DAX Functions in Power BI - III

```
IsWeekend =
    IF(
        'Calendar Table'[DayName] = "Saturday" || 'Calendar Table'[DayName] = "Sunday",
        "Weekend",
        "Weekday")
```

```
IsWeekend =
    IF(
        'Calendar Table'[DayName] IN {"Saturday","Sunday"},
        "Weekend",
        "Weekday")
```

```
IsWeekend =
    SWITCH(
        TRUE(),
        'Calendar Table'[DayName] = "Saturday", "Weekend",
        'Calendar Table'[DayName] = "Sunday", "Weekend",
        "Weekday"
        )
```

```
IsWeekend =
    SWITCH(
        TRUE(),
        'Calendar Table'[DayName] = "Monday" , "Weekday",
        'Calendar Table'[DayName] = "Tuesday" , "Weekday",
        'Calendar Table'[DayName] = "Wednesday" , "Weekday",
        'Calendar Table'[DayName] = "Thursday" , "Weekday",
        'Calendar Table'[DayName] = "Friday" , "Weekday",
        'Calendar Table'[DayName] = "Saturday" , "Weekend",
        'Calendar Table'[DayName] = "Sunday" , "Weekend")
```

```
IsWeekend =
    SWITCH(
        'Calendar Table'[DayName],
        "Monday" , "Weekday",
        "Tuesday" , "Weekday",
        "Wednesday" , "Weekday",
        "Thursday" , "Weekday",
        "Friday" , "Weekday",
        "Saturday" , "Weekend",
        "Sunday" , "Weekend")
```

```
AlternativeDays =
    IF(
        'Calendar Table'[WeekDay] IN {1,3,5} , "MWF",
        IF(
            'Calendar Table'[WeekDay] IN {2,4,6}, "TTS", "Weekend"))
```

Month	Day	MonthName	DayName	WeekDay	IsWeekend	AlternativeDays
1	1	January	Sunday	7	Weekend	Weekend
1	2	January	Monday	1	Weekday	MWF
1	3	January	Tuesday	2	Weekday	TTS
1	4	January	Wednesday	3	Weekday	MWF
1	5	January	Thursday	4	Weekday	TTS
1	6	January	Friday	5	Weekday	MWF
1	7	January	Saturday	6	Weekend	TTS
1	8	January	Sunday	7	Weekend	Weekend
1	9	January	Monday	1	Weekday	MWF
1	10	January	Tuesday	2	Weekday	TTS
1	11	January	Wednesday	3	Weekday	MWF
1	12	January	Thursday	4	Weekday	TTS
1	13	January	Friday	5	Weekday	MWF
1	14	January	Saturday	6	Weekend	TTS
1	15	January	Sunday	7	Weekend	Weekend
1	16	January	Monday	1	Weekday	MWF
1	17	January	Tuesday	2	Weekday	TTS
1	18	January	Wednesday	3	Weekday	MWF
1	19	January	Thursday	4	Weekday	TTS
1	20	January	Friday	5	Weekday	MWF
1	21	January	Saturday	6	Weekend	TTS

```
AlternativeDays =
    SWITCH(
        TRUE(),
        'Calendar Table'[WeekDay] IN {1,3,5} , "MWF",
        'Calendar Table'[WeekDay] IN {2,4,6} , "TTS",
        "Weekend"
        )
```

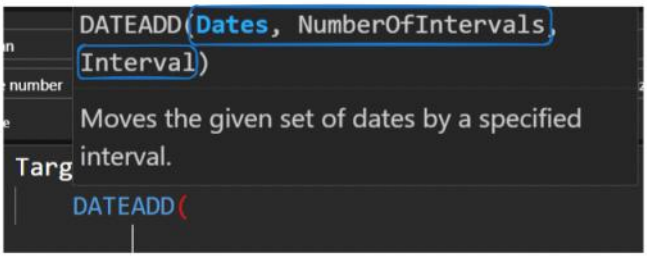
DATEDIFF(), DATEADD()

-> We must deliver the product within 2 days or 48 hours.

```
OrderDate =
    VehicleOrders[ORDERDATETIME].[Date]
```

Target Delivery Date = OrderDate + 2 days.

Target Delivery Date [Calculated Column] - Delivery Date [Original Column]



```
Target Delivery Date =
    DATEADD(
        VehicleOrders[ORDERDATETIME].[Date],
        2,
```

DAY
MONTH
QUARTER
YEAR

Target Delivery Date | Format *14-03-2001 (Shor... | Summarization Don't summarize
Date/time | Auto | Data category Uncategorized
Structure | Formatting | Properties

```
1 Target Delivery Date =
2     DATEADD(
3         VehicleOrders[ORDERDATETIME].[Date],
4         2,
5         DAY)
```

Delay In Delivery DateDiff()

= DeliveryDateTime - Target Delivery Date
- 0 or +ve We have delivered the product same day or earlier
- -ve [Delay in deliveries]

DATEDIFF(Date1, Date2, Interval)

Returns the number of units (unit specified in Interval) between the input two dates.

