	Off	9999
3	0	2.397	07/Sep/2027	2583	3633	PROFIT	LOW	HIGH	False	FUR	9999
2	0	9.936	10/Jun/2026	3488	2284	PROFIT	LOW	HIGH	False	Off	9999
4	0	1.5456	10/Sep/2025	2508	3827	PROFIT	LOW	HIGH	False	Off	9999
1	0	24.936	28/Mar/2025	1437	1343	PROFIT	LOW	HIGH	False	Tec	9999
3	0	73.41	13/Feb/2026	1538	603	PROFIT	LOW	HIGH	False	Off	9999
4	0	28.7712	07/Dec/2025	2084	1229	PROFIT	LOW	HIGH	False	FUR	9999
9	0	27.9936	31/Aug/2025	2397	1252	PROFIT	LOW	HIGH	False	Off	9999
3	0	9.6192	08/Apr/2026	3515	2332	PROFIT	LOW	HIGH	False	Off	9999
5	0	15.552	17/Sep/2025	3011	1818	PROFIT	LOW	HIGH	False	Off	9999
7	0	5.0596	20/Nov/2025	3554	3050	PROFIT	LOW	HIGH	False	Off	9999
2	0	53.196	29/Sep/2024	1241	785	PROFIT	LOW	HIGH	False	FUR	9999
4	0	5.4332	27/Dec/2024	4146	2975	PROFIT	LOW	HIGH	False	Off	9999
4	0	22.1184	26/Feb/2027	2057	1459	PROFIT	LOW	HIGH	False	Off	9999
9	0	44.955	12/Jul/2024	1065	903	PROFIT	LOW	HIGH	False	Off	9999
2	0	7.4872	06/Nov/2027	3836	2623	PROFIT	LOW	HIGH	False	Off	9999
1	0	41.4294	24/Dec/2024	1565	962	PROFIT	LOW	HIGH	False	Off	9999
6	0	18.6624	18/Dec/2026	2812	1636	PROFIT	LOW	HIGH	False	Off	9999
3	0	6.5286	02/Apr/2027	3284	2761	PROFIT	LOW	HIGH	False	FUR	9999
3	0	4.0749	11/Jul/2027	4415	3242	PROFIT	LOW	HIGH	False	Off	9999
4	0	3.36	01/Aug/2025	4583	3411	PROFIT	LOW	HIGH	False	Off	9999
2	0	3.0096	12/Sep/2027	4446	3498	PROFIT	LOW	HIGH	False	FUR	9999
3	0	60.2553	11/Jun/2027	1667	717	PROFIT	LOW	HIGH	False	Off	9999
3	0	6.5856	19/Oct/2024	3982	2749	PROFIT	LOW	HIGH	False	Off	9999

Off

IF OR

ADD NEW COLUMN

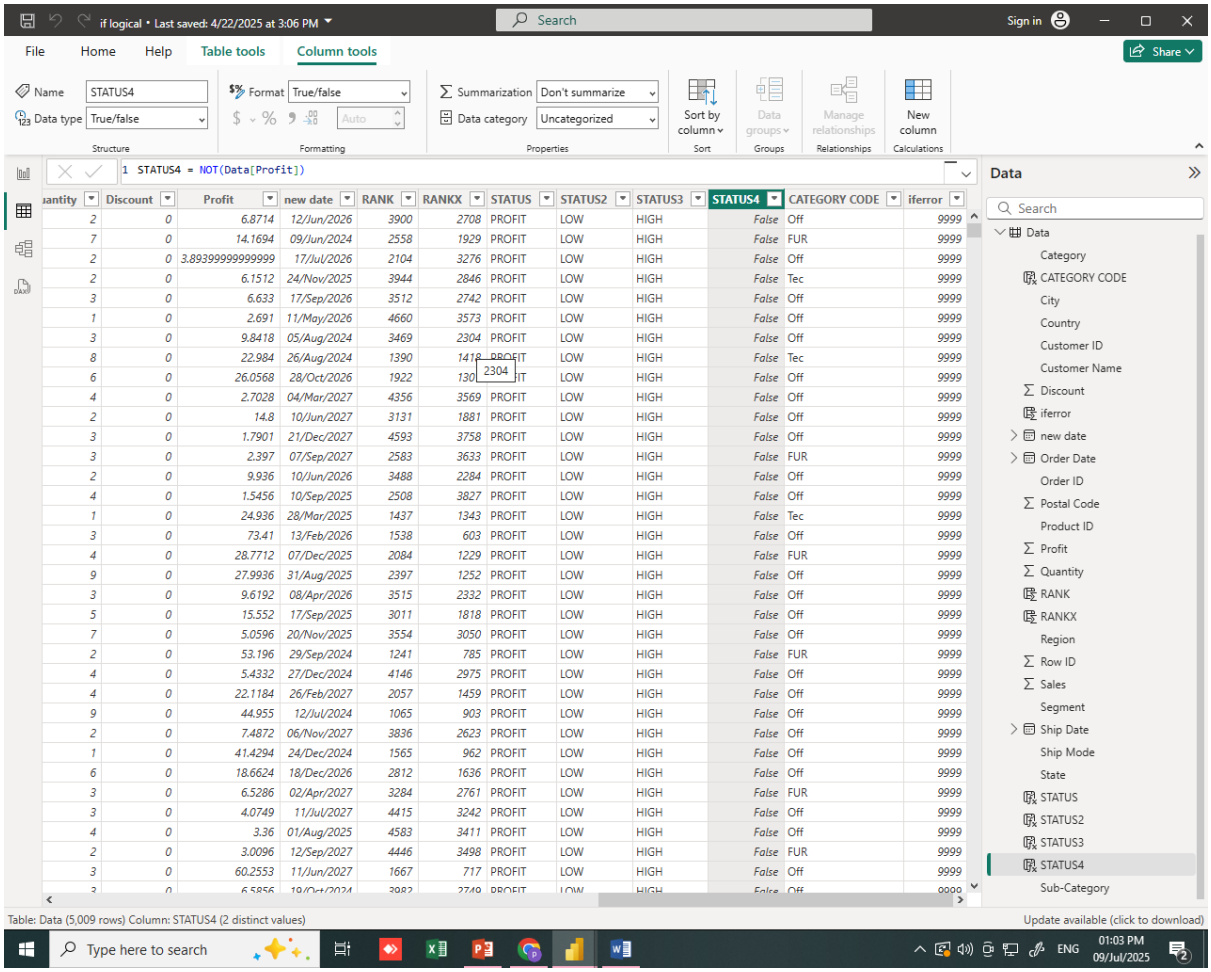
```
STATUS3 = IF(OR(Data[Sales]>1000,Data[Profit]>0),"HIGH","LOW")
```



