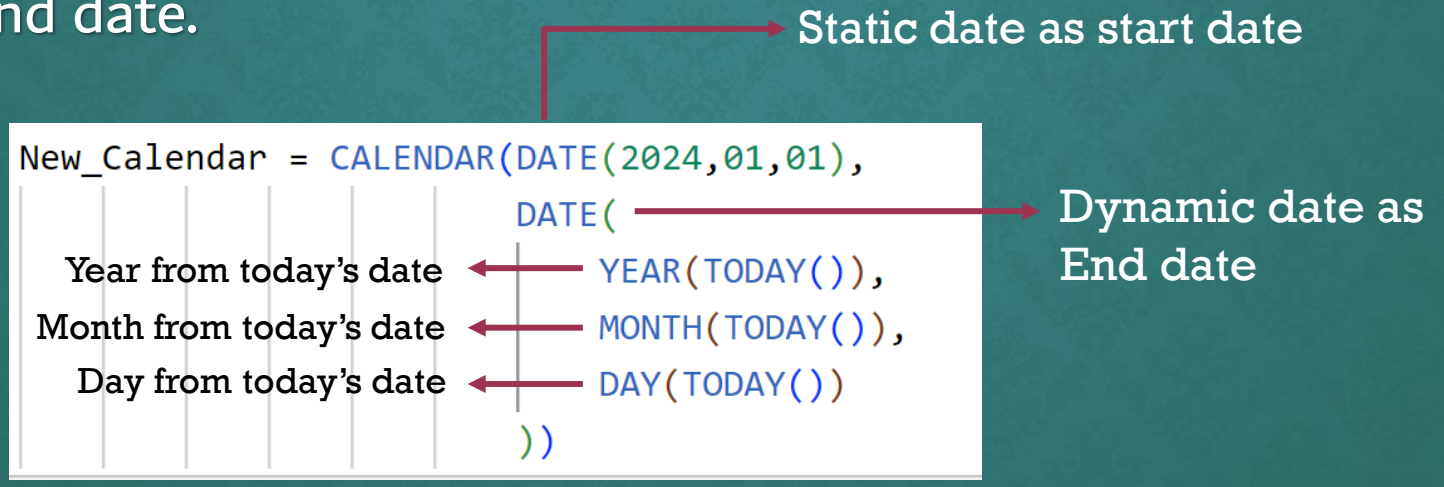
CALENDAR

- This function used to generate a set of dates in a data model.
- It returns a single column of continuous date from the given start date to the end date.



Karthimeena

CALENDARAUTO

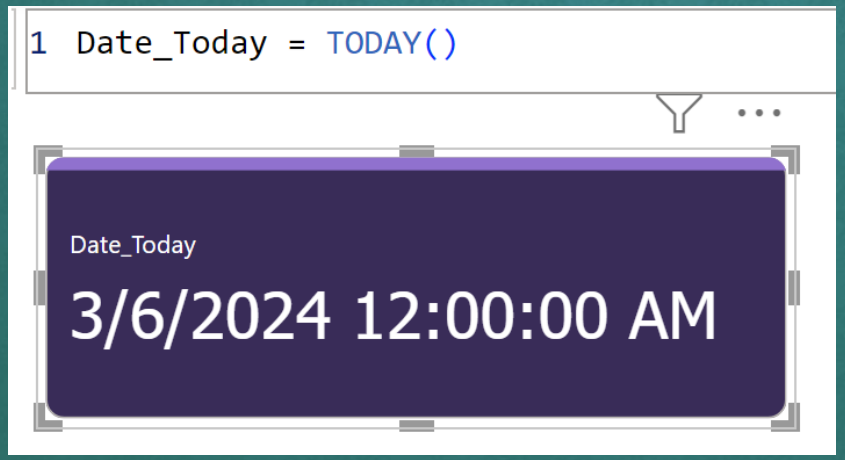
- This function also performs the same task as CALENDAR(), with significant difference of being its date range is calculated automatically based on the dates present in our model.
- Start date: It takes available minimum date as start date if the earliest date is not present in the column
- End date: It takes available maximum date as end date if the latest date is not present in the column

```
1  New_CalendarAuto = CALENDARAUTO()
```

Karthimeena

TODAY

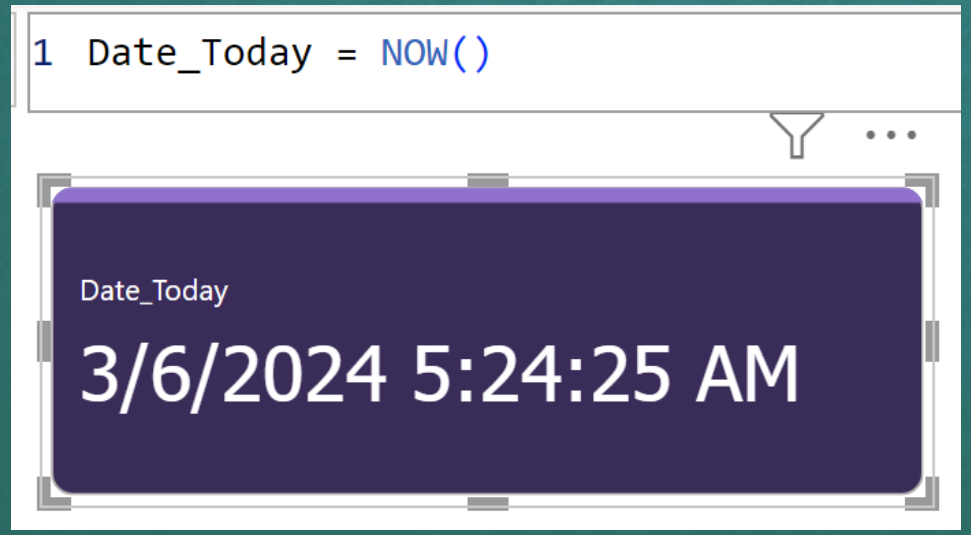
- TODAY()
  - Returns the current date.
  - It returns the time value as 12.00 PM for all time