Date1 - Date2

```
1 Delay In Delivery =
2     DATEDIFF(
3         VehicleOrders[DELIVERYDATETIME].[Date],
4         VehicleOrders[Target Delivery Date],
5         HOUR)
```

CITY	STATE	POSTALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	OrderDate	Target Delivery Date	Delay In Delivery
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	19-05-2014	21-05-2014	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	25-11-2014	27-11-2014	48
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	13-10-2014	15-10-2014	24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	14-08-2016	16-08-2016	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	28-08-2014	30-08-2014	24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	17-06-2012	19-06-2012	-24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	15-05-2014	17-05-2014	24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	26-09-2013	28-09-2013	24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	12-03-2014	14-03-2014	24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	07-05-2014	09-05-2014	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	09-05-2016	11-05-2016	48
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	02-06-2012	04-06-2012	-24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	13-09-2013	15-09-2013	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	24-05-2013	26-05-2013	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	28-03-2013	30-03-2013	48
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	12-09-2012	14-09-2012	-24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	04-11-2013	06-11-2013	48
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	13-09-2013	15-09-2013	24
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	21-10-2013	23-10-2013	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	12-09-2016	14-09-2016	-24

```
Target Delivery Date =
    DATEADD(
        VehicleOrders[ORDERDATETIME].[Date],
        2,
        DAY)
```

CITY	STATE	POSTALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	OrderDate	Target Delivery Date	Delay In Delivery
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	19-05-2014	21-05-2014	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	25-11-2014	27-11-2014	2
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	13-10-2014	15-10-2014	1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	14-08-2016	16-08-2016	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	28-08-2014	30-08-2014	1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	17-06-2012	19-06-2012	-1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	15-05-2014	17-05-2014	1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	26-09-2013	28-09-2013	1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	12-03-2014	14-03-2014	1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	07-05-2014	09-05-2014	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	09-05-2016	11-05-2016	2
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	02-06-2012	04-06-2012	-1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	13-09-2013	15-09-2013	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	24-05-2013	26-05-2013	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	28-03-2013	30-03-2013	2
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	12-09-2012	14-09-2012	-1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	04-11-2013	06-11-2013	2
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	13-09-2013	15-09-2013	1
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	21-10-2013	23-10-2013	0
Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	12-09-2016	14-09-2016	-1

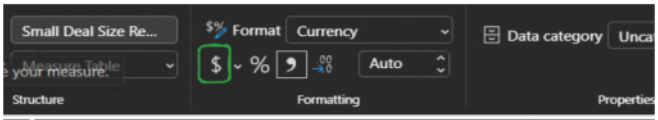
CALCULATE()

- It help us to write complex measures by taking help from existing measures


```
CALCULATE(Expression, [Filter1], ...)
```

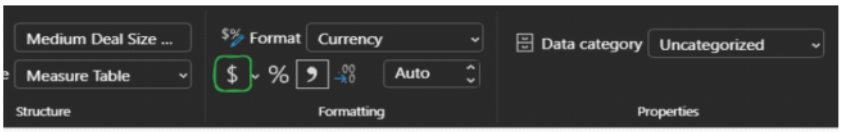
Evaluates an expression in a context modified by filters.

```
CALCULATE(
```




```
Small Deal Size Revenue =
    CALCULATE(
        [Revenue],
        VehicleOrders[DEALSIZE] = "Small")
```