IF NOT

ADD NEW COLUMN

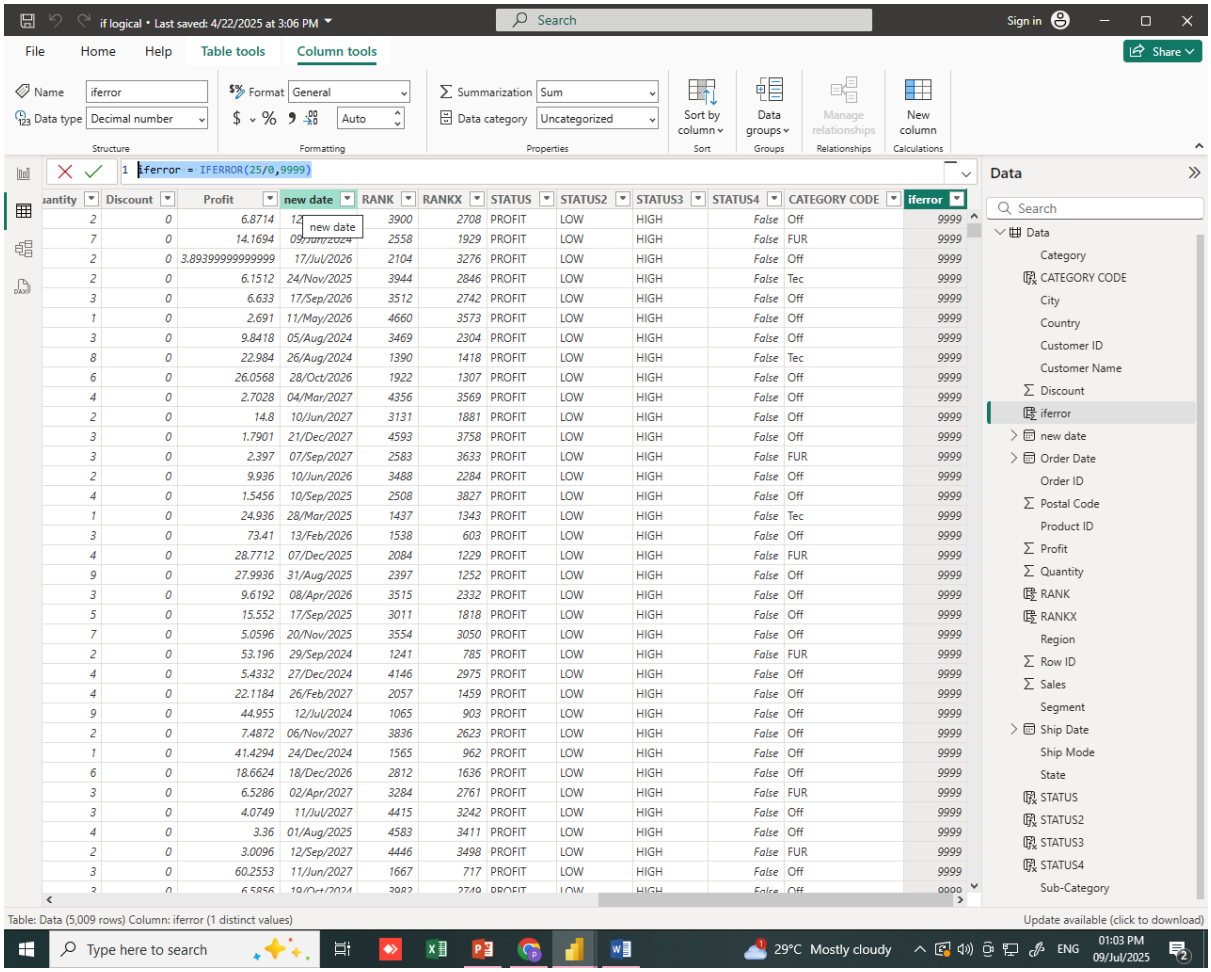
```
STATUS4 = NOT(Data[Profit])
```



IFERROR

ADD NEW COLUMN

```
iferror = IFERROR(25/0,9999)
```



Filter functions

All functions

Show output in tabl
es

Add measures

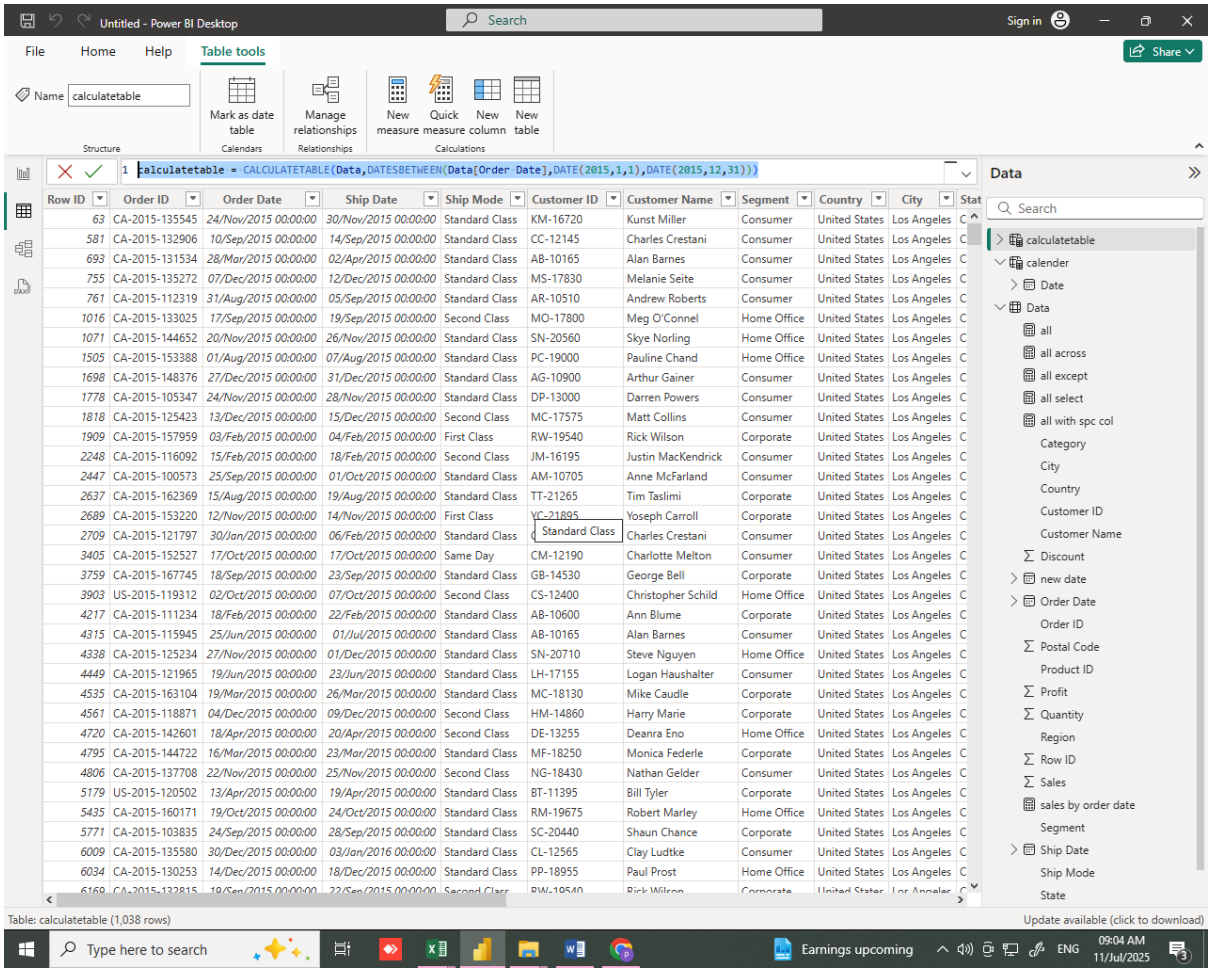
```
all = CALCULATE(SUM(Data[Sales]),ALL(Data))
all across = CALCULATE(SUM(Data[Sales]),ALLCROSSFILTERED(Data))
all except = CALCULATE(SUM(Data[Sales]),ALLEXCEPT(Data,Data[Sub-Category]))
all select = CALCULATE(SUM(Data[Sales]),ALLSELECTED(Data[City],Data[Sub-Category]))
all with specific col = CALCULATE(SUM(Data[Sales]),ALL(Data[Sub-Category]))
```

calculate table

add new table

it will make new table. Represent only 2015 data

```
calculatetable = CALCULATETABLE(Data,DATESBETWEEN(Data[Order
Date],DATE(2015,1,1),DATE(2015,12,31)))
```



