

# Descriptions of available transformations

The following table describes the available transformations. The date and number types refer generically to any of the various forms of these concepts. That is, number includes, for example, `integer`, `long`, `double`. Date includes, for example, `date`, `Time`, `ZonedDateTime`.

| Transformation             | Input Type | Output Type | Parameter (* = required) | Description  |
|----------------------------|------------|-------------|--------------------------|--|
| <code>AbsoluteValue</code> | number     | number      | None                     | Return the absolute value of a number.   |
| <code>AddDays</code>       | date       | date        | <code>days</code>        | Add days to a date. The default is 0 days.   |
| <code>AddSeconds</code>    | date       | date        | <code>seconds</code>     | Add seconds to a date. The default is 0 seconds.   |
| <code>Append</code>        | string     | string      | string                   | Append a string to the end of a string. The default is to append nothing.  |
| <code>Camelize</code>      | string     | string      | None                     | Convert a phrase to a camelized string by removing whitespace, making the first word lowercase, and capitalizing the first letter of each subsequent word. |
| <code>Capitalize</code>    | string     | string      | None                     | Capitalize the first character in a string.  |
| <code>Ceiling</code>       | number     | number      | None                     | Return the whole number ceiling of a number.   |
| <code>Contains</code>      | any        | Boolean     | <code>value</code>       | Return true if a field contains the specified value.   |

| Transformation      | Input Type | Output Type | Parameter (* = required) | Description   |
|---------------------|------------|-------------|--------------------------|---|
| ConvertAreaUnit     | number     | number      | fromUnit*<br>toUnit *    | Convert a number that represents an area to another unit. For the fromUnit and toUnit parameters, select the appropriate unit from the <b>From Unit</b> and <b>To Unit</b> menus. The choices are: Square Foot, Square Meter, or Square Mile. |
| ConvertDistanceUnit | number     | number      | fromUnit*<br>toUnit *    | Convert a number that represents a distance to another unit. For the fromUnit and toUnit parameters, select the appropriate unit from the <b>From Unit</b> and <b>To Unit</b> menus. The choices are: Foot, Inch, Meter, Mile, or Yard.       |
| ConvertMassUnit     | number     | number      | fromUnit*<br>toUnit *    | Convert a number that represents mass to another unit. For the fromUnit and toUnit parameters, select the appropriate unit from the <b>From Unit</b> and <b>To Unit</b> menus. The choices are: Kilogram or Pound.                            |

| Transformation    | Input Type | Output Type | Parameter (* = required) | Description   |
|-------------------|------------|-------------|--------------------------|---|
| ConvertVolumeUnit | number     | number      | fromUnit *<br>toUnit *   | Convert a number that represents volume to another unit. For the fromUnit and toUnit parameters, select the appropriate unit from the <b>From Unit</b> and <b>To Unit</b> menus. The choices are: Cubic Foot, Cubic Meter, Gallon US Fluid, or Liter. |
| CurrentDate       | None       | date        | Note                     | Return the current date.  |
| CurrentDateTime   | None       | date        | None                     | Return the current date and time.   |
| CurrentTime       | None       | date        | None                     | Return the current time.  |
| DayOfWeek         | date       | number      | None                     | Return the day of the week (1 through 7) that corresponds to the date.  |
| DayOfYear         | date       | number      | None                     | Return the day of the year (1 through 366) that corresponds to the date.  |
| EndsWith          | string     | Boolean     | string                   | Return true if a string ends with the specified string, including case.   |
| Equals            | any        | Boolean     | value                    | Return true if a field is equal to the specified value, including case.   |
| FileExtension     | string     | string      | None                     | From a string that represents a file name, return the file extension without the dot.   |