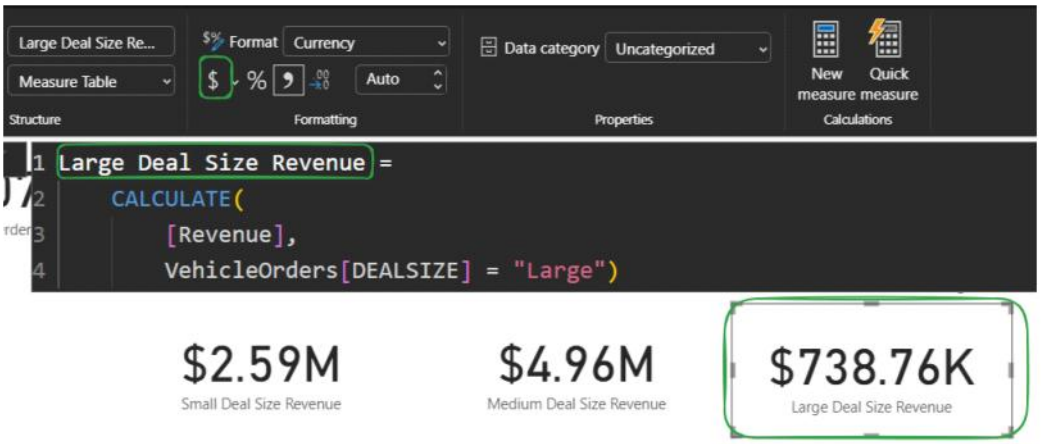
$2.59M
Small Deal Size Revenue



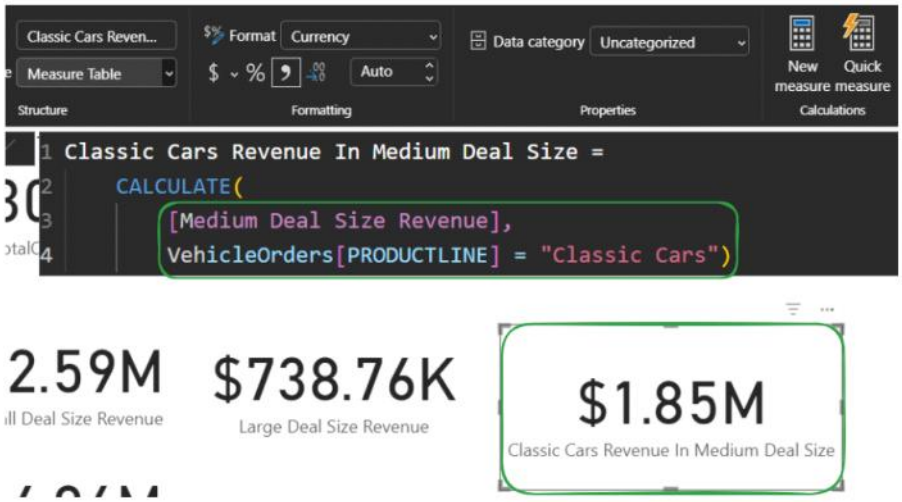

```
Medium Deal Size Revenue =
    CALCULATE(
        [Revenue],
        VehicleOrders[DEALSIZE] = "Medium")
```

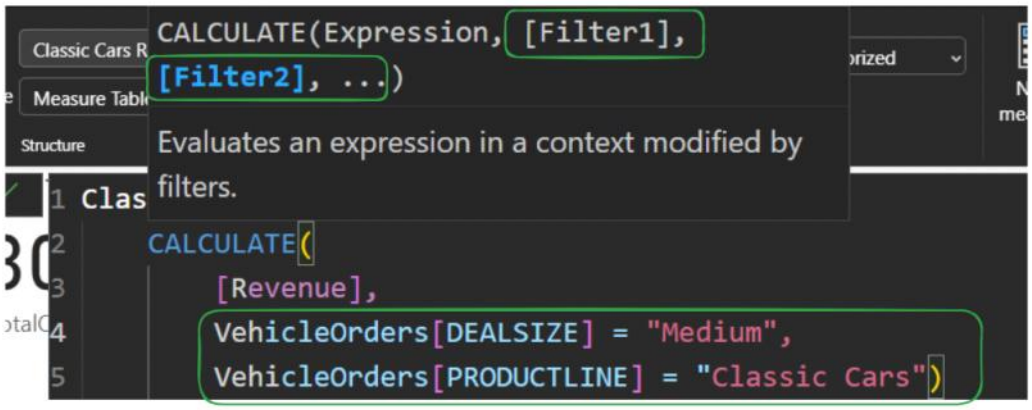
$2.59M
Small Deal Size Revenue

$4.96M
Medium Deal Size Revenue



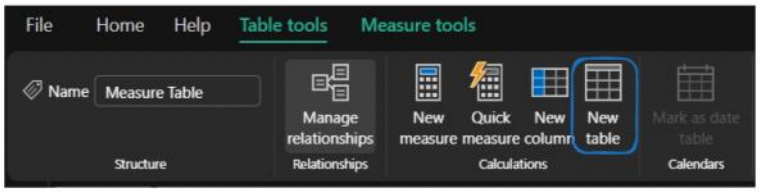
PRODUCTLINE	Medium Deal Size Revenue
Classic Cars	$18,45,151.86
Vintage Cars	$9,33,451.81
Trucks and Buses	$6,65,276.49
Motorcycles	$5,58,912.72
Planes	$4,72,345.20
Ships	$3,90,938.24
Trains	$95,660.36
Total	**$49,61,736.68**





Filter

- Impacting the original Table [Vehicle Orders] , to create a duplicate and apply some filter on it.




```
1 Classic Car Dataset =
2     FILTER(
3         VehicleOrders,
4         VehicleOrders[PRODUCTLINE] = "Classic Cars")
```

ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	ORDERDATETIME	DELIVERYDATETIME	STATUS	PRODUCTLINE	CITY	STATE	POSTALCODE	COUNTR
10203	20	100	8	19-05-2014 23:07:00	21-05-2014 11:19:59	Shipped	Classic Cars				
10153	20	100	11	25-11-2014 01:04:00	25-11-2014 07:56:06	Shipped	Classic Cars				
10104	34	100	1	13-10-2014 00:33:00	14-10-2014 15:46:41	Shipped	Classic Cars				
10153	42	100	12	14-08-2016 23:02:00	16-08-2016 17:27:35	Shipped	Classic Cars				
10212	39	100	16	28-08-2014 00:16:00	29-08-2014 15:53:17	Shipped	Classic Cars				
10203	47	100	5	12-03-2014 00:54:00	13-03-2014 17:57:38	Shipped	Classic Cars				
10212	33	100	15	07-05-2014 01:19:00	09-05-2014 18:31:03	Shipped	Classic Cars				
10212	29	100	10	09-05-2016 00:47:00	09-05-2016 02:47:22	Shipped	Classic Cars				
10212	38	100	6	24-05-2013 00:33:00	26-05-2013 02:35:03	Shipped	Classic Cars				
10212	41	100	9	12-09-2012 01:12:00	15-09-2012 00:02:15	Shipped	Classic Cars				
10104	24	100	8	04-11-2013 00:58:00	04-11-2013 17:34:58	Shipped	Classic Cars				
10246	40	100	4	13-09-2013 00:39:00	14-09-2013 10:38:05	Shipped	Classic Cars				
10412	41	100	4	21-10-2013 00:56:00	23-10-2013 16:51:09	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10212	40	100	7	06-10-2012 00:36:00	06-10-2012 19:04:53	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10311	43	100	10	17-03-2012 00:42:00	19-03-2012 08:16:40	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10379	29	100	5	14-08-2015 23:10:00	17-08-2015 17:15:38	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10104	23	100	13	07-01-2017 22:29:00	10-01-2017 02:11:06	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10212	40	100	11	15-08-2012 23:40:00	16-08-2012 13:55:01	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10383	47	100	6	07-04-2015 00:29:00	09-04-2015 05:43:57	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10394	22	100	5	22-02-2015 00:40:00	23-02-2015 10:45:01	Shipped	Classic Cars	Madrid	Unknown	28034	Spain
10203	32	100	10	03-04-2015 00:10:00	04-04-2015 12:16:26	Shipped	Classic Cars	Madrid	Unknown	28034	Spain

Sort ascending
Sort descending
Clear sort
Clear filter
Clear all filters
Text filters
Search
(Select all)
Classic Cars
OK
Cancel

```
1 Medium Deal on Classic Cars Dataset =
2     FILTER(
3         'Classic Car Dataset',
4         'Classic Car Dataset'[DEALSIZE] = "Medium")
```

LINE	CITY	STATE	POSTALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	OrderDate	Target Delivery Date	Delay In Delivery
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			0
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			2
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			0
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			0
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			2
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			0
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			-1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			2
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium			1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	21-10-2013 00:00:00	23-10-2013 00:00:00	0
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	06-10-2012 00:00:00	08-10-2012 00:00:00	2
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	17-03-2012 00:00:00	19-03-2012 00:00:00	0
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	14-08-2015 00:00:00	16-08-2015 00:00:00	-1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	07-01-2017 00:00:00	09-01-2017 00:00:00	-1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	15-08-2012 00:00:00	17-08-2012 00:00:00	1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	07-04-2015 00:00:00	09-04-2015 00:00:00	0
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	22-02-2015 00:00:00	24-02-2015 00:00:00	1
	Madrid	Unknown	28034	Spain	EMEA	Freyre	Diego	Medium	03-04-2015 00:00:00	05-04-2015 00:00:00	1

Sort ascending
Sort descending
Clear sort
Clear filter
Clear all filters
Text filters
Search
(Select all)
Medium
OK
Cancel

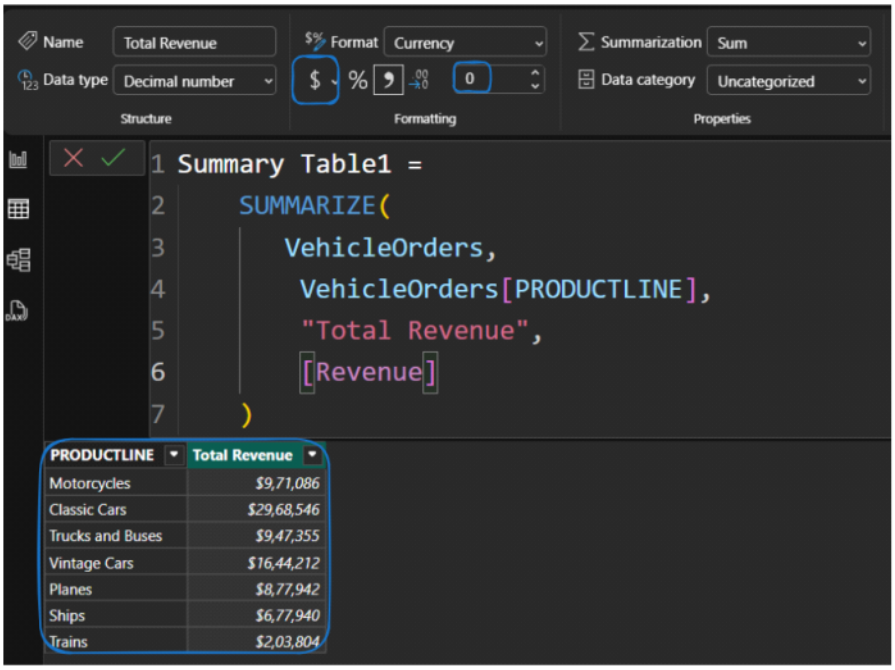
SUMMARIZE() → - Impacting the original Table [Vehicle Orders] , to summarize the table using Group BY & Aggregation.

```
Summary Table1 =
    SUMMARIZE(
    SUMMARIZE(Table,
    [GroupBy_ColumnName1], ...,
    [Name1], [Expression1], ...)
```

