**DOMO BEAST MODE CALCULATIONS**

**MONTH**

(CASE WHEN (MONTH(`ReportedDate`) < 10) THEN Concat('0',MONTH(`ReportedDate`),' - ',MONTHNAME(`ReportedDate`)) ELSE Concat(MONTH(`ReportedDate`),' - ',MONTHNAME(`ReportedDate`)) END )

**YEAR**

YEAR(`ReportedDate`)

CASE

WHEN `Month` = 'Jan'

THEN 1

WHEN `Month` = 'Feb'

THEN 2

WHEN `Month` = 'Mar'

THEN 3

WHEN `Month` = 'Apr'

THEN 4

WHEN `Month` = 'May'

THEN 5

WHEN `Month` = 'Jun'

THEN 6

WHEN `Month` = 'Jul'

THEN 7

WHEN `Month` = 'Aug'

THEN 8

WHEN `Month` = 'Sept'

THEN 9

WHEN `Month` = 'Oct'

THEN 10

WHEN `Month` = 'Nov'

THEN 11

WHEN `Month` = 'Dec'

THEN 12

-- ELSE 'Tier 3 Customer'

END

Rename a column

You can use a calculation to rename a column in your data. For example, to rename a column named "daily\_total" to "Daily Total", create a calculation named "Daily Total" with the following code:

`daily\_total`

If you want to sum the column, use the following code:

sum(`daily\_total`)

After saving your calculation, click the new column name in the **Columns** list to display the column in your card.

Change values in a column

You can use a calculation to change a specified column value to a different value. For example, if you had a column called "Employee Last Name" and you wanted to change all instances of "Janssen" in the column to "Janssen-Soderquist," you would create a calculation with the following code:

case when `Employee Last Name` = 'Janssen'  
then 'Janssen-Soderqust'  
else `Employee Last Name`  
end

Filter values

You can filter values in a column by creating a calculation, then setting a filter to include or exclude the fields with the value you want. For example, assume you have a column of US states and you want to filter out State = TX, use this code:

case when `State` = 'TX'  
then 0  
else 1  
end

Then set a filter where the column does not include 0.

Alternately, if you have multiple values you want to filter out:

case when `State` in ('NY', 'TX')  
then 0  
else 1  
end

Then set a filter where the column does not include 0.

Or, when looking for patterns:

case  
when `State` like '%TX%' then 0  
when `State` like '%NY%' then 0  
else 1  
end

Then set a filter where the column does not include 0.

Force a sort order

You can tell Beast Mode to sort data the way you want.

CASE  
WHEN `Development Status` = 'Requested' THEN 1  
WHEN `Development Status` = 'In Development' THEN 2  
WHEN `Development Status` = 'Code Complete' THEN 3  
WHEN `Development Status` = 'Data Mapping' THEN 4  
WHEN `Development Status` = 'Ready' THEN 5  
WHEN `Development Status` = 'Deployer' THEN 6  
WHEN `Development Status` = 'Forecasted' THEN 7  
WHEN `Development Status` = 'Hold' THEN 8 ELSE 0  
END

Sort by the column with numerical values.

GMT and time zone

CASE WHEN HOUR(CURRENT\_TIMESTAMP()) < 8 THEN ADDDATE(CURRENT\_DATE(), -1) ELSE CURRENT\_DATE() END

Replace 8 with the GMT time difference value.

Transform a date or unrecognized date

You can transform the date format of a column into another column. For example, supposing a date column has a date format of 2012-01-13, you could create a new column having a date format of 2012-01 using the following code:

Date\_Format(`MyDateColumn`, '%Y-%m')

If a column isn't recognized as a date/time column, you can use a calculation to transform the column values to dates in another column. For example, create a calculation using the following code:

Date\_Format(`MyDateColumn`, '%Y-%m-%d')

This code uses a date format of 2012-01-13 for year, month, day, but you can specify the date format you want. For more information, see [Date Format Specifier Characters in Beast Mode](https://knowledge.domo.com/Visualize/Adding_Cards_to_Domo/KPI_Cards/Transforming_Data_Using_Beast_Mode/03Date_Format_Specifier_Characters_in_Beast_Mode).