Lookup value

We can fetch data Without relation

Open sample lookup value file

There are 2 query tables

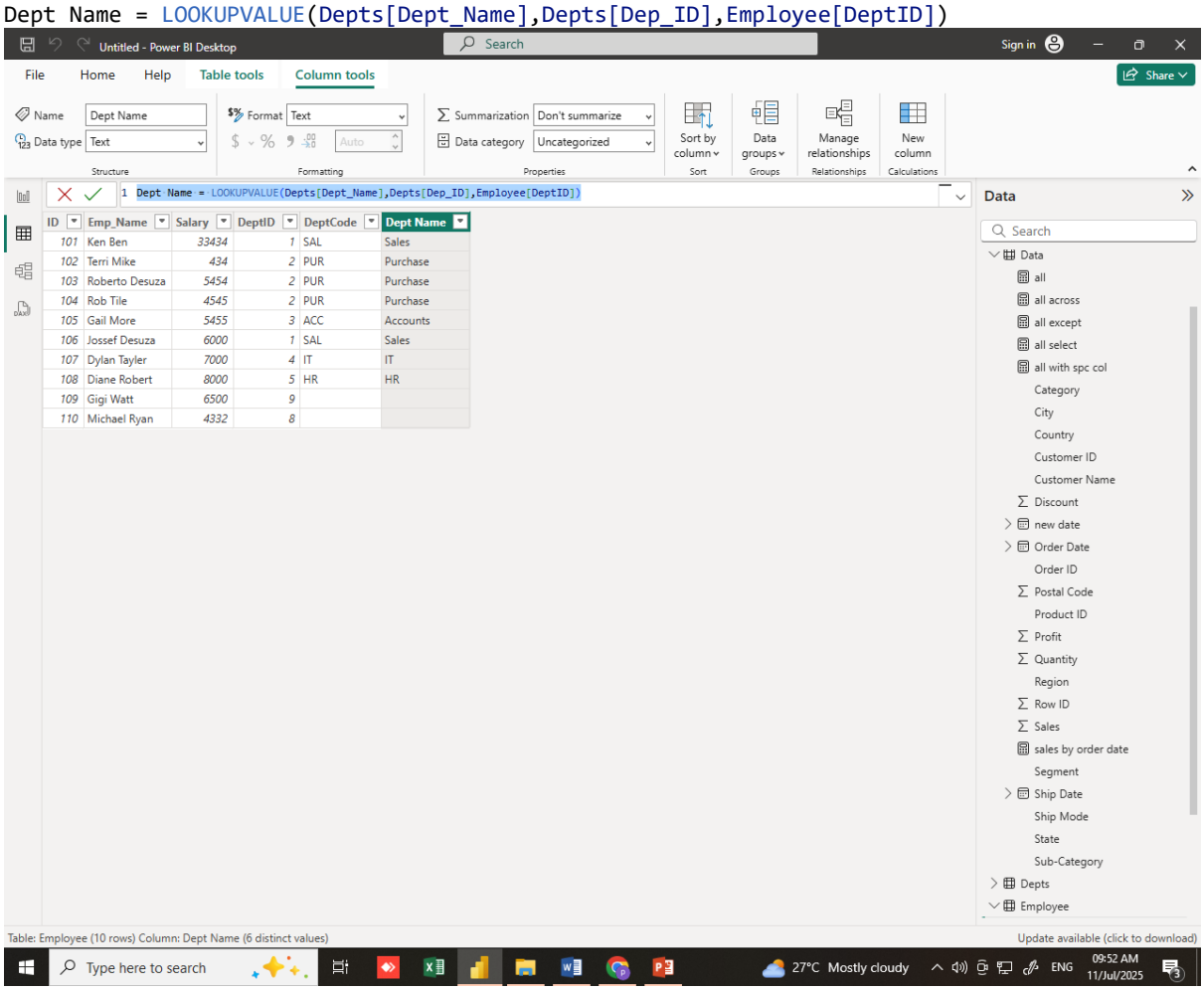
Apply formula in employee table

Dept name will come in employee table

DEPT	EMPLOYEE
Dept ID	salary
Dept Name	DeptCode
Dcode	**Dept ID**
	EMPLOYEE NAME
	ID

Add new column

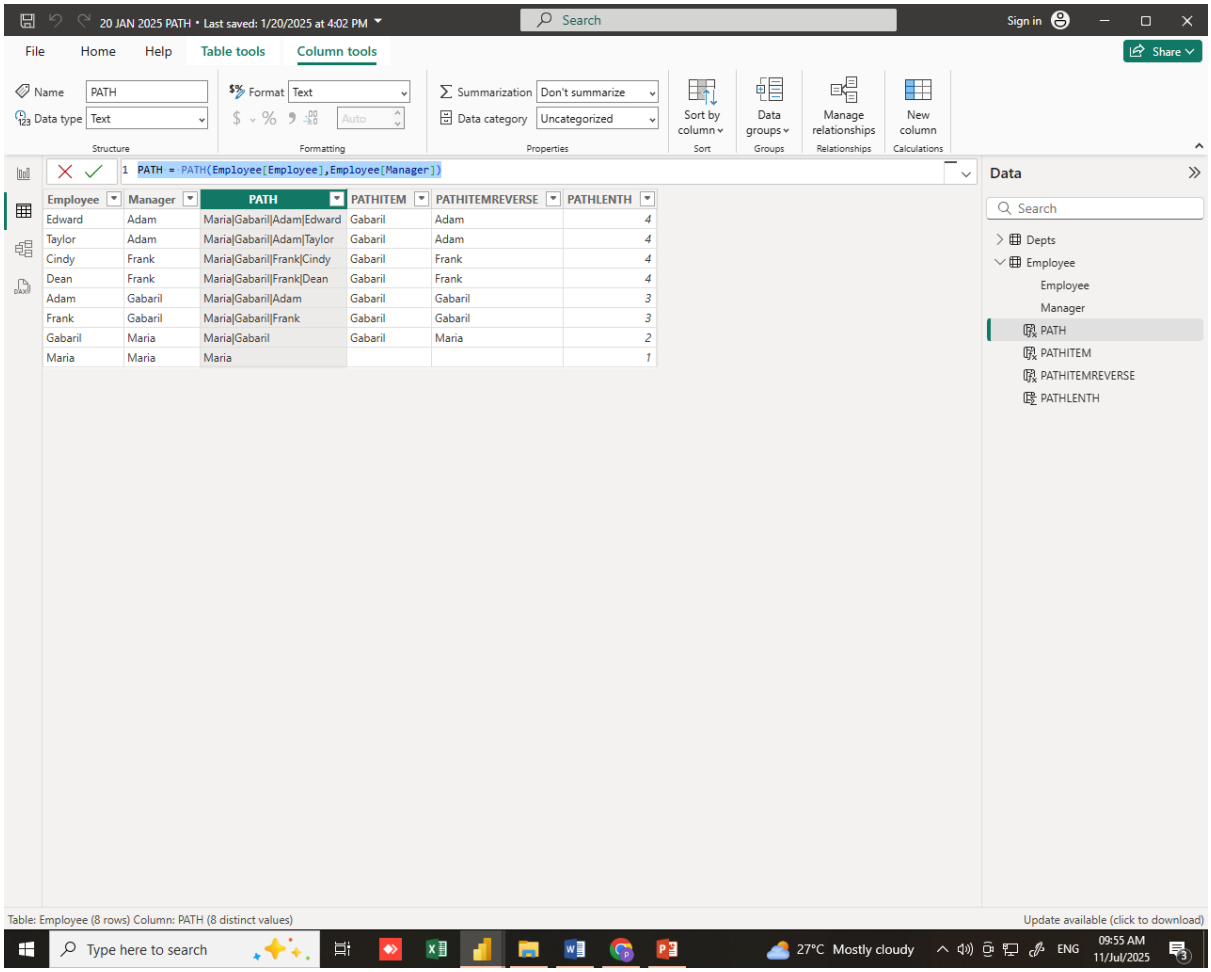
```
Dept Name = LOOKUPVALUE(Depts[Dept_Name],Depts[Dep_ID],Employee[DeptID])
```