Karthimeena

NOW

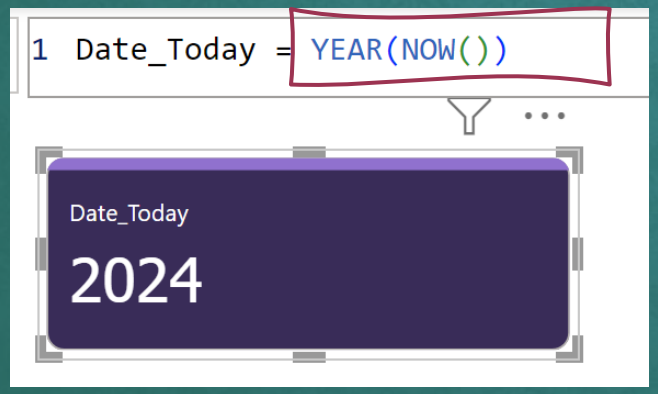
- NOW()
  - This also returns the current date.
  - Significant difference is it returns the exact time of the day.
  - And it follows UTC date time always.

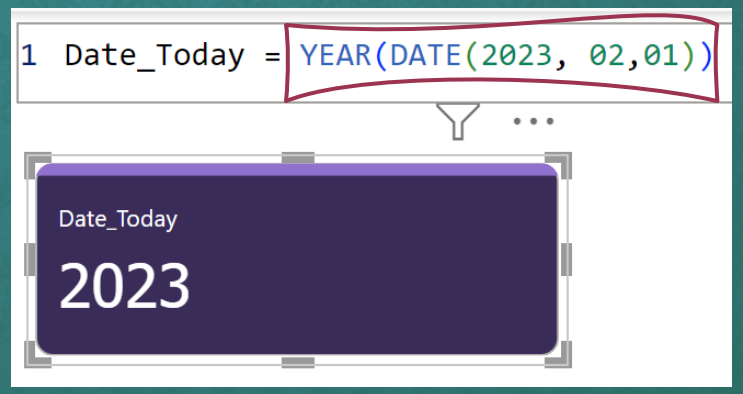


Karthimeena

YEAR

- YEAR() Returns the year of given date.
- This accepts date as a parameter.





Karthimeena

YEARFRAC

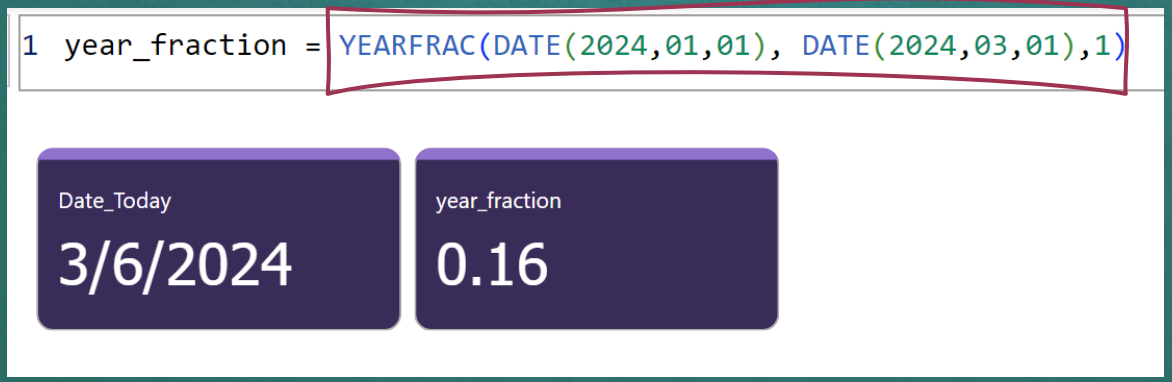
- YEARFRAC() is used to calculate the portion of the year has been passed between two given dates.
- It accepts 3 parameter such as start date, end date and basis.
- The parameter ‘basis’ indicates type of day count (0,1,2,3,4).
- The third parameter is optional, therefore it takes 0 and follows the 30/360 [US] standard.
- 1 - actual/actual
- 2 - actual/ 360
- 3 - actual/365
- 4 - 30/360 [European]

Karthimeena

YEARFRAC

- Below code used basis as 1 and follows the actual standard.
- Fraction = actual days between given days/ actual days in the year
- = 61/366
- = 0.166

```
1  year_fraction = YEARFRAC(DATE(2024,01,01), DATE(2024,03,01),1)
```