| Transformation | Input Type | Output Type | Parameter (* = required) | Description  |
|----------------|------------|-------------|--------------------------|--|
| Floor          | number     | number      | None                     | Return the whole number floor of a number.   |
| Format         | any        | string      | template *               | In <b>template</b> , replace each placeholder (such as %s) with the value of the input field and return a string that contains the result. This is similar to mechanisms that are available in programming languages such as Java and C. |
| GenerateUUID   | None       | string      | None                     | Create a string that represents a random UUID.   |
| IndexOf        | string     | number      | string                   | In a string, starting at 0, return the first index of the specified <b>string</b> . Return <b>-1</b> if it is not found.   |
| IsNull         | any        | Boolean     | None                     | Return true if a field is null.  |
| LastIndexOf    | string     | number      | string                   | In a string, starting at 0, return the last index of the specified <b>string</b> . Return <b>-1</b> if it is not found.  |
| Length         | any        | number      | None                     | Return the length of the field, or <b>-1</b> if the field is null.   |
| Lowercase      | string     | string      | None                     | Convert a string to lowercase.   |

| Transformation | Input Type | Output Type | Parameter (* = required)     | Description   |
|----------------|------------|-------------|------------------------------|---|
| Normalize      | string     | string      | None                         | Replace consecutive whitespace characters with a single space and trim leading and trailing whitespace from a string.                           |
| PadStringLeft  | string     | string      | padCharacter *<br>padCount * | Insert the character supplied in padCharacter at the beginning of a string. Do this the number of times specified in padCount.                  |
| PadStringRight | string     | string      | padCharacter *<br>padCount * | Insert the character supplied in padCharacter at the end of a string. Do this the number of times specified in padCount.                        |
| Prepend        | string     | string      | string                       | Prefix string to the beginning of a string. the default is to prepend nothing.  |
| ReplaceAll     | string     | string      | match *<br>newString         | In a string, replace all occurrences of the supplied matching string with the supplied newString. The default newString is an empty string.     |
| ReplaceFirst   | string     | string      | match *<br>newString *       | In a string, replace the first occurrence of the specified match string with the specified newString. The default newString is an empty string. |

| Transformation       | Input Type | Output Type | Parameter (* = required) | Description  |
|----------------------|------------|-------------|--------------------------|--|
| Round                | number     | number      | None                     | Return the rounded whole number of a number.   |
| SeparateByDash       | string     | string      | None                     | Replace each occurrence of whitespace, colon (:), underscore (_), plus (+), and equals (=) with a hyphen (-).  |
| SeparateByUnderscore | string     | string      | None                     | Replace each occurrence of whitespace, colon (:), hyphen (-), plus (+), and equals (=) with an underscore (_).   |
| StartsWith           | string     | Boolean     | string                   | Return true if a string starts with the specified string (including case).   |
| Substring            | string     | string      | startIndex *<br>endIndex | Retrieve a segment of a string from the specified inclusive <b>startIndex</b> to the specified exclusive <b>endIndex</b> . Both indexes start at zero. <b>startIndex</b> is inclusive. <b>endIndex</b> is exclusive. The default value of <b>endIndex</b> is the length of the string. |

| Transformation  | Input Type | Output Type | Parameter (* = required)            | Description   |
|-----------------|------------|-------------|-------------------------------------|---|
| SubstringAfter  | string     | string      | startIndex *<br>endIndex<br>match * | Retrieve the segment of a string after the specified match string from the specified inclusive startIndex to the specified exclusive endIndex. Both indexes start at zero. The default value of endIndex is the length of the string after the supplied match string. |
| SubstringBefore | string     | string      | startIndex *<br>endIndex<br>match * | Retrieve a segment of a string before the supplied match string from the supplied inclusive startIndex to the supplied exclusive endIndex. Both indexes start at zero. The default value of endIndex is the length of the string before the supplied match string.    |
| Trim            | string     | string      | None                                | Trim leading and trailing whitespace from a string.   |
| TrimLeft        | string     | string      | None                                | Trim leading whitespace from a string.  |
| TrimRight       | string     | string      | None                                | Trim trailing whitespace from a string.   |
| Uppercase       | string     | string      | None                                | Convert a string to uppercase.  |