Path

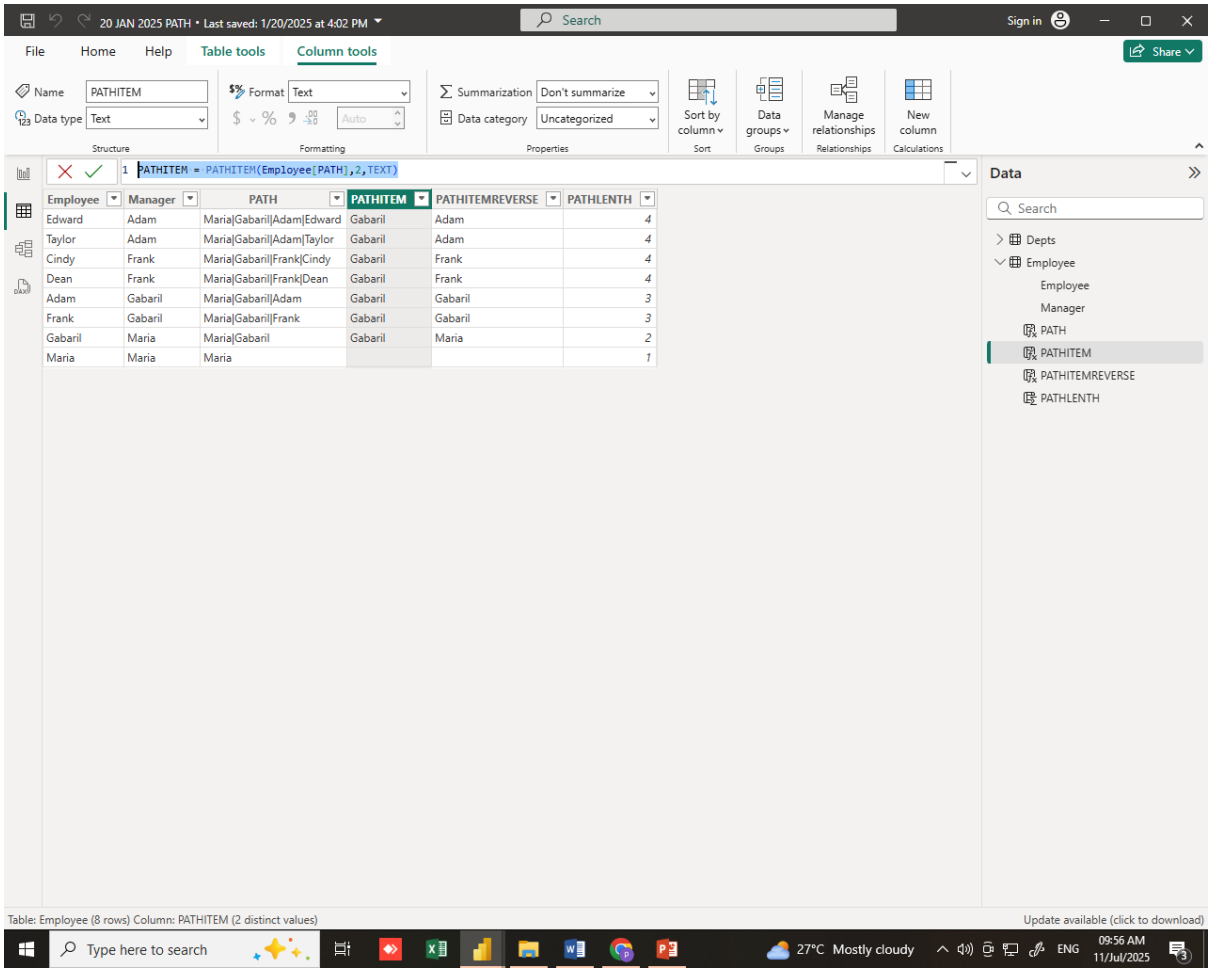
Add new column in employee table

```
PATH = PATH(Employee[Employee],Employee[Manager])
```



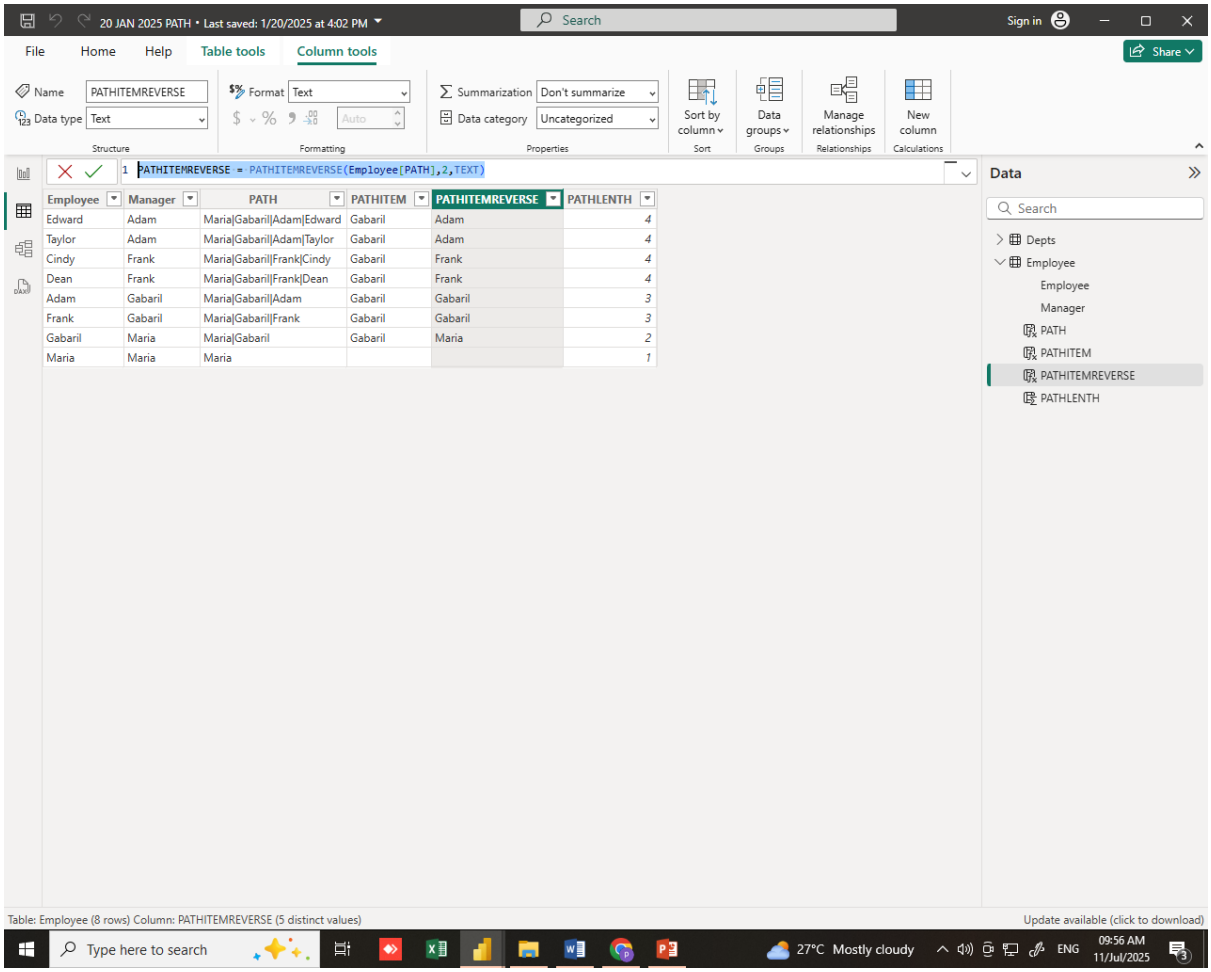
PATHITEM

```
PATHITEM = PATHITEM(Employee[PATH],2,TEXT)
```



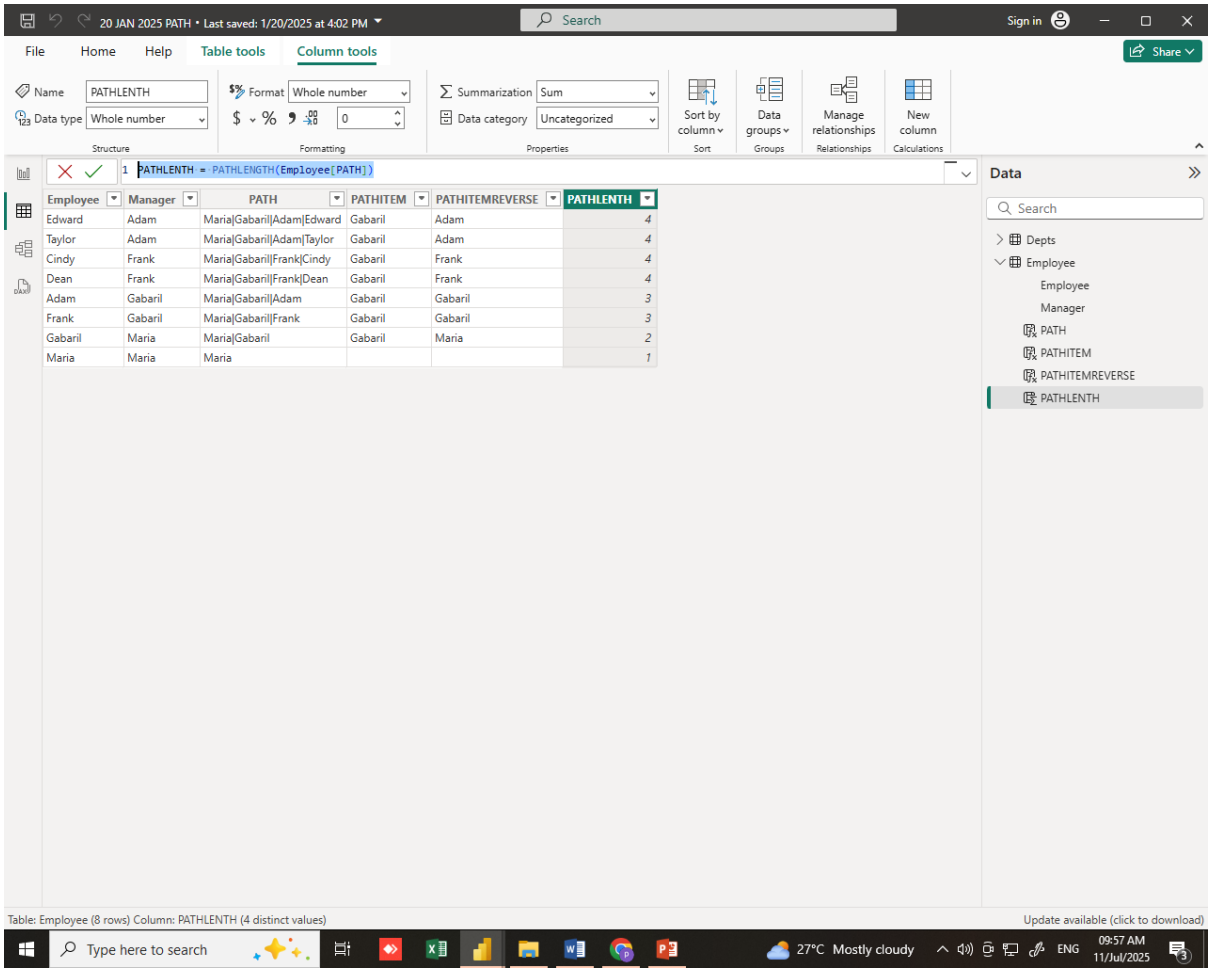
PATHITEMREVERSE

```
PATHITEMREVERSE = PATHITEMREVERSE(Employee[PATH],2,TEXT)
```