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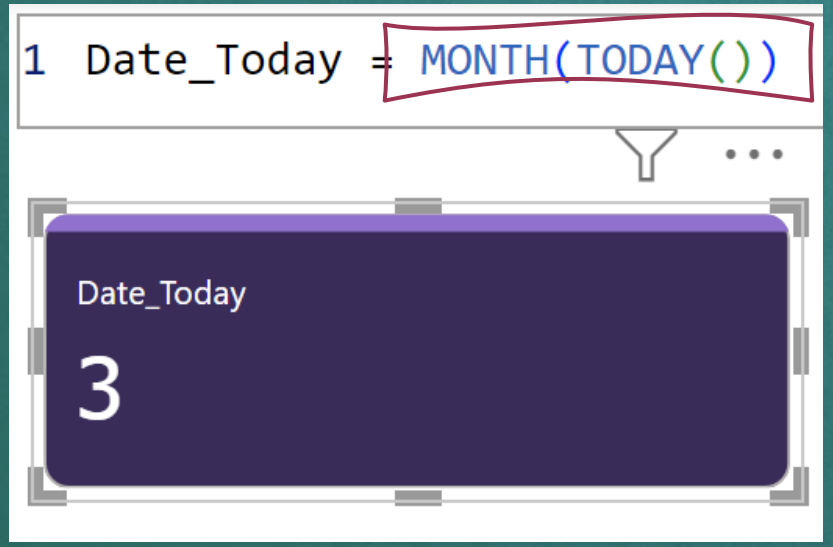
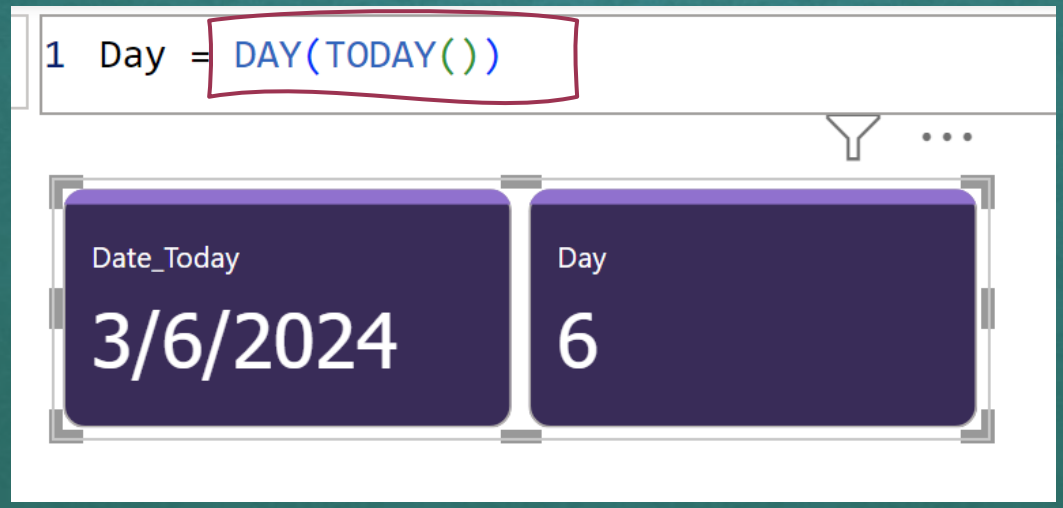
MONTH

- MONTH() Returns the month of given date.
- This requires date as a parameter and returns integer values as month number from 1 to 12.



DAY

- DAY() Returns the day of given date.
- This requires date as a parameter and returns an integer, that indicating day of the month.



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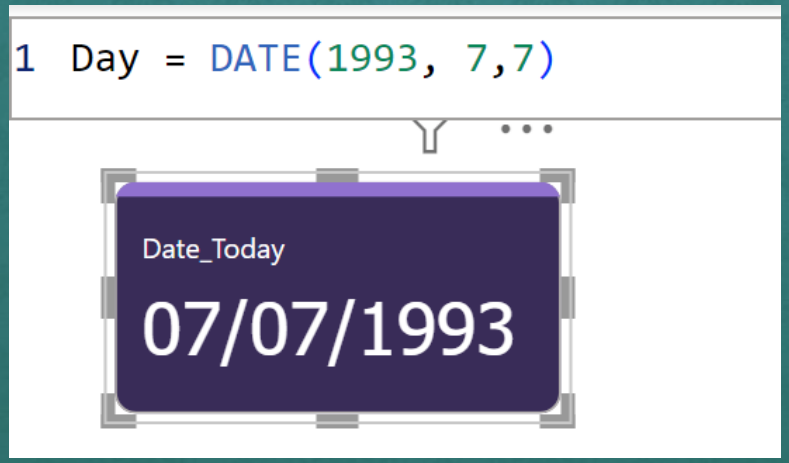
DATE

- DATE() function converts your integer inputs to corresponding date.
- It accepts 3 integer parameters and there is no optional parameters.



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EDATE

- EDATE() function returns the date, that is indicated number of months before or after the provided start date.
- It accepts date as first parameter and integer as another parameter.
- In the example, used measure as date parameter and it returned the date after 5 months.
- Return value either positive or negative based the order of start and end date values.

Karthimeena

EDATE

- In the below example, it returned the date before 5 months.

```
1  E_Date = EDATE([Date_Today], -5)
```

Date_Today	E_Date
07/07/1993	02/07/1993

- Here, I used a static date in the Date-Month-Year format and it returned 2 months earlier date.