Calendar month day

Date\_Format(`MyDateColumn`,'%m/%d')

Calendar year

Year(`MyDateColumn`)

Current year

case when Year(`MyDateColumn`) = year(current\_date()) then 'True' else 'False' end

Last 12 months

case  
when  
year(`MyDateColumn`) = year(current\_date()) - 1  
and month(current\_date()) <= month(`MyDateColumn`)  
then  
'Yes'  
  
when  
month(`MyDateColumn`) <= month(current\_date())  
and year(`MyDateColumn`) = year(current\_date())  
then  
'Yes'  
else 'No'  
end

Last 12 months filter

Use the following code to create a calculation to create a column with a 'Yes' string value where the corresponding date value is greater than or equal to the first day of the month of the current calendar day from the previous year, and a 'No' where it is not.

CASE WHEN `MyDateColumn` >= STR\_TO\_DATE(CONCAT(YEAR(CURRENT\_DATE() - 1), MONTH(CURRENT\_DATE()), '01'), '%Y%m%d') THEN 'Yes' ELSE 'No' END

To exclude the current month, add AND `MyDateColumn` < DATE\_FORMAT(CURRENT\_DATE(), '%Y%m01')  
CASE WHEN `MyDateColumn` >= STR\_TO\_DATE(CONCAT(YEAR(CURRENT\_DATE() - 1), MONTH(CURRENT\_DATE()), '01'), '%Y%m%d')  
AND `MyDateColumn` < DATE\_FORMAT(CURRENT\_DATE(), '%Y%m01')  
THEN 'Yes' ELSE 'No' END

Last year filter

Use the following code to create a calculation to create a column with a 'Yes' string value where the corresponding date value is greater than or equal to the current calendar day from the previous year, and a 'No' where it is not.

CASE WHEN `MyDateColumn` >= STR\_TO\_DATE(CONCAT(YEAR(CURRENT\_DATE() - 1), MONTH(CURRENT\_DATE()), DAY(CURRENT\_DATE())), '%Y%m%d') THEN 'Yes' ELSE 'No' END

To exclude the current date, add AND `MyDateColumn` < CURRENT\_DATE()

CASE WHEN `MyDateColumn` >= STR\_TO\_DATE(CONCAT(YEAR(CURRENT\_DATE() - 1), MONTH(CURRENT\_DATE()), DAY(CURRENT\_DATE())), '%Y%m%d')  
AND `MyDateColumn` < CURRENT\_DATE()  
THEN 'Yes' ELSE 'No' END

Another last year filter

Use the following code to create a calculation to determine whether to add a zero '0' before the month so that it's a 2-digit month, which helps in setting the date.

CASE WHEN MONTH(CURRENT\_DATE()) < 10 THEN CASE WHEN `MyDateColumn` >= STR\_TO\_DATE(CONCAT(YEAR(CURRENT\_DATE())-1, '0', MONTH(CURRENT\_DATE()), '01'), '%Y%m%d') THEN 'Yes' ELSE 'No' END

Rolling 13 months

CASE WHEN PERIOD\_DIFF(DATE\_FORMAT(STR\_TO\_DATE(CONCAT(YEAR(CURRENT\_DATE()), MONTH(CURRENT\_DATE())), '%Y%m%d'), '%Y%m'), DATE\_FORMAT (`Month`, '%Y%m')) > 14  
THEN 'No'  
ELSE 'Yes'  
END

This fiscal quarter

Use the following code to create a calculation that returns "Yes" or "No" depending on whether the value falls in the current fiscal quarter:

CASE WHEN `FiscalQuarter` = (CASE WHEN MONTH(CURRENT\_DATE()) >= 2 AND MONTH(CURRENT\_DATE()) <=4 then 1  
ELSE CASE WHEN MONTH(CURRENT\_DATE()) >= 5 AND MONTH(CURRENT\_DATE()) <=7 then 2  
ELSE CASE WHEN MONTH(CURRENT\_DATE()) >= 8 AND MONTH(CURRENT\_DATE()) <=10 then 3  
ELSE 4 END  
END  
END)  
THEN 'Yes' ELSE 'No'  
END

This fiscal year

Use the following code to create a calculation that returns "Yes" or "No" depending on whether the value falls in the current fiscal year:

CASE WHEN `FiscalYear` = (CASE WHEN MONTH(CURRENT\_DATE())<2 THEN YEAR(CURRENT\_DATE())-1 ELSE YEAR(CURRENT\_DATE()) END) THEN 'Yes' ELSE 'No' END

Fiscal calendar

Use the following code to create a calculation to create an "Adjusted Date" column that maps current year date and previous year date to the same value:

Date\_Format(`Adjusted Date`, '%b %d')

Then create a calculation to filter dates:

CASE WHEN DateDiff(AddDate(Current\_Date(), -1), `Adjusted Date`) < 30 AND DateDiff(Current\_Date(), `Adjusted Date`) > 0 THEN 'Y' ELSE 'N' END

Week starting on day x

Use the following code to create a calculation that aggregates your data weekly. To change the week start day, add a value between 1 and 6 in place of x. Note that WEEKDAY() indexes the days of the week differently than DAYOFWEEK(). You can specify additional formatting using DATE\_FORMAT().

SUBDATE(`Date`, DAYOFWEEK(`Date`)+1)

Week over week

Use the following code to create a calculation that shows week over week. The following example includes 4 weeks prior (aligned on days), and 52 weeks prior (aligned on days). Change the values to the time periods you want.

X Axis is Date - has to be "Common Date":

case  
when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < 28 and DateDiff(Current\_Date(), `MyDateColumn`) > 0 then Date\_Format(`MyDateColumn`, '%b %e')

when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < (28 + 28) and DateDiff(Current\_Date(), `MyDateColumn`) > 28 then Date\_Format(AddDate(`MyDateColumn`,28), '%b %e')

when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < 28 + (52 \* 7) and DateDiff(Current\_Date(), `MyDateColumn`) > (52 \* 7) then Date\_Format(AddDate(`MyDateColumn`,52 \* 7), '%b %e')

end

Filter to "Last 28 Days":

case  
when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < 28 and DateDiff(Current\_Date(), `MyDateColumn`) > 0 then 'Yes'

when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < (28 + 28) and DateDiff(Current\_Date(), `MyDateColumn`) > 28 then 'Yes'

when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < 28 + (52 \* 7) and DateDiff(Current\_Date(), `MyDateColumn`) > (52 \* 7) then 'Yes'  
else 'No'  
end

Pick your metric (in this example, "Visits"), then create a column called "Series":

case  
when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < 28 and DateDiff(Current\_Date(), `MyDateColumn`) > 0 then 'Last 28 Days'

when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < (28 + 28) and DateDiff(Current\_Date(), `MyDateColumn`) > 28 then '4 Weeks Prior'

when when DateDiff(AddDate(Current\_Date(), -1), `MyDateColumn`) < 28 + (52 \* 7) and DateDiff(Current\_Date(), `MyDateColumn`) > (52 \* 7) then '52 Weeks Prior'  
end

Year over year change

Use the following code to create a calculation for year over year change:

(SUM(CASE WHEN YEAR(`MyDateColumn`) = YEAR(CURRENT\_DATE()) THEN `Amount` ELSE 0 END) / NULLIF(SUM(CASE WHEN YEAR(`MyDateColumn`) = YEAR(CURRENT\_DATE()) - 1 THEN `Amount` ELSE 0 END), 0)) - 1

Wrap the denominator in a NULLIF() function to avoid a divide by zero error.

Variance CY-PY

Use the following code to create a calculation for the variance Current Year - Past Year:

(  
SUM(CASE WHEN YEAR(`MyDateColumn`) = YEAR(CURRENT\_DATE()) THEN `Amount` ELSE 0 END)  
- SUM(CASE WHEN YEAR(`MyDateColumn`) = YEAR(CURRENT\_DATE()) - 1 THEN `Amount` ELSE 0 END)  
)

Variance % ((CY - PY) / PY)

Use the following code to create a calculation for the variance % ((Current Year - Past Year) / Past Year):

(  
(SUM(CASE WHEN YEAR(`MyDateColumn`) = YEAR(CURRENT\_DATE()) THEN `Amount` ELSE 0 END)  
- SUM(CASE WHEN YEAR(`MyDateColumn`) = YEAR(CURRENT\_DATE()) - 1 THEN `Amount` ELSE 0 END)  
)  
/ NULLIF(SUM(CASE WHEN YEAR(`MyDateColumn`) = YEAR(CURRENT\_DATE()) - 1 THEN `Amount` ELSE 0 END), 0)  
)