PATHLENTH

```
PATHLENTH = PATHLENGTH(Employee[PATH])
```

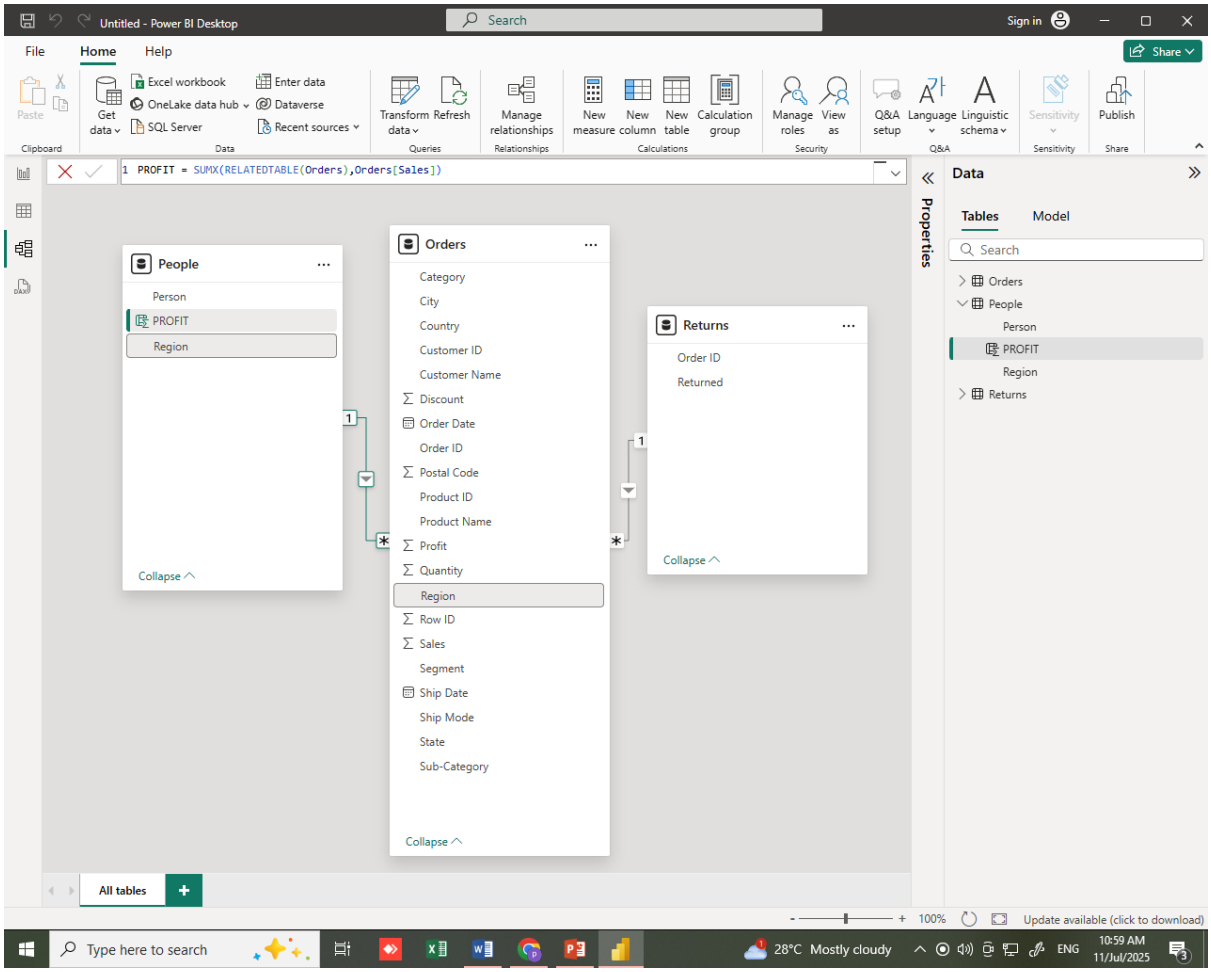


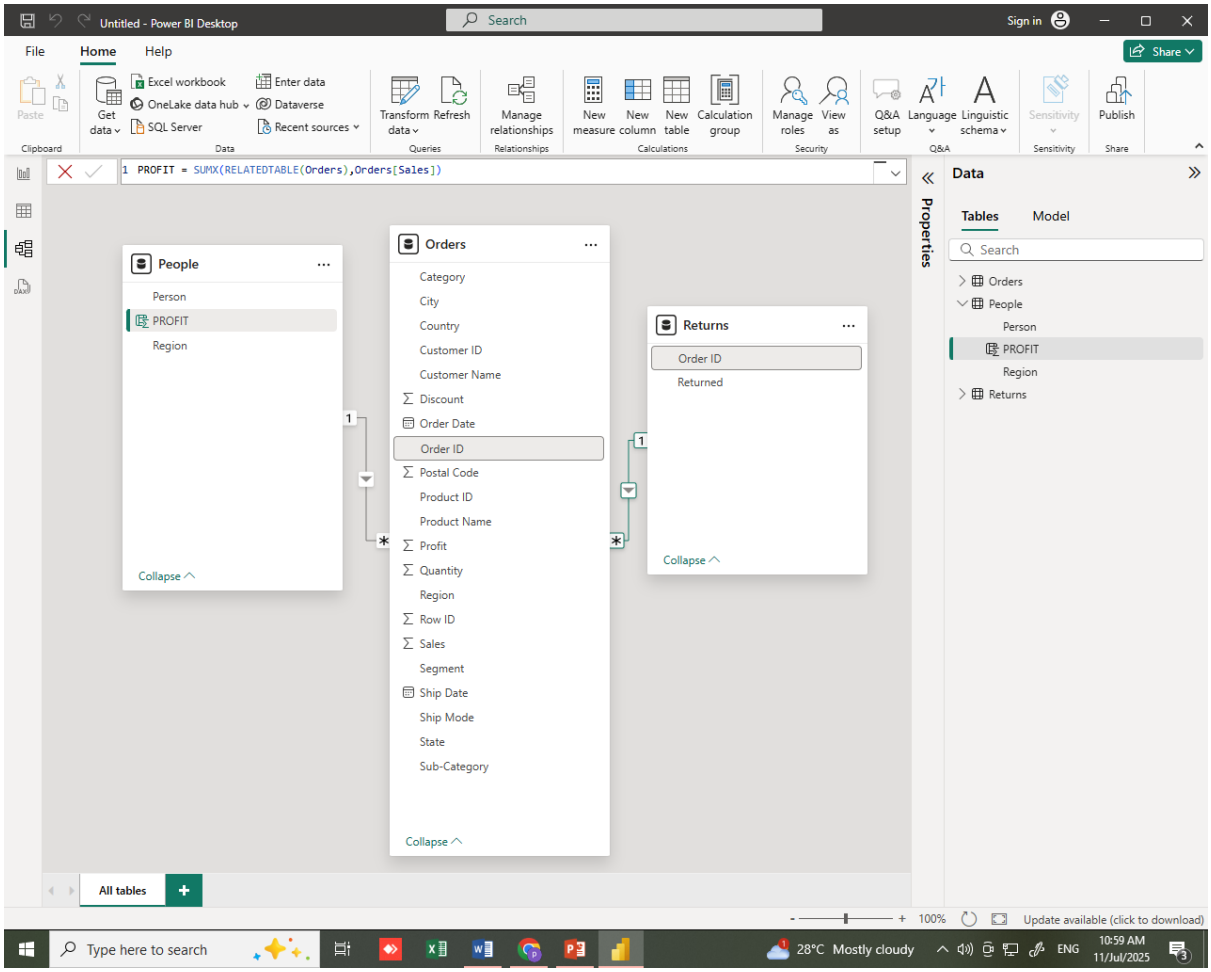
FORMULA WITH RELATION
4 TYPES OF RELATION
1 TO MANY
MANY TO 1
MANY TO MANY
ONE TO ONE