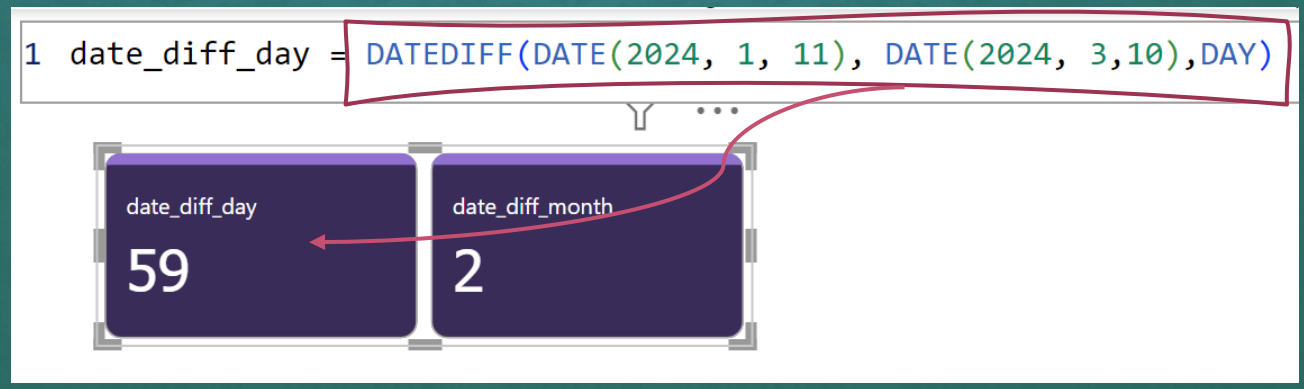
```
1  E_Date = EDATE("15-8-2022", -2)
```

E_Date
06/15/2022

Karthimeena

DATEDIFF

- DATEDIFF() function calculates the difference between two days.
- Can set the return value in various types such as year, quarter, month, week, day, hour.
- It accepts 3 parameter such as start date, end date and the interval.
- Below example, interval as day and returns the number of days in positive.



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DATEDIFF

- Below example, interval as month and returns the number of days in positive.

```
1  date_diff_month = DATEDIFF(DATE(2024, 1, 11), DATE(2024, 3,10), MONTH)
```

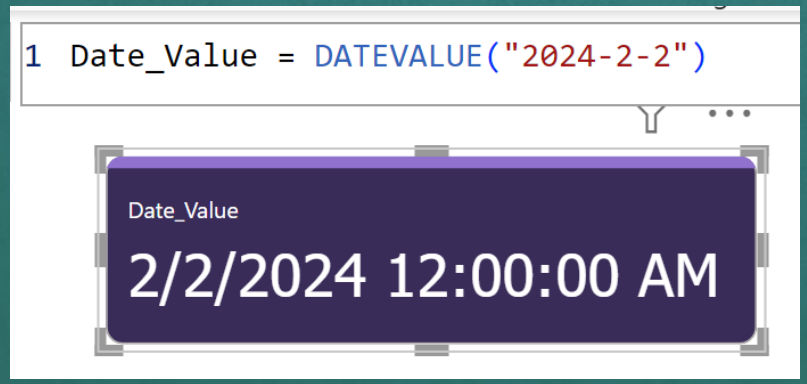
- Calculating age with DATEDIFF()

```
1  Age = DATEDIFF(date(2014, 7,7), TODAY(), YEAR)
```

Karthimeena

DATEVALUE

- DATEVALUE() function used to convert in the form of text into date value.
- It has a single parameter as input and returns a date in datetime type.
- It uses the local date/time settings of the model to determine the date.



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DATEADD

- DATEADD() function used to add specified number of units (day/month/year/hour/minute/second) to given date and return a new date value.
- It has a three different parameter as input.
- Start date as first parameter, it accepts date column as a parameter
- Number as second parameter – number of units add/remove from the starting date
- Interval as third parameter – type of interval to add (day/month/year/hour/minute/second) .

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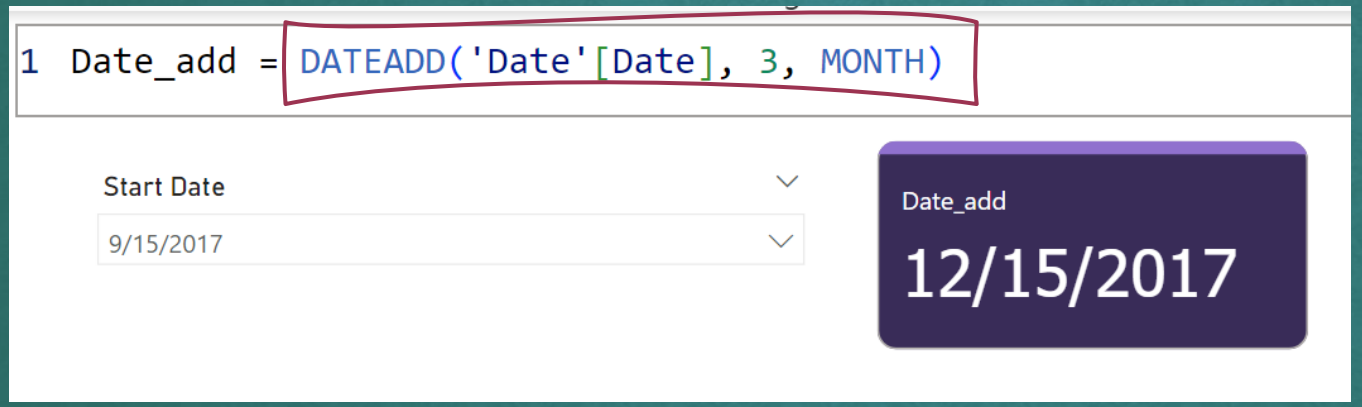
DATEADD



- In the example, adding months as interval. Selecting start date as input to add 3 months.

