

EXAMPLE - Date Functions - Min Max and Mode

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:

Transformation Name	Unpivot columns
Parameter: Columns	Date1,Date2,Date3
Parameter: Group size	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`:

Transformation Name	Rename columns
Parameter: Option	Manual rename
Parameter: Column	value
Parameter: New column name	eventDates

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

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	MINDATE(eventDates)
Parameter: New column name	earliestDate

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	MAXDATE(eventDates)
Parameter: New column name	latestDate

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	MODEDATE(eventDates)
Parameter: New column name	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