



WINDOW-FUNCTION TAB

# Offset

*Read a value from another row relative to the current one within the partition — LAG (a prior row) or LEAD (a following row), with offset and default.*

## Who

### WHO IT IS FOR

Analysts comparing each row to the one before or after — period-over-period change, gaps, and trends.

## What

### WHAT IT DOES

The Offset tab builds a LAG or LEAD column that pulls a value from a row a set number of positions away within an ordered partition, with a default for when no such row exists.

## When

### WHEN TO USE IT

Use it for month-over-month differences, detecting gaps in a sequence, or comparing each event to the previous one.

## Where

### WHERE TO FIND IT

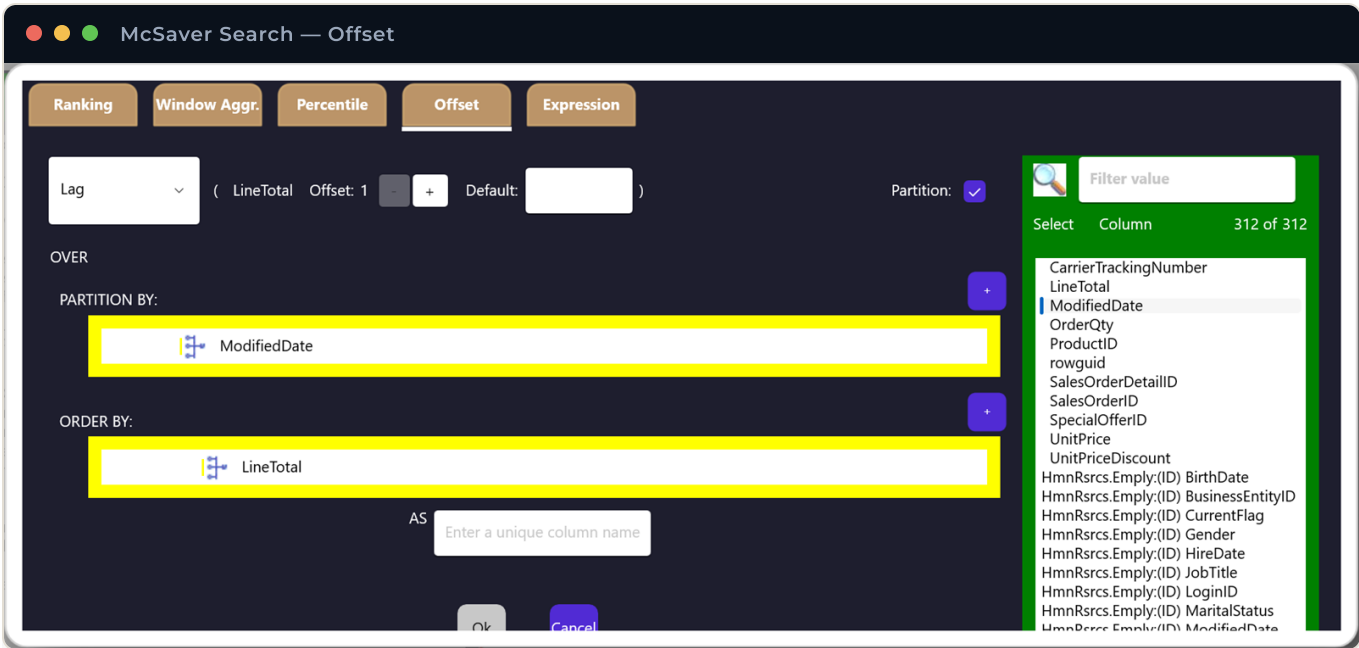
Open the advanced column popup from the dictionary icon on a selected column in the Searcher's Select tab; choose the Offset tab.

## Why

### WHY IT MATTERS

Row-to-row comparisons are a classic source of off-by-one SQL errors. Building LAG/LEAD visually keeps the offset, ordering, and default correct.

SCREENSHOT



The Offset tab — a LAG of LineTotal (offset 1) partitioned by ModifiedDate and ordered by LineTotal.



Tip of the Day

64 tips

These Searcher Tip of the Day entries apply across all of its sub-tabs — open them in the app from the lightbulb icon in the Searcher header.

**VALUE** Build complex SQL queries visually without writing a single line of code — pick tables, columns, filters, grouping, and sorting through the tabs and let the Searcher generate the SQL for you.