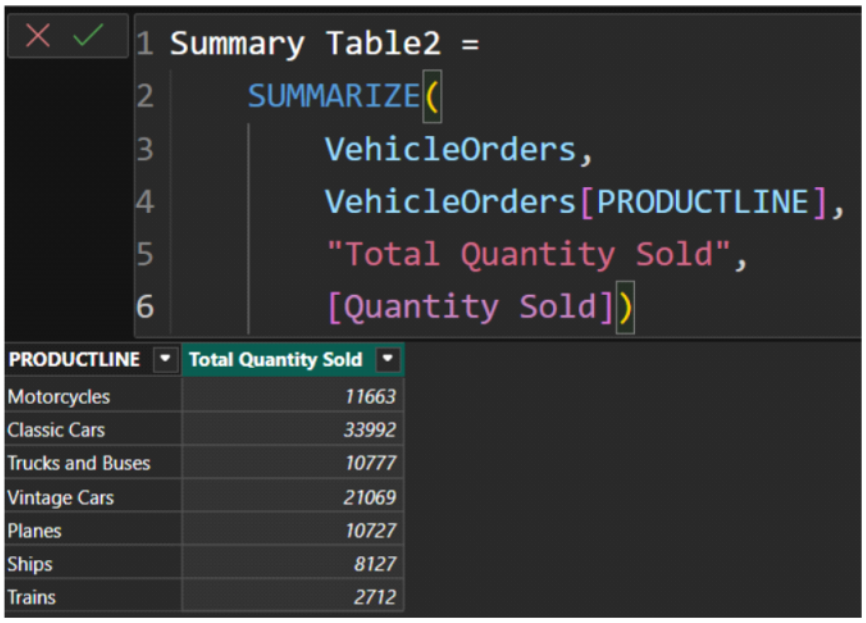
Categorical Column

Aggregation

Creates a summary the input table grouped by the specified columns.



PRODUCTLINE	Total Revenue
Motorcycles	$9,71,086
Classic Cars	$29,68,546
Trucks and Buses	$9,47,355
Vintage Cars	$16,44,212
Planes	$8,77,942
Ships	$6,77,940
Trains	$2,03,804



PRODUCTLINE	Total Quantity Sold
Motorcycles	11663
Classic Cars	33992
Trucks and Buses	10777
Vintage Cars	21069
Planes	10727
Ships	8127
Trains	2712

Report view

```
Summary Table2 =
    SUMMARIZE(
        VehicleOrders,
        VehicleOrders[PRODUCTLINE],
        VehicleOrders[DEALSIZE],
        "Total Quantity Sold",
        [Quantity Sold])
```

PRODUCTLINE	Total Quantity Sold	DEALSIZE
Motorcycles	4818	Small
Classic Cars	10308	Small
Trucks and Buses	3642	Small
Vintage Cars	9935	Small
Planes	5000	Small
Ships	3816	Small
Trains	1615	Small
Motorcycles	5929	Medium
Classic Cars	19178	Medium
Trucks and Buses	6777	Medium
Vintage Cars	10022	Medium
Planes	5250	Medium
Ships	4311	Medium
Trains	1052	Medium
Motorcycles	916	Large
Classic Cars	4506	Large
Trucks and Buses	358	Large
Vintage Cars	1112	Large
Planes	477	Large
rains	45	Large

```
Summary Table2 =
    SUMMARIZE(
        VehicleOrders,
        VehicleOrders[PRODUCTLINE],
        VehicleOrders[DEALSIZE],
        VehicleOrders[COUNTRY],
        "Total Quantity Sold",
        [Quantity Sold])
```

PRODUCTLINE	Total Quantity Sold	DEALSIZE	COUNTRY
Motorcycles	2806	Medium	USA
Classic Cars	6581	Medium	USA
Trucks and Buses	2341	Medium	USA
Vintage Cars	4239	Medium	USA
Planes	1689	Medium	USA
Ships	1144	Medium	USA
Trains	349	Medium	USA
Motorcycles	1202	Medium	France
Classic Cars	1792	Medium	France
Trucks and Buses	874	Medium	France
Vintage Cars	766	Medium	France
Planes	611	Medium	France
Ships	425	Medium	France
Trains	70	Medium	France
Motorcycles	287	Medium	Norway
Classic Cars	682	Medium	Norway
Trucks and Buses	248	Medium	Norway
Vintage Cars	134	Medium	Norway
lanes	119	Medium	Norway

```
Summary Table2 =
    SUMMARIZE(
        VehicleOrders,
        VehicleOrders[PRODUCTLINE],
        VehicleOrders[DEALSIZE],
        VehicleOrders[COUNTRY],
        "Total Quantity Sold",
        [Quantity Sold],
        "Total Revenue",
        [Revenue]
        )
```