Accounts receivable/payable aging buckets

Use the following code to create a calculation for accounts receivable:

CASE  
when DATEDIFF(CURRENT\_DATE(),`TxnDate`) < 31 then ' 30 Days'  
when DATEDIFF(CURRENT\_DATE(),`TxnDate`) < 61 then ' 60 Days'  
when DATEDIFF(CURRENT\_DATE(),`TxnDate`) < 91 then ' 90 Days'  
when DATEDIFF(CURRENT\_DATE(),`TxnDate`) < 121 then '120 Days'  
when DATEDIFF(CURRENT\_DATE(),`TxnDate`) > 120 then 'Over 120'  
end

Remove NULL for line charts

Use the following code to create a calculation to filter NULL Values in line charts (so line doesn't go to zero).

CASE WHEN `Number of SQLs` = 0 THEN '' ELSE SUM(`Number of SQLs`) END

Stylize a value

Use a calculation to stylize a cell value in a table. For example, to stylize a cell in a column named "salesperson" when the value is equal to 'Bob', create a calculation named "Sales Person", then use the following code:

CASE `salesperson`  
when 'Bob' then CONCAT('<span style="color:red">',`salesperson`,'</span>')  
else `salesperson`  
end

Include a URL in a card

Use the following Beast Mode to insert a URL in a card:

CONCAT(`TopicName`, ': ', '<a href="', `Link`, '" target="\_blank">', `Link`, '</a')

"TopicName" refers to the field in the DataSet with your topic names, and "Link" refers to the field with the URLs. URLs *must* start with https://.

Conditional formatting for a standard table

The following Beast Mode examples show you how to create conditional formatting on a standard table, which you can use in instances where you need a modified drill path table view. These options are not currently available in Sumo tables.

This formatting is accomplished by creating an HTML string which contains a DIV element in which the background color changes based on user-defined conditions.

**Green Background (#bbe491)**  
CONCAT('<div style="background-color:#bbe491; width: 100%; height:100%; margin:-20px; padding:20px"><a href="#">', 'Green Conditional Format', '</a></div>')

**Yellow Background (#ccf84)**  
CONCAT('<div style="background-color:#fccf84; width: 100%; height:100%; margin:-20px; padding:20px"><a href="#">', 'Yellow Conditional Format', '</a></div>')

**Red Background**  
CONCAT('<div style="background-color:#fcbcb7; width: 100%; height:100%; margin:-20px; padding:20px"><a href="#">', 'Red Conditional Format', '</a></div>')

***Note:****The <a> element with a reference to # prevents the user from drilling on that column as it would create a filter for the full HTML string.*

**Example Beast Mode**

CASE

WHEN `CHANGE` > 0 THEN CONCAT('<div style="background-color:#bbe491; width: 100%; height:100%; margin:-20px; padding:20px"><a href="#">', `CHANGE`, '</a></div>')  
  
WHEN IFNULL(`CHANGE`, 0) = 0 THEN CONCAT('<div style="background-color:#fccf84; width: 100%; height:100%; margin:-20px; padding:20px"><a href="#">', `CHANGE`, '</a></div>')  
  
WHEN `CHANGE` < 0 THEN CONCAT('<div style="background-color:#fcbcb7; width: 100%; height:100%; margin:-20px; padding:20px"><a href="#">', `CHANGE`, '</a></div>')  
  
END

**Example Table with Beast Mode Applied**

***Note:****Keep in mind that the value this Beast Mode returns is a STRING. Any aggregations must be done within Beast Mode because aggregations will be disabled when building cards.*

**Alternative Approach**

If you would like to highlight the text block portion only and not the entire cell, use the following code:

<span style="background-color:#ff666;display:block"><a href="#">Your Text Here</a></span>

If you would like to highlight just the text and not the entire display block, use this code:

  <span style="color:#ff666;"><a href="#">Your Text Here</a></span>

Notice the <a> tag was added to handle the drill issue and the styling needs to have "color" when dealing with the font color only.