**OVERVIEW** The Searcher is a visual SQL query builder where you choose a root table and assemble a SELECT statement using the Select, Where, Group By, Having, Order By, SQL, and Tree tabs.

**NAVIGATION** Use the root-entity Picker beside the "Searcher" title to choose the table your query is built from; its tooltip shows the table's description.

**FEATURE** Check "Ids" in the header to drop primary-key Id columns from every table except the root, keeping your column list focused.

**FEATURE** Check "Ex-Right" in the header to eliminate every column that sits to the right of the root entity in the join tree.

**PERFORMANCE** Set the "Timeout" value in the header to cap how many seconds an SQL operation may run before it is cancelled.

**ACTION** Click "Show Results" in the header to run the query and open the results in a separate Search Results window.

**WORKFLOW** Click the save (disk) icon in the header to open the Save SQL dialog and persist your query.

**WORKFLOW** Click the list icon in the header to load a previously saved Searcher criteria back into the builder.

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| <b>VISUAL</b>      | Click the camera icon in the header to save images of the current view when image capture is available.                                                                                      |
| <b>NAVIGATION</b>  | Click the tip (lightbulb) icon in the header to reopen this Tip of the Day window.                                                                                                           |
| <b>NAVIGATION</b>  | On the Tree tab, type in the "Highlite Items" entry to highlight matching entities in yellow across the join tree.                                                                           |
| <b>VISUAL</b>      | Check "Show Short Aliases" on the Tree tab to switch entity names between their full aliases and abbreviated short aliases.                                                                  |
| <b>VISUAL</b>      | On the Tree tab, green depth bars mark the Left Side of the tree and blue depth bars mark the Right Side, with a Level pill showing each join's depth.                                       |
| <b>NAVIGATION</b>  | Click any entity row in the Tree tab to re-root your query on that table without leaving the Tree tab.                                                                                       |
| <b>ACTION</b>      | Right-click an entity in the Tree tab to set a custom alias for that table.                                                                                                                  |
| <b>VISUAL</b>      | Each Tree row shows a join-type pill whose letter (and tooltip) tells you the kind of join used to reach that entity.                                                                        |
| <b>NAVIGATION</b>  | Use the "Last Viewed" bar at the bottom of the Tree tab to jump back to any of your recently viewed root entities.                                                                           |
| <b>ACTION</b>      | Click the All/Alt/Group pill on the Select tab to cycle the left list between every column, unique column names, and a grouped view.                                                         |
| <b>ACTION</b>      | On the Select tab, check "Distinct" to return only unique rows in your results.                                                                                                              |
| <b>PERFORMANCE</b> | Check "No lock" on the Select tab to add a NOLOCK hint that reads without taking locks on a busy database.                                                                                   |
| <b>ACTION</b>      | Use "Skip" and "Top" on the Select tab to page through or cap result size — great for previewing large tables quickly.                                                                       |
| <b>FILTER</b>      | Type in the "Filter value" entry on the Select tab to narrow the list of selectable columns by name.                                                                                         |
| <b>ACTION</b>      | Tap a column in the left list of the Select tab to add it to your query; double-tap a selected column on the right to remove it.                                                             |
| <b>ACTION</b>      | Right-click the "X of" count on the Select tab to add all filtered columns, or right-click the total count to add every column at once.                                                      |
| <b>SELECTION</b>   | Right-click the selected-columns count on the Select tab to remove all selected columns in one step.                                                                                         |
| <b>VISUAL</b>      | Red row-count bars warn that a table has over a million rows and yellow bars warn of over a hundred thousand rows — add WHERE filters before querying those.                                 |
| <b>COLUMN</b>      | In the column lists, a blue "R" means the column exists in the root table, a green "1" marks a one-to-one relationship, a red "M" marks one-to-many, and an orange flag marks a natural key. |
| <b>ACTION</b>      | Click the rotated aggregation icon next to a selected column to change its aggregation (Sum, Count, Avg, Min, Max, and more).                                                                |