1- UNIQUE
MANY-DUPLICATE

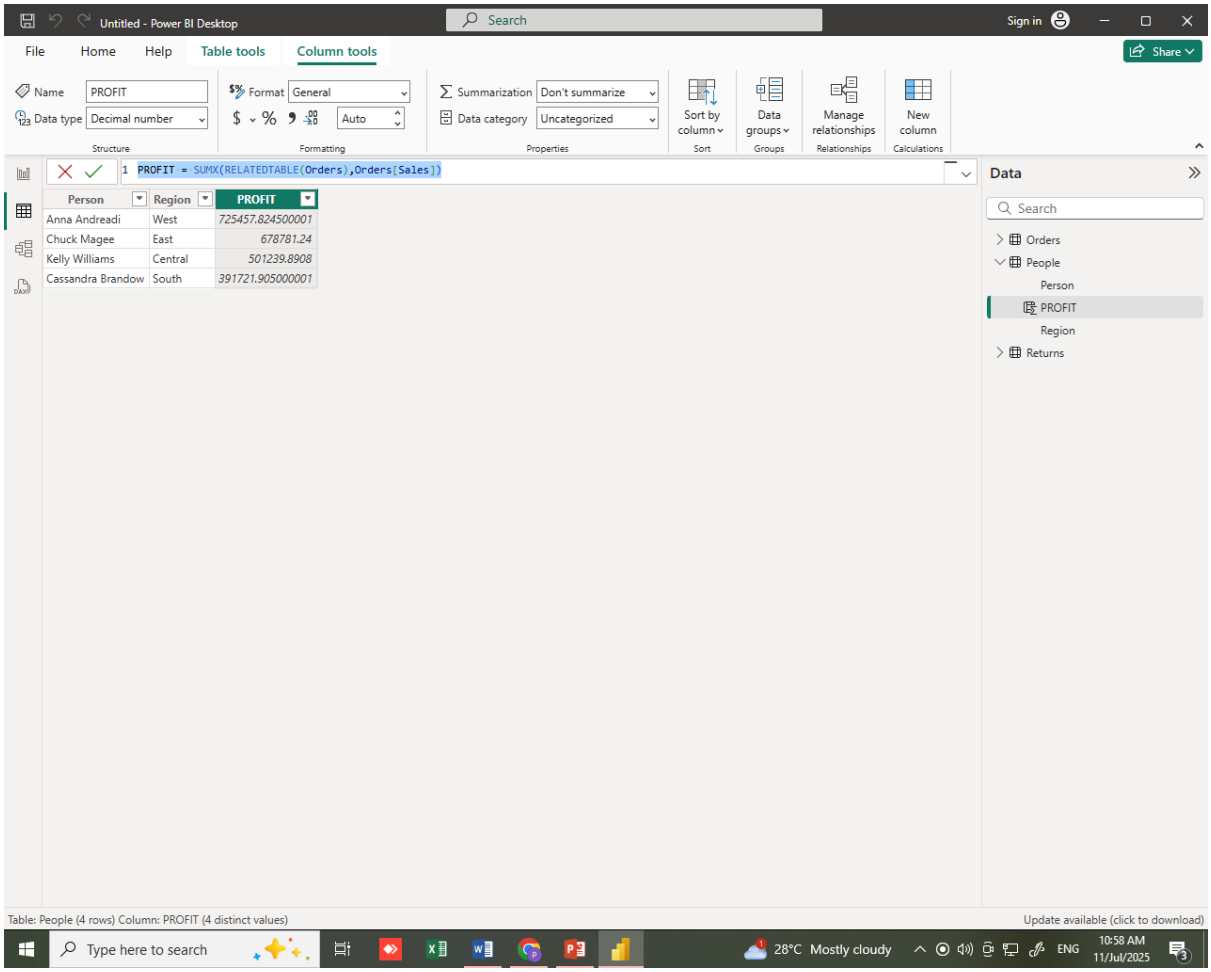
RELATED VS RELATEDTABLE
MANY TO ONE – RELATABLE
ONE TO MANY-RELATED

MAKE RELATION FIRST


Untitled - Power BI Desktop
Search
Sign in
File
Home
Help
Share
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
Share
1 PROFIT = SUMX(RELATEDTABLE(Orders),Orders[Sales])
People
Person
PROFIT
Region
Collapse
Orders
Category
City
Country
Customer ID
Customer Name
Discount
Order Date
Order ID
Postal Code
Product ID
Product Name
Profit
Quantity
Region
Row ID
Sales
Segment
Ship Date
Ship Mode
State
Sub-Category
Collapse
Returns
Order ID
Returned
Collapse
Properties
Data
Tables
Model
Search
Orders
People
Person
PROFIT
Region
Returns
All tables
100%
Update available (click to download)
Type here to search
28°C Mostly cloudy
ENG
10:59 AM
11/Jul/2025



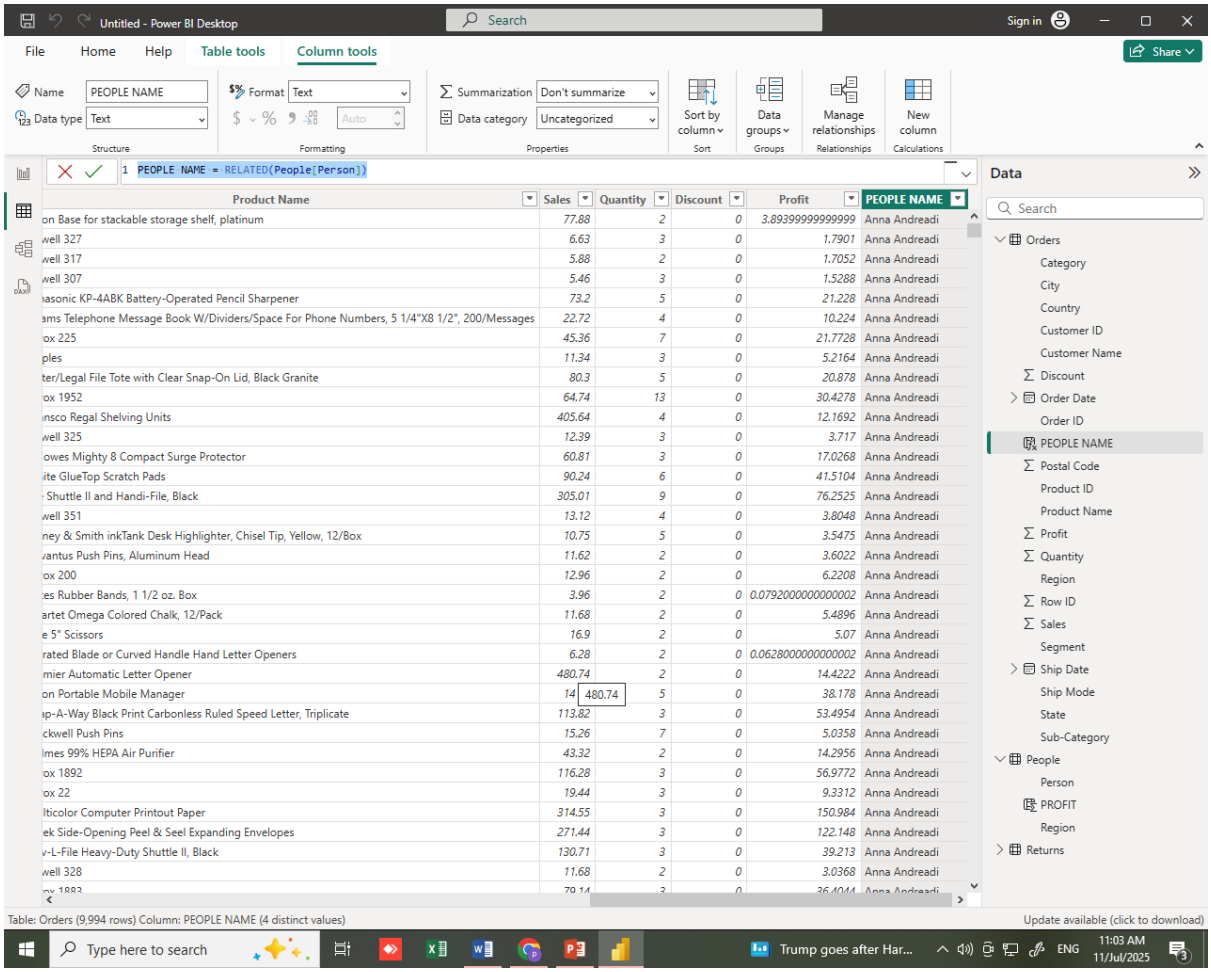

```
    OPEN PEOPLE TABLE
    ADD NEW COLUMN
    PROFIT WILL COME FROM ORDER TABLE
PROFIT = SUMX(RELATEDTABLE(Orders),Orders[profit])
```