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DATESBETWEEN

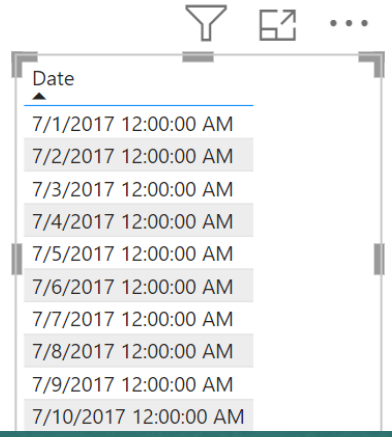
- DATESBETWEEN() function used to find the dates between the given start and end date.
- It returns a table of dates.
- It has a three different parameter as input.
- Date as first parameter, it accepts date column as a parameter
- Start and End date.
- When start and end dates are BLANK, the function takes earliest/ latest value in the date column as start/end date.

Karthimeena

DATESBETWEEN

- DATESBETWEEN() function returning the dates between first of July to 10th of July as given in the code.

```
1  Dates_Between_column =
2  DATESBETWEEN('Date'[Date], DATE(2017, 7, 1) , DATE(2017, 7, 10))
```



Date
7/1/2017 12:00:00 AM
7/2/2017 12:00:00 AM
7/3/2017 12:00:00 AM
7/4/2017 12:00:00 AM
7/5/2017 12:00:00 AM
7/6/2017 12:00:00 AM
7/7/2017 12:00:00 AM
7/8/2017 12:00:00 AM
7/9/2017 12:00:00 AM
7/10/2017 12:00:00 AM

Karthimeena

DATESBETWEEN

- DATESBETWEEN() function returning the dates between first of July to 5th of July as given in the code.
- Begin date given as BLANK(), so this function takes earliest date as start date from the given column.

```
1  Dates_Between_column =
2  DATESBETWEEN('Date'[Date], BLANK() , DATE(2017, 7, 5))
```

Date
7/1/2017 12:00:00 AM
7/2/2017 12:00:00 AM
7/3/2017 12:00:00 AM
7/4/2017 12:00:00 AM
7/5/2017 12:00:00 AM

Karthimeena

DATESINPERIOD

- DATESINPERIOD() function used to find the dates between the given start date and continuous for the specified number and interval.
- This is similar to the DATESBETWEEN(), but it calculates the range of dates differently. While DATESBETWEEN() requires specifying both start and end date directly, DATESINPERIOD() takes only start date and calculates range of dates based on specified interval and type.

Karthimeena

DATESINPERIOD

- It has a 4 different parameter as input.
- Date as first parameter, it accepts date column as a parameter
- Start date as second parameter
- Number of intervals to add to/subtract from the start date.
- Interval as third parameter – type of interval to add (day/month/year/hour/minute/second) .

Karthimeena

DATESINPERIOD

- In the code, Interval as DAY and number of interval set to 10, the function returns dates starting from July 5th and extending 10 days later.

```
1  Dates_Between_column =
2  DATESINPERIOD('Date'[Date], DATE(2017, 7, 5), 10, DAY)
```

Date
7/5/2017 12:00:00 AM
7/6/2017 12:00:00 AM
7/7/2017 12:00:00 AM
7/8/2017 12:00:00 AM
7/9/2017 12:00:00 AM
7/10/2017 12:00:00 AM
7/11/2017 12:00:00 AM
7/12/2017 12:00:00 AM
7/13/2017 12:00:00 AM
7/14/2017 12:00:00 AM

Karthimeena

FIRSTDATE

- FIRSTDATE() function used to find the date in the given column of date values.
- This returns the table with single column and single row with date value.

Karthimeena

FIRSTNONBLANK

- This function is useful to find the first non blank value in the given column based on the current context.
- This has two parameters, first one specifies the column from which to retrieve the non-blank value.
- Second parameter is an optional. This is an expression that evaluates the column, such as measure or calculated column.
- Return type contains a table with single column and row with value.

FIRSTNONBLANK

- Below code returns the first non-blank values from the column ‘CustomerKey’ who has their revenue is 10000.
- Here, [Revenue] is a measure.

```
1  First_Non_Blank = FIRSTNONBLANK(Sales[CustomerKey], Sales[Revenue] = 10000)
```

Karthimeena

FIRSTNONBLANKVALUE

- This function is also useful to find the first non blank value in the given column based on the expression.
- This has two parameters, first one specifies the column <column> from which to retrieve the non-blank value.
- Second parameter is an expression <expression> that evaluates the column.
- Significant difference is FIRSTNONBLANKVALUE() uses their <columnname> in the filter context of their <expression>

Karthimeena

FIRSTNONBLANKVALUE

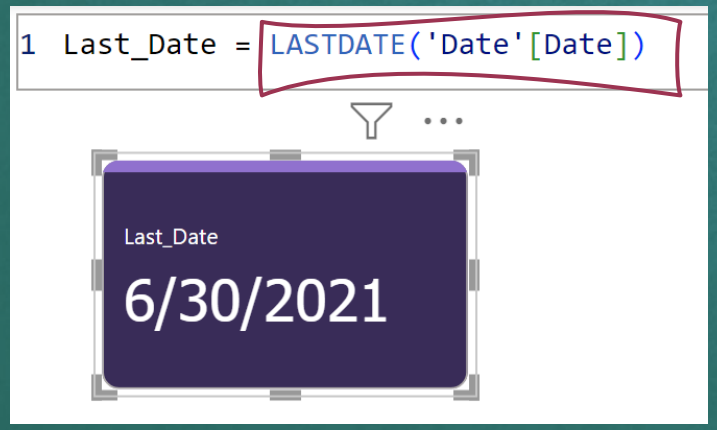
- Below code evaluates the revenue for united states .

```
1  First_Non_BlankValue = FIRSTNONBLANKVALUE('Sales Territory'[Country], CALCULATE([Revenue], 'Sales
   Territory'[Country] = "United States"))
```