Group By

Aggregation

PRODUCTLINE	Total Quantity Sold	DEALSIZE	COUNTRY	Total Revenue
Motorcycles	2806	Medium	USA	$2,68,987
Classic Cars	6581	Medium	USA	$6,32,589
Trucks and Buses	2341	Medium	USA	$2,29,716
Vintage Cars	4239	Medium	USA	$3,92,088
Planes	1689	Medium	USA	$1,50,718
Ships	1144	Medium	USA	$1,06,714
Trains	349	Medium	USA	$29,621
Motorcycles	1202	Medium	France	$1,08,411
Classic Cars	1792	Medium	France	$1,68,781
Trucks and Buses	874	Medium	France	$83,901
Vintage Cars	766	Medium	France	$73,017
Planes	611	Medium	France	$55,134
Ships	425	Medium	France	$39,371
Trains	70	Medium	France	$7,000
Motorcycles	287	Medium	Norway	$27,403
Classic Cars	682	Medium	Norway	$66,552

DEALSIZE	Total Revenue	Total Quantity Sold
Medium	$49,61,736.68	52519
Small	$25,90,392.20	39134
Large	$7,38,757.91	7414
Total	**$82,90,886.79**	**99067**

Rows
- DEALSIZE
- COUNTRY
- PRODUCTLINE

Columns
- Add data fields here

Values
- Total Revenue
- Total Quantity Sold

DEALSIZE	Total Revenue	Total Quantity Sold
Medium	**$49,61,736.68**	**52519**
USA	**$18,10,432.26**	**19149**
Classic Cars	$6,32,588.73	6581
Vintage Cars	$3,92,087.54	4239
Motorcycles	$2,68,987.23	2806
Trucks and Buses	$2,29,716.32	2341
Planes	$1,50,718.07	1689
Ships	$1,06,713.73	1144
Trains	$29,620.64	349
Spain	**$6,25,811.87**	**6670**
France	**$5,35,615.05**	**5740**
Australia	**$3,05,856.96**	**3181**
UK	**$2,50,103.41**	**2687**
Finland	**$1,59,820.03**	**1713**
Italy	**$1,51,579.40**	**1596**
Norway	**$1,49,251.14**	**1542**
Singapore	**$1,37,179.50**	**1402**
Sweden	**$1,17,818.93**	**1247**
Canada	**$1,12,748.98**	**1199**
Denmark	**$1,08,726.63**	**1144**
Austria	**$1,07,825.14**	**1131**
Germany	**$1,04,218.24**	**1089**
Japan	**$79,021.40**	**855**
Switzerland	**$75,208.31**	**809**
Belgium	**$58,744.17**	**613**
Philippines	**$51,975.26**	**554**
Ireland	**$19,800.00**	**198**
Small	**$25,90,392.20**	**39134**
Large	**$7,38,757.91**	**7414**
Total	**$82,90,886.79**	**99067**

Deal Size >> Country >> Product Line

ADD COLUMN

- Adding a new column and create a new table where the add column performs the tasks.

```
ADDCOLUMNS(Table, Name1,
Expression1, ...)
```

Returns a table with new columns specified by the DAX expressions.

```
ADDCOLUMNS(
```

```
1 Add Column Example =
2 ADDCOLUMNS(
3     VehicleOrders,
4     "Order Value" , VehicleOrders[QUANTITYORDERED] * VehicleOrders[PRICEEACH],
5     "Order Year" , YEAR(VehicleOrders[OrderDate]),
6     "Order Month", FORMAT(VehicleOrders[OrderDate],"MMMM"))
```

ERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	OrderDate	Target Delivery Date	Delay In Delivery	Order Value	Order Year	Order Month
MEA	Freyre	Diego	Medium	19-05-2014 00:00:00	21-05-2014 00:00:00	0	2000	2014	May
MEA	Freyre	Diego	Medium	25-11-2014 00:00:00	27-11-2014 00:00:00	2	2000	2014	November
MEA	Freyre	Diego	Medium	13-10-2014 00:00:00	15-10-2014 00:00:00	1	3400	2014	October
MEA	Freyre	Diego	Medium	14-08-2016 00:00:00	16-08-2016 00:00:00	0	4200	2016	August
MEA	Freyre	Diego	Medium	28-08-2014 00:00:00	30-08-2014 00:00:00	1	3900	2014	August
MEA	Freyre	Diego	Medium	17-06-2012 00:00:00	19-06-2012 00:00:00	-1	4100	2012	June
MEA	Freyre	Diego	Medium	15-05-2014 00:00:00	17-05-2014 00:00:00	1	4600	2014	May
MEA	Freyre	Diego	Medium	26-09-2013 00:00:00	28-09-2013 00:00:00	1	5400	2013	September
MEA	Freyre	Diego	Medium	12-03-2014 00:00:00	14-03-2014 00:00:00	1	4700	2014	March
MEA	Freyre	Diego	Medium	07-05-2014 00:00:00	09-05-2014 00:00:00	0	3300	2014	May
MEA	Freyre	Diego	Medium	09-05-2016 00:00:00	11-05-2016 00:00:00	2	2900	2016	May
MEA	Freyre	Diego	Medium	02-06-2012 00:00:00	04-06-2012 00:00:00	-1	3600	2012	June
MEA	Freyre	Diego	Medium	13-09-2013 00:00:00	15-09-2013 00:00:00	0	4000	2013	September
MEA	Freyre	Diego	Medium	24-05-2013 00:00:00	26-05-2013 00:00:00	0	3800	2013	May
MEA	Freyre	Diego	Medium	28-03-2013 00:00:00	30-03-2013 00:00:00	2	3900	2013	March
MEA	Freyre	Diego	Medium	12-09-2012 00:00:00	14-09-2012 00:00:00	-1	4100	2012	September
MEA	Freyre	Diego	Medium	04-11-2013 00:00:00	06-11-2013 00:00:00	2	2400	2013	November
MEA	Freyre	Diego	Medium	13-09-2013 00:00:00	15-09-2013 00:00:00	1	4000	2013	September