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| <b>ACTION</b>        | Right-click a selected column on the Select tab to rename its output alias in the results.                                                  |
| <b>ACTION</b>        | Drag and drop selected columns on the Select tab to reorder them in the query output.                                                       |
| <b>FILTER</b>        | Check "Exclude Nulls" on a selected column to filter out null values from nullable or left-joined columns.                                  |
| <b>FEATURE</b>       | Click the dictionary icon on a selected column to open the advanced popup for Ranking, Window, Percentile, Offset, and Expression support.  |
| <b>VISUAL</b>        | On a selected column, a blue bar marks a required left join, a red bar marks a one-to-many path, and a green bar marks a nullable column.   |
| <b>ACTION</b>        | On the Where tab, click the add (+) icon to append a new filter condition to your query.                                                    |
| <b>ACTION</b>        | Use the And/Or connector Picker on each Where row to control how that condition joins the previous one.                                     |
| <b>ACTION</b>        | Drag the colored group bars on the left of a Where row to wrap conditions in parentheses or ungroup them.                                   |
| <b>VISUAL</b>        | Aqua group bars on the Where tab mean your parenthetical grouping is valid; red bars mean a group still needs fixing.                       |
| <b>ACTION</b>        | Double-tap the funnel icon on a Where row to delete that condition.                                                                         |
| <b>ACTION</b>        | Click the tag / data-connection icon on a Where row to switch between comparing against a typed value and comparing against another column. |
| <b>FEATURE</b>       | The Where value editor adapts to the column type, offering text, numeric, date, time, or a dropdown of known reference values.              |
| <b>FILTER</b>        | On a nullable or left-joined Where column, toggle the include-nulls radio button to include null rows; right-click it to turn that off.     |
| <b>CLARIFICATION</b> | The Having tab works just like the Where tab but filters after aggregation — it appears only when your query uses GROUP BY.                 |
| <b>CLARIFICATION</b> | The Group By and Having tabs appear automatically once an aggregation forces a GROUP BY, and hide again when none is needed.                |
| <b>ACTION</b>        | On the Order By tab, click the arrow icon next to a sort column to toggle between Ascending and Descending.                                 |
| <b>ACTION</b>        | Check "Best Guess" on the Order By tab to auto-suggest a reasonable sort order for your query.                                              |
| <b>FILTER</b>        | Check "Limit to used columns" on the Order By or Group By tab to show only columns already used in your query.                              |
| <b>ACTION</b>        | Drag and drop Order By columns to set sort priority — the topmost column sorts first; double-tap a column to remove it.                     |
| <b>ACTION</b>        | Click "Clear all" on the Order By or Group By tab to remove every selected sort or grouping column at once.                                 |

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| <b>ACTION</b>     | On the Group By tab, check "Best Guess" to auto-suggest grouping columns based on your selected columns.                                               |
| <b>NAVIGATION</b> | The SQL tab shows a read-only, syntax-highlighted preview of the generated query with line numbers.                                                    |
| <b>CLIPBOARD</b>  | When the query can't build, click the red error banner at the bottom of the SQL tab to copy the message to your clipboard.                             |
| <b>FEATURE</b>    | In the advanced popup, the Ranking tab builds ROW_NUMBER, RANK, and DENSE_RANK functions with optional PARTITION BY and ORDER BY columns.              |
| <b>FEATURE</b>    | The Window Aggr. tab computes an aggregate OVER a window, with optional ORDER BY and a Frame clause using ROWS BETWEEN preceding and following bounds. |
| <b>FEATURE</b>    | The Percentile tab calculates distribution percentiles from 0.0 to 1.0 within an ordered group, with optional PARTITION BY columns.                    |
| <b>FEATURE</b>    | The Offset tab builds LAG and LEAD functions, letting you set the offset, a default value, and null handling to compare a row to its neighbors.        |
| <b>FEATURE</b>    | The Expression tab lets you write a free-form expression and map @0, @1, @2 placeholders to columns you pick below.                                    |
| <b>ACTION</b>     | Check "Simple Expression" in the Expression tab for guided DateTime, String, or Math function pickers chosen by the column's data type.                |
| <b>VISUAL</b>     | In the advanced popup, give your new column a name in the "AS" entry, then click Ok to add it or Cancel to discard it.                                 |
| <b>WORKFLOW</b>   | In the Save SQL dialog, choose a Format of Criteria, SQL, View, Proc, or Func to control what gets generated.                                          |
| <b>WORKFLOW</b>   | Save as Criteria to preserve the full visual query structure so you can reload and edit it later.                                                      |
| <b>EXPORT</b>     | In the Save SQL dialog, pick a Destination of File, Database, or Clipboard for the generated SQL.                                                      |
| <b>TECHNIQUE</b>  | Check "Generate Test Script" when saving to also place a runnable test version of your query on the clipboard.                                         |
| <b>ACTION</b>     | When saving to a file, check "Open Directory" to reveal the saved file's folder once the save completes.                                               |