Karthimeena

LASTDATE

- LASTDATE() function used to find the last date in the current context of specified date column.
- It has a single parameter, that is date column.
- It returns a table of single column and row with date value.
- Below example, simply returns the last date from date table



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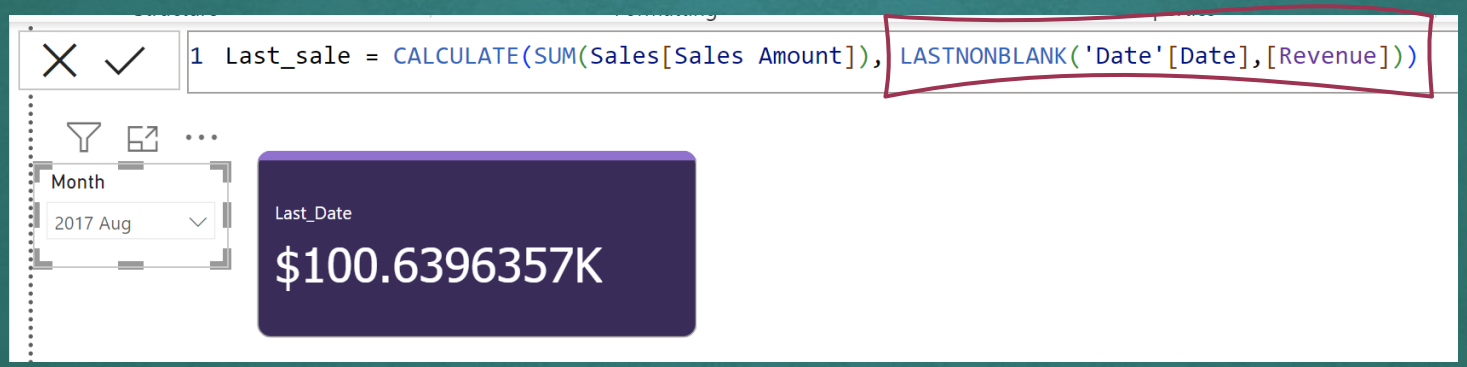
LASTNONDATE

- LASTNONDATE() function returns the last date in the current context of specified column where the expression is non-blank.
- It has two parameter, First is date column from which you want to retrieve the last non-blank value.
- Second parameter is an expression evaluated for each row when the column expression is not blank.
- It returns a table of single column and row with date value.

LASTNONBLANK

- Below example, used LASTNONBLANK() inside the CALCULATE() to determine the context in which the calculation is performed.



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PREVIOUSYEAR

- PREVIOUSYEAR() function used to return a range of dates from the previous year based on the date given in the current context.
- This function is useful when you want to compare or analyze the data from the previous year to the current date.
- It has 2 parameters, first one is date parameter – optional parameter.
- Second parameter is Year-end-date. Specifies the last date of the year to consider when calculating previous year.

PREVIOUSYEAR

```
1  Previous_year = CALCULATE([Total_Revenue], PREVIOUSYEAR('Date'[Date]))
```

Fiscal Year

FY2020

Category	Total_Revenue	Previous_year
Accessories	$1,096,341.49	$92,735.3534
Bikes	$43,484,661.12	$26,328,476.8155
Clothing	$1,294,061.73	$485,587.1546
Components	$6,003,210.20	$3,610,092.4719
Total	**$51,878,274.54**	**$30,516,891.7954**

- In the example, function calculates the total revenue of the last year (2019).
- Total revenue is a measure, it calculates the total revenue of current year (2020)

Karthimeena

SAMEPERIODLASTYEAR

- Use this function to retrieve the equivalent period from the previous year.
- It has a single parameter, dates – a column of date value.
- It returns the single column of date values.

```
1  Total_Revenue_LY = CALCULATE([Total_Revenue], SAMEPERIODLASTYEAR('Date'[Date]))
```

Fiscal Year

FY2019

Category	Total_Revenue	Total_Revenue_LY
Accessories	$138,901.55	$36,814.8464
Bikes	$28,544,881.62	$22,590,983.47
Clothing	$757,224.19	$66,327.5346
Components	$4,629,101.14	$1,166,765.3153
Total	**$34,070,108.50**	**$23,860,891.1663**