NOW OPEN ORDER TABLE

PERSON NAME WILL COME FROM PEOPLE TABLE

```
PEOPLE NAME = RELATED(People[Person])
```



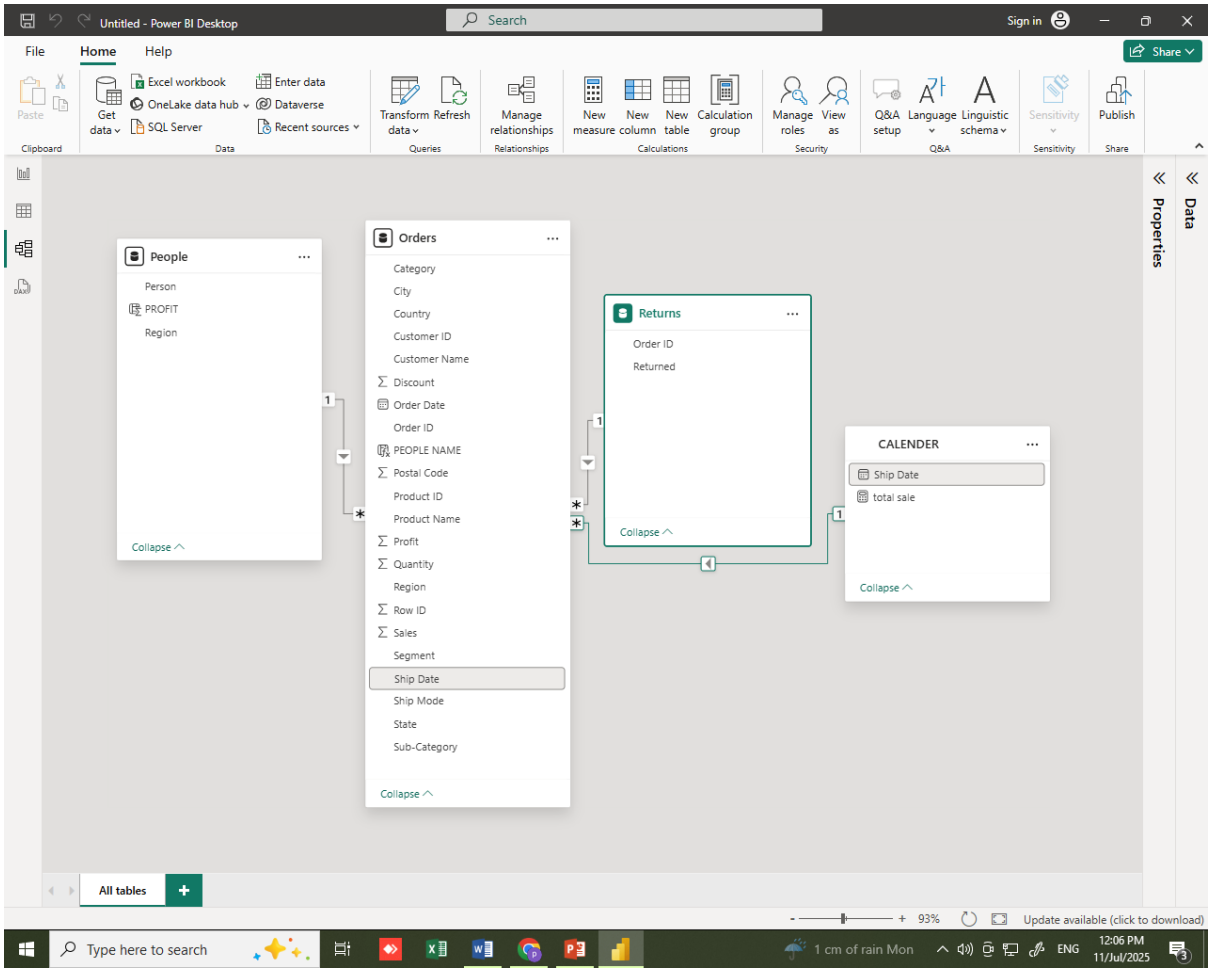
USERRELATIONSHIP

MAKE CALENDER TABLE

```
CALENDER = CALENDAR(DATE(2014,1,1),DATE(2016,12,31))
```

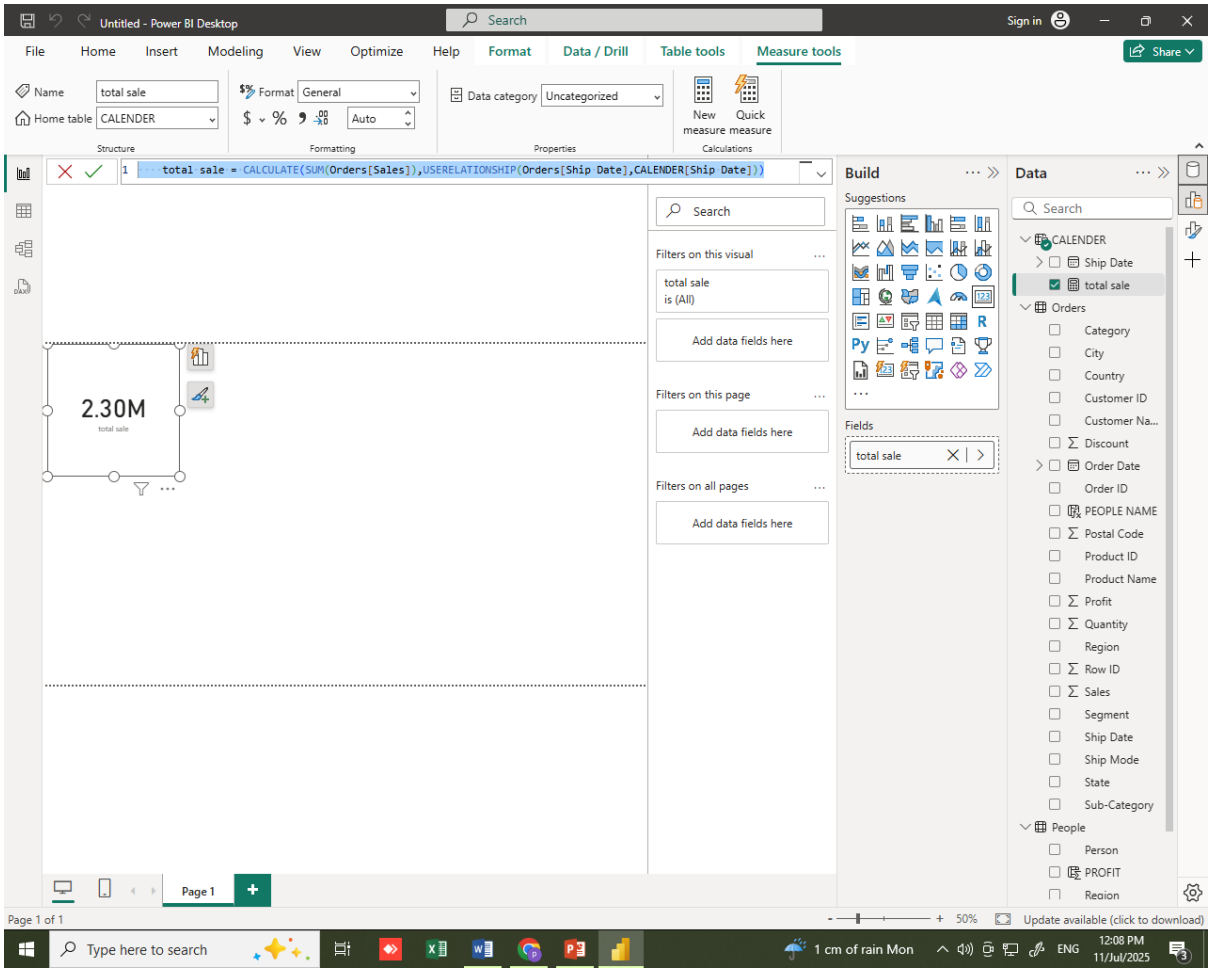
Give title name “Ship Date”