Var & Return → Calculated Column [Use to create a new column]

$100 * 0.9 = $90

Create a discount Price variable based on the Product Line.

-> Motor Cycle -> 10% Discount
-> Classic Cars -> 15% Discount
-> Other Products -> 20% Discount

1 -> 100%
0.1 -> 10%
0.15 -> 15%
0.2 -> 20%

(1 - discount) = 10 % discount = 0.9
= 15 % discount = 0.85
= 20 % discount = 0.8

```
Discounted Price =
VAR BasePrice = VehicleOrders[PRICEEACH]
VAR Discount =
    IF(VehicleOrders[PRODUCTLINE] = "Motorcycles", 0.90,
        IF(VehicleOrders[PRODUCTLINE] = "Classic Cars" , 0.85, 0.80)
    )
RETURN BasePrice * Discount
```

POSTALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	OrderDate	Target Delivery Date	Delay In Delivery	Discounted Price
8034	Spain	EMEA	Freyre	Diego	Medium	19-05-2014	21-05-2014	0	85
8034	Spain	EMEA	Freyre	Diego	Medium	25-11-2014	27-11-2014	2	85
8034	Spain	EMEA	Freyre	Diego	Medium	13-10-2014	15-10-2014	1	85
8034	Spain	EMEA	Freyre	Diego	Medium	14-08-2016	16-08-2016	0	85
8034	Spain	EMEA	Freyre	Diego	Medium	28-08-2014	30-08-2014	1	85
8034	Spain	EMEA	Freyre	Diego	Medium	17-06-2012	19-06-2012	-1	80
8034	Spain	EMEA	Freyre	Diego	Medium	15-05-2014	17-05-2014	1	80
8034	Spain	EMEA	Freyre	Diego	Medium	26-09-2013	28-09-2013	1	80
8034	Spain	EMEA	Freyre	Diego	Medium	12-03-2014	14-03-2014	1	85
8034	Spain	EMEA	Freyre	Diego	Medium	07-05-2014	09-05-2014	0	85
8034	Spain	EMEA	Freyre	Diego	Medium	09-05-2016	11-05-2016	2	85
8034	Spain	EMEA	Freyre	Diego	Medium	02-06-2012	04-06-2012	-1	80
8034	Spain	EMEA	Freyre	Diego	Medium	13-09-2013	15-09-2013	0	80
8034	Spain	EMEA	Freyre	Diego	Medium	24-05-2013	26-05-2013	0	85
8034	Spain	EMEA	Freyre	Diego	Medium	28-03-2013	30-03-2013	2	80
8034	Spain	EMEA	Freyre	Diego	Medium	12-09-2012	14-09-2012	-1	85

PRICEEACH	ORDERLINENUMBER	ORDERDATETIME	DELIVERYDATETIME	STATUS	PRODUCTLINE
$100	8	19-05-2014 23:07:00	21-05-2014 11:19:59	Shipped	Classic Cars
$100	11	25-11-2014 01:04:00	25-11-2014 07:56:06	Shipped	Classic Cars
$100	1	13-10-2014 00:33:00	14-10-2014 15:46:41	Shipped	Classic Cars
$100	12	14-08-2016 23:02:00	16-08-2016 17:27:35	Shipped	Classic Cars
$100	16	28-08-2014 00:16:00	29-08-2014 15:53:17	Shipped	Classic Cars
$100	9	17-06-2012 23:51:00	20-06-2012 23:46:07	Shipped	Trucks and Buses
$100	5	15-05-2014 23:47:00	16-05-2014 09:08:01	Shipped	Trucks and Buses
$100	5	26-09-2013 23:42:00	27-09-2013 02:26:05	Shipped	Trucks and Buses
$100	5	12-03-2014 00:54:00	13-03-2014 17:57:38	Shipped	Classic Cars
$100	15	07-05-2014 01:19:00	09-05-2014 18:31:03	Shipped	Classic Cars
$100	10	09-05-2016 00:47:00	09-05-2016 02:47:22	Shipped	Classic Cars
$100	2	02-06-2012 23:47:00	05-06-2012 04:30:35	Shipped	Vintage Cars
$100	7	13-09-2013 23:41:00	15-09-2013 22:52:02	Shipped	Vintage Cars
$100	6	24-05-2013 00:33:00	26-05-2013 02:35:03	Shipped	Classic Cars
$100	2	28-03-2013 01:26:00	28-03-2013 14:00:36	Shipped	Vintage Cars
$100	9	12-09-2012 01:12:00	15-09-2012 00:02:15	Shipped	Classic Cars

```
Discounted Price =
VAR BasePrice = VehicleOrders[PRICEEACH]
VAR Discount =
    SWITCH(
        TRUE(),
        VehicleOrders[PRODUCTLINE] = "Motorcycles", 0.9,
        VehicleOrders[PRODUCTLINE] = "Classic Cars", 0.85,
        0.80
    )
RETURN BasePrice * Discount
```