Karthimeena

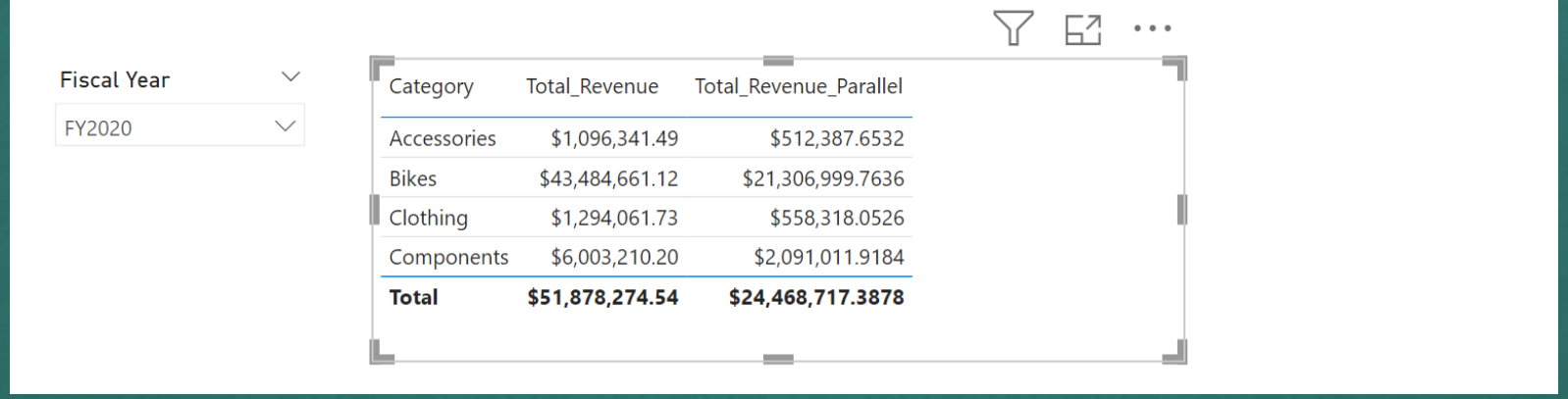
PARALLELPERIOD

- Use PARALLELPERIOD() to get equivalent period of dates from specified number of intervals back or forward.
- It has 3 parameter. First is date column from where you want to get the date.
- Second is number of intervals to add or subtract from the dates.
- Third is interval type. This can be either year, month or quarter.
- Finally it returns a single column of date values.

PARALLELPERIOD

- Below code, returns the total revenue for corresponding period one year ago, as specified in the context.

```
1  Total_Revenue_Parallel = CALCULATE([Total_Revenue], PARALLELPERIOD('Date'[Date], 1, YEAR))
```



Fiscal Year

FY2020

Category	Total_Revenue	Total_Revenue_Parallel
Accessories	$1,096,341.49	$512,387.6532
Bikes	$43,484,661.12	$21,306,999.7636
Clothing	$1,294,061.73	$558,318.0526
Components	$6,003,210.20	$2,091,011.9184
Total	**$51,878,274.54**	**$24,468,717.3878**

STARTOFYEAR

- STARTOFYEAR() returns the first date of the year in the current context for specified column.
- It has two parameter. First parameter contains a column of dates.
- YearEndDate parameter is end date of the yar and it’s a optional parameter.
- It returns the a table containing single column and row with date value.

Karthimeena

STARTOFYEAR

Code returns the first date (start of the year) of each row.

```
1  start_of_year = STARTOFYEAR('Date'[Date])
```

start_of_year

1/1/2019...

Date	start_of_year
7/6/2019	1/1/2019 12:00:00 AM
8/13/2019	1/1/2019 12:00:00 AM
9/12/2019	1/1/2019 12:00:00 AM
10/11/2019	1/1/2019 12:00:00 AM
10/30/2019	1/1/2019 12:00:00 AM
11/14/2019	1/1/2019 12:00:00 AM
12/5/2019	1/1/2019 12:00:00 AM
1/24/2020	1/1/2020 12:00:00 AM
2/9/2020	1/1/2020 12:00:00 AM

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STARTOFMONTH

- STARTOFMONTH() returns the first date in the current context for specified column.
- It has single parameter. That's contains a column of dates.
- It returns the a table containing single column and row with date value.

STARTOFMONTH

Code returns the first date of a month for each row in a table.

```
1  start_of_month = STARTOFMONTH('Date'[Date])
```

start_of_month

7/1/2019

Date	start_of_month
7/6/2019	7/1/2019
8/13/2019	8/1/2019
9/12/2019	9/1/2019
10/11/2019	10/1/2019
10/30/2019	10/1/2019
11/14/2019	11/1/2019
12/5/2019	12/1/2019
1/24/2020	1/1/2020
2/9/2020	2/1/2020

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STARTOFQUATER

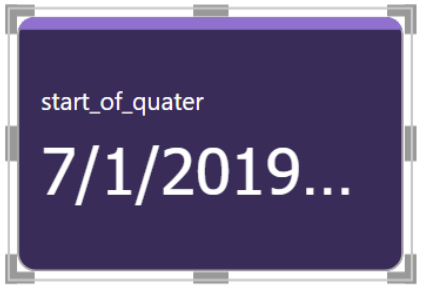
- STARTOFQUATER() returns the first date of the quarter in the current context for specified column.
- It has single parameter. That's contains a column of dates.
- It returns the a table containing single column and row with date value.

Karthimeena

STARTOFQUATER

Code returns the first date of the quarter for each row in a table.

```
1  start_of_quater = STARTOFQUARTER('Date'[Date])
```



Date	start_of_year	start_of_quater
7/6/2019	1/1/2019 12:00:00 AM	7/1/2019 12:00:00 AM
8/13/2019	1/1/2019 12:00:00 AM	7/1/2019 12:00:00 AM
9/12/2019	1/1/2019 12:00:00 AM	7/1/2019 12:00:00 AM
10/11/2019	1/1/2019 12:00:00 AM	10/1/2019 12:00:00 AM
10/30/2019	1/1/2019 12:00:00 AM	10/1/2019 12:00:00 AM
11/14/2019	1/1/2019 12:00:00 AM	10/1/2019 12:00:00 AM
12/5/2019	1/1/2019 12:00:00 AM	10/1/2019 12:00:00 AM
1/24/2020	1/1/2020 12:00:00 AM	1/1/2020 12:00:00 AM
2/9/2020	1/1/2020 12:00:00 AM	1/1/2020 12:00:00 AM