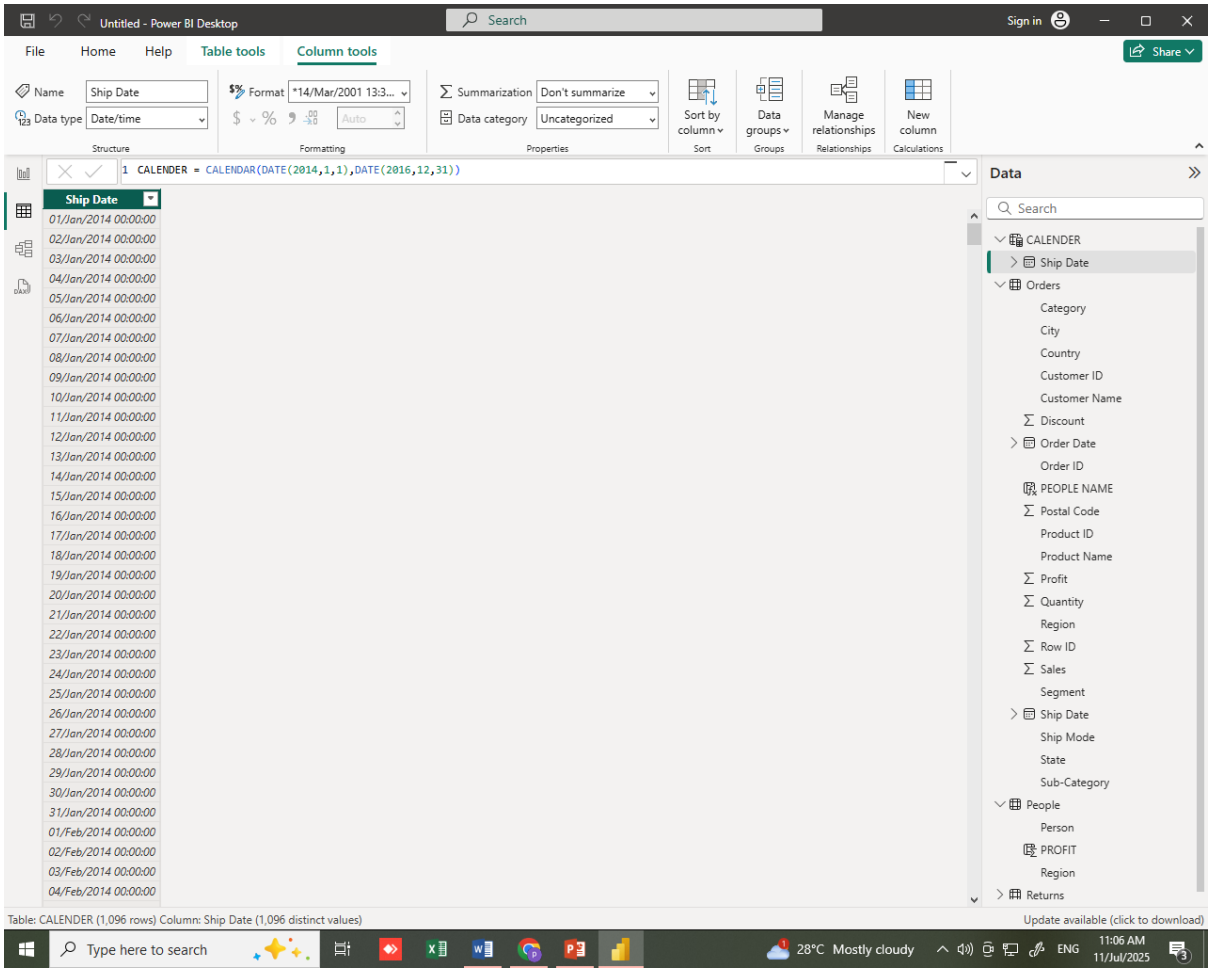
MAKE RELATION



Make measure

```
total sale = CALCULATE(SUM(Orders[Sales]),USERELATIONSHIP(Orders[Ship Date],CALENDER[Ship Date]))
```


Untitled - Power BI Desktop
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Table tools
Measure tools
Share
Name
total sale
Home table
CALENDER
Structure
Format
General
Auto
Formatting
Data category
Uncategorized
Properties
New measure
Quick measure
Calculations
total sale = CALCULATE(SUM(Orders[Sales]),USERELATIONSHIP(Orders[Ship Date],CALENDER[Ship Date]))
2.30M
total sale
Filters on this visual
total sale
is (All)
Add data fields here
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Build
Suggestions
Fields
total sale
Data
CALENDER
Ship Date
total sale
Orders
Category
City
Country
Customer ID
Customer Na...
Discount
Order Date
Order ID
PEOPLE NAME
Postal Code
Product ID
Product Name
Profit
Quantity
Region
Row ID
Sales
Segment
Ship Date
Ship Mode
State
Sub-Category
People
Person
PROFIT
Page 1
Page 1 of 1
50%
Update available (click to download)
Type here to search
1 cm of rain Mon
ENG
12:08 PM
11/Jul/2025


Untitled - Power BI Desktop
Search
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Column tools
Share
Name
Ship Date
Data type
Date/time
Format
*14/Mar/2001 13:3...
Summarization
Don't summarize
Data category
Uncategorized
Sort by column
Data groups
Manage relationships
New column
Structure
Formatting
Properties
Sort
Groups
Relationships
Calculations
1 CALENDER = CALENDAR(DATE(2014,1,1),DATE(2016,12,31))
Ship Date
01/Jan/2014 00:00:00
02/Jan/2014 00:00:00
03/Jan/2014 00:00:00
04/Jan/2014 00:00:00
05/Jan/2014 00:00:00
06/Jan/2014 00:00:00
07/Jan/2014 00:00:00
08/Jan/2014 00:00:00
09/Jan/2014 00:00:00
10/Jan/2014 00:00:00
11/Jan/2014 00:00:00
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16/Jan/2014 00:00:00
17/Jan/2014 00:00:00
18/Jan/2014 00:00:00
19/Jan/2014 00:00:00
20/Jan/2014 00:00:00
21/Jan/2014 00:00:00
22/Jan/2014 00:00:00
23/Jan/2014 00:00:00
24/Jan/2014 00:00:00
25/Jan/2014 00:00:00
26/Jan/2014 00:00:00
27/Jan/2014 00:00:00
28/Jan/2014 00:00:00
29/Jan/2014 00:00:00
30/Jan/2014 00:00:00
31/Jan/2014 00:00:00
01/Feb/2014 00:00:00
02/Feb/2014 00:00:00
03/Feb/2014 00:00:00
04/Feb/2014 00:00:00
Data
Search
CALENDER
Ship Date
Orders
Category
City
Country
Customer ID
Customer Name
Discount
Order Date
Order ID
PEOPLE NAME
Postal Code
Product ID
Product Name
Profit
Quantity
Region
Row ID
Sales
Segment
Ship Date
Ship Mode
State
Sub-Category
People
Person
PROFIT
Region
Returns
Table: CALENDER (1,096 rows) Column: Ship Date (1,096 distinct values)
Update available (click to download)
Type here to search
28°C Mostly cloudy
ENG
11:06 AM
11/Jul/2025