

# MODEDATE Function

Computes the most frequent (mode) value found in all row values in a Datetime column.

If a row contains a missing or null value, it is not factored into the calculation. If no Datetime values are found in the source column, the function returns a null value.

**Wrangle vs. SQL:** This function is part of Wrangle, a proprietary data transformation language. Wrangle is not SQL. For more information, see *Wrangle Language*.

## Basic Usage

```
modedate(myDates)
```

**Output:** Returns the most frequently appearing Datetime value from the `myDates` column.

## Syntax and Arguments

```
modedate(function_col_ref)
```

Argument	Required?	Data Type	Description
function_col_ref	Y	string	Name of column to which to apply the function

For more information on syntax standards, see *Language Documentation Syntax Notes*.

### function\_col\_ref

Name of the column the Datetime values of which you want to calculate the most frequent (mode) date.

- Column must contain Datetime values.
- Literal values are not supported as inputs.
- Multiple columns and wildcards are not supported.

### Usage Notes:

Required?	Data Type	Example Value
Yes	Datetime (column reference)	datTransactions

## Examples

**Tip:** For additional examples, see *Common Tasks*.

This example shows how you can use the following functions to perform some analysis on Datetime columns.

- **MINDATE** - Calculates the earliest (minimum) date from a column of Datetime column values. See *MINDATE Function*.
- **MAXDATE** - Calculates the latest (maximum) date from a column of Datetime column values. See *MAXDATE Function*.
- **MODEDATE** - Calculates the most frequent (mode) date from a column of Datetime column values. See *MODEDATE Function*.

**Source:**

The following dataset contains a set of three available dates for a set of classes:

classId	Date1	Date2	Date3
c001	2020-03-09	2020-03-13	2020-03-17
c002	2020-03-09	2020-03-06	2020-03-21
c003	2020-03-09	2020-03-16	2020-03-23
c004	2020-03-09	2020-03-23	2020-04-06
c005	2020-03-09	2020-04-09	2020-05-09
c006	2020-03-09	2020-08-09	2021-01-09

**Transformation:**

To compare dates across multiple columns, you must consolidate the values into a single column. You can use the following transformation to do so:

<b>Transformation Name</b>	Unpivot columns
<b>Parameter: Columns</b>	Date1,Date2,Date3
<b>Parameter: Group size</b>	1

The dataset is now contained in three columns, with descriptions listed below:

classId	key	value
Same as previous.	DateX column identifier	Corresponding value from the DateX column.

You can use the following to rename the value column to eventDates:

<b>Transformation Name</b>	Rename columns
<b>Parameter: Option</b>	Manual rename
<b>Parameter: Column</b>	value
<b>Parameter: New column name</b>	eventDates

Using the following transformations, you can create new columns containing the min, max, and mode values for the Datetime values in eventDates:

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	MINDATE(eventDates)

<b>Parameter: New column name</b>	earliestDate
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<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	MAXDATE(eventDates)
<b>Parameter: New column name</b>	latestDate

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	MODEDATE(eventDates)
<b>Parameter: New column name</b>	mostFrequentDate

**Results:**

classId	key	eventDates	mostFrequentDate	latestDate	earliestDate
c001	Date1	2020-03-09	2020-03-09	2021-01-09	2020-03-06
c001	Date2	2020-03-13	2020-03-09	2021-01-09	2020-03-06
c001	Date3	2020-03-17	2020-03-09	2021-01-09	2020-03-06
c002	Date1	2020-03-09	2020-03-09	2021-01-09	2020-03-06
c002	Date2	2020-03-06	2020-03-09	2021-01-09	2020-03-06
c002	Date3	2020-03-21	2020-03-09	2021-01-09	2020-03-06
c003	Date1	2020-03-09	2020-03-09	2021-01-09	2020-03-06
c003	Date2	2020-03-16	2020-03-09	2021-01-09	2020-03-06
c003	Date3	2020-03-23	2020-03-09	2021-01-09	2020-03-06
c004	Date1	2020-03-09	2020-03-09	2021-01-09	2020-03-06
c004	Date2	2020-03-23	2020-03-09	2021-01-09	2020-03-06
c004	Date3	2020-04-06	2020-03-09	2021-01-09	2020-03-06
c005	Date1	2020-03-09	2020-03-09	2021-01-09	2020-03-06
c005	Date2	2020-04-09	2020-03-09	2021-01-09	2020-03-06
c005	Date3	2020-05-09	2020-03-09	2021-01-09	2020-03-06
c006	Date1	2020-03-09	2020-03-09	2021-01-09	2020-03-06
c006	Date2	2020-08-09	2020-03-09	2021-01-09	2020-03-06
c006	Date3	2021-01-09	2020-03-09	2021-01-09	2020-03-06