CASE

WHEN SUM(`Retained` / `Start`) / COUNT(`Start`) \*100 > 90

THEN CONCAT('<div style="background-color:#bbe491; text-align: center; text-decoration:none; font-weight: bold; width: 100%; height:100%; margin:-20px; padding:20px;"><a href="#">', ROUND(SUM(`Retained` / `Start`) / COUNT(`Start`),4) \*100,' %','</a></div>')

WHEN SUM(`Retained` / `Start`) / COUNT(`Start`) \*100 > 75

THEN CONCAT('<div style="background-color:#fccf84; text-align: center; text-decoration:none; font-weight: bold; width: 100%; height:100%; margin:-20px; padding:20px;"><a href="#">', ROUND(SUM(`Retained` / `Start`) / COUNT(`Start`),4) \*100,' %', '</a></div>')

ELSE CONCAT('<div style="background-color:#fcbcb7; text-align: center; font-weight: normal; width: 100%; height:100%; margin:-20px; padding:20px"><a href="#">', ROUND(SUM(`Retained` / `Start`) / COUNT(`Start`),4) \*100,' %', '</a></div>')

END

Page Analyzer Links (or Deep Linking with Filters)

Using a Beast Mode calculation, you can create link to other pages in Table cards and apply Analyzer filters according to what you have set in the Beast Mode. This is a powerful feature when you want to guide a user through a data story that involves cards that aren’t in the direct drill path of the current card, or if you want users to be able to apply Analyzer filters quickly to any page from a central or parent Table card.

To create one of these links, copy the following code into a Beast Mode and then follow the annotations to configure each for your use case: CONCAT(

**Use Cases**

1. Instance and Page ID  
     
   '<a href=''https://yourdomoinstance.domo.com/page/1111111111?pfilters=['
2. Filter 1  
     
   You can apply the operators IN or NOT\_IN. Be sure to change the column value and the data source ID for the Analyzer to reference.

*Filter Code Block Start*

,'{"column":"your\_field1","dataSourceId":"your\_datasource \_Id","dataType":"string","operand":"IN","values":["'

,`your\_field1`

,'"]}'

*Filter Code Block End*

1. Configure another filter if applicable.

*Filter Code Block Start*

,',{"column":"your\_field2","dataSourceId":"your\_datasource \_Id","dataType":"string","operand":"NOT\_IN","values":["'

,`your\_field2`

,'"]}'

*Filter Code Block End*

1. Add more filters by copying in the previous calculation in number 3 here:

*Filter Code Block Start  
  
  
Filter Code Block End*

,']'  *Copy and past additional filter blocks above this line*

,'''target="\_blank" title="Open in Domo">'

1. Text to be displayed in hyperlink:

,'Display Text' *Put display text in single quotes here*

,'</a>'

)

Dynamic Daylight Savings

The following dynamic Beast Mode calculations allow you to compare a date column to daylight savings dates. A "yes" or "no" is returned if the dates are in a certain range of daylight savings.

**Sample Beast Mode**

"Date" is the date column.

CASE

    WHEN `date`>= CASE

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-08'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-08'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-09'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-09'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-10'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-10'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-11'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-11'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-12'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-12'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-13'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-13'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-14'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-03-14'),'%Y-%m-%d')

END

    AND  `date`< CASE

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-01'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-01'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-02'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-02'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-03'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-03'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-04'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-14'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-05'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-05'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-06'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-06'),'%Y-%m-%d')

WHEN DAYOFWEEK(STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-07'),'%Y-%m-%d')) = 0 THEN STR\_TO\_DATE(CONCAT(YEAR(curdate()), '-11-07'),'%Y-%m-%d')

END

        THEN 'yes'

    ELSE 'no'

END

Date Difference for Business Days

If you need to calculate the date difference between two dates for weekdays/business days, this can be done in Beast Mode or SQL DataFlow using a query. For more information, see [Date Difference for Business Days](https://knowledge.domo.com/Prepare/DataFlow_Tips_and_Tricks/Date_Difference_for_Business_Days).

Removing NULL for Line Graphs

Use the following code to create a calculation to filter NULL Values in Line graphs (so the line doesn't go to zero).

SUM(CASE WHEN `Number of SQLs` != 0 THEN`Number of SQLs` END)

SUM() is on the outside of the CASE statement as a best practice. If `Number of SQLs` = 0 it will return a NULL value.