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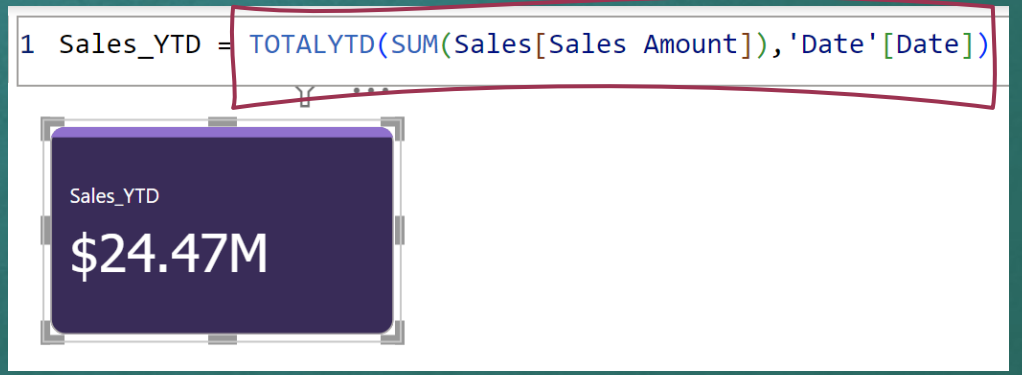
TOTALYTD

- TOTALYTD() calculates the total year-to-date for specified expression up to the given date.
- It has 2 parameter. First parameter contains the expression for which you want to calculate the year-to-total.
- Second parameter contains the dates.
- It returns a scalar value.



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TOTALQTD

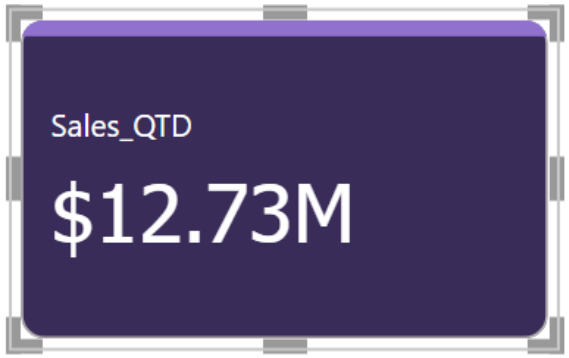
- TOTALQTD() calculates the total quater-to-date for specified expression up to the given date.
- Quarter-to-date – It's a period of beginning of current quarter to current date.
- It has 2 parameter. First parameter contains the expression for which you want to calculate the quater-to-total.
- Second parameter contains the dates.
- It returns a scalar value.

Karthimeena

TOTALQTD

- Below code, calculates the quater-to-Date sales and returns a

```
1  Sales_QTD = TOTALQTD(SUM(Sales[Sales Amount]),'Date'[Date])
```



TOTALMTD

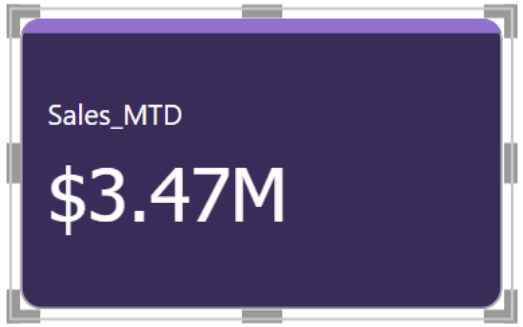
- TOTALMTD() calculates the total month-to-date for specified expression up to the given date.
- Month-to-date – It's a period of beginning of current month to current date.
- It has 2 parameter. First parameter contains the expression for which you want to calculate the month-to-total.
- Second parameter contains the dates.
- It returns a scalar value.

Karthimeena

TOTALMTD

- Below code, calculates the Month-to-Date sales and returns a value

```
1  Sales_MTD = TOTALMTD(SUM(Sales[Sales Amount]),'Date'[Date])
```



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DATESYTD

- DATESYTD() returns table of dates for year- to-date.
- It has two parameter. First one is a column that contains dates.
- Second parameter is optional, that is a date defines the year-end date.

```
1  dates_YTD = CALCULATE([Total_Products], DATESYTD('Date'[Date]))
```

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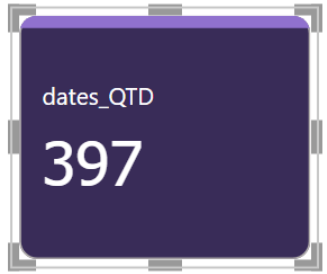
DATESQTD

- DATESQTD() returns table of dates for quarter- to-date.
- It has single parameter. A column that contains dates.

```
1  dates_QTD = CALCULATE([Total_Products], DATESQTD('Date'[Date]))
```



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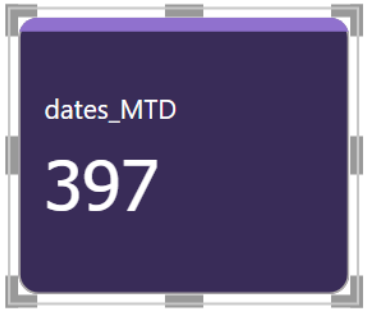
DATESMTD

- DATESMTD() returns table of dates for month- to-date.
- It has single parameter. A column that contains dates.

```
1  dates_MTD = CALCULATE([Total_Products], DATESMTD('Date'[Date]))
```



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