RELATED Function

- RELATED() helps us to bring column from another table, If and only if the relationship exists.

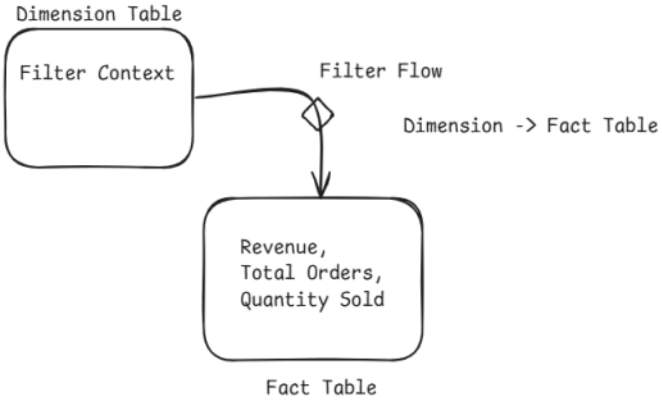
ALL → It removes all Filter Context applied in calculation.

```
CALCULATE(Expression, [Filter1], ...)
```

Evaluates an expression in a context modified by filters.

```
CALCULATE(
```

ALL(ProductLine)




```
ALL([TableNameOrColumnName], [ColumnName1], ...)
```

Returns all the rows in a table, or all the values in a column, ignoring any filters that might have been applied.

```
ALL(
```

```
1 All Quantity Sold =
2     CALCULATE(
3         [Quantity Sold],
4         ALL(VehicleOrders[PRODUCTLINE]))
```

PRODUCTLINE	Quantity Sold	All Quantity Sold
Classic Cars	33992	99067
Motorcycles	11663	99067
Planes	10727	99067
Ships	8127	99067
Trains	2712	99067
Trucks and Buses	10777	99067
Vintage Cars	21069	99067
Total	**99067**	**99067**

Numerator

Denominator

```
DIVIDE(Numerator, Denominator, [AlternateResult])
```

Safe Divide function with ability to handle divide by zero case.

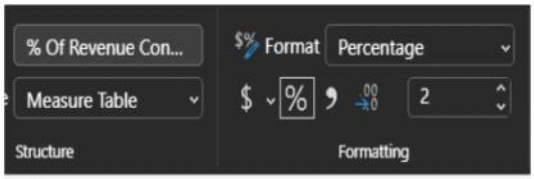
```
DIVIDE(
    [Quantity Sold],
    [All Quantity Sold],
```


```
% Product Contribution in Quantity Sold =
    DIVIDE(
        [Quantity Sold],
        [All Quantity Sold],
        "NA")
```

PRODUCTLINE	Quantity Sold	All Quantity Sold	% Product Contribution in Quantity Sold
Classic Cars	33992	99067	34.31%
Motorcycles	11663	99067	11.77%
Planes	10727	99067	10.83%
Ships	8127	99067	8.20%
Trains	2712	99067	2.74%
Trucks and Buses	10777	99067	10.88%
Vintage Cars	21069	99067	21.27%
Total	**99067**	**99067**	**100.00%**

```
ALL Revenue =
    CALCULATE(
        [Revenue],
        ALL(VehicleOrders))
```

The use of ALL Function are required to calculate the percentage of contribution.




```
% Of Revenue Contribution =
    DIVIDE(
        [Revenue],
        [ALL Revenue],
        "NA")
```

PRODUCTLINE	Revenue	ALL Revenue	% Of Revenue Contribution
Classic Cars	$29,68,546.40	82,90,886.79	35.80%
Motorcycles	$9,71,086.29	82,90,886.79	11.71%
Planes	$8,77,942.21	82,90,886.79	10.59%
Ships	$6,77,940.40	82,90,886.79	8.18%
Trains	$2,03,804.26	82,90,886.79	2.46%
Trucks and Buses	$9,47,355.18	82,90,886.79	11.43%
Vintage Cars	$16,44,212.05	82,90,886.79	19.83%
Total	**$82,90,886.79**	**82,90,886.79**	**100.00%**

DEALSIZE	Revenue	ALL Revenue	% Of Revenue Contribution
Large	$7,38,757.91	82,90,886.79	8.91%
Medium	$49,61,736.68	82,90,886.79	59.85%
Small	$25,90,392.20	82,90,886.79	31.24%
Total	**$82,90,886.79**	**82,90,886.79**	**100.00%**