

# EXAMPLE - Type Parsing Functions

This example shows how to use the following parsing functions for evaluating input against the function-specific data type:

- **PARSEBOOL** - If the input String value is a valid Boolean value, the value is returned as a Boolean data type value. See *PARSEBOOL Function*.
- **PARSEDATE** - If the input String value is valid against the specified or default Datetime formats, the value is returned as a Datetime value. See *PARSEDATE Function*.
- **PARSEFLOAT** - If the input String value is a valid Float (Decimal) value, the value is returned as a Decimal data type value. See *PARSEFLOAT Function*.
- **PARSEINT** - If the input String value is a valid Integer value, the value is returned as an Integer data type value. See *PARSEINT Function*.

## Source:

The following table contains data on a series of races.

racelid	disqualified	date	racerId	time_sc
1	FALSE	2/1/20	1	24.22
2	f	2/8/20	1	25
3	no	2/8/20	1	24.11
4	n	1-Feb-20	2	26.1
5	TRUE	8-Feb-20	2.2	-25.22
6	t	2/8/2020 10:16:00 AM	2	25.44
7	yes	2/1/20	3	24
8	y	2/8/20	33	29.22
9	0	2/8/20	3	24.78
10	1	1-Feb-20	4	26.2.1
11	FALSE	8-Feb-20		28.22 sec
12	FALSE	2/8/2020 10:16:00 AM	4	27.11

As you can see, this dataset has variation in values (FALSE, f, no, n) and problems with the data.

## Transformation:

When the data is first imported, it may be properly typed for each column. To use the parsing functions, these columns should be converted to String data type:

<b>Transformation Name</b>	Change column data type
<b>Parameter: Columns</b>	disqualified,date,racerId,time_sc
<b>Parameter: New type</b>	String

Now, you can parse individual columns.

disqualified column:

<b>Transformation Name</b>	Edit column with formula
<b>Parameter: Columns</b>	disqualified

<b>Parameter: Formula</b>	PARSEBOOL(\$col)
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racerId column:

<b>Transformation Name</b>	Edit column with formula
<b>Parameter: Columns</b>	racerId
<b>Parameter: Formula</b>	PARSEINT(\$col)

time\_sc column:

<b>Transformation Name</b>	Edit column with formula
<b>Parameter: Columns</b>	time_sc
<b>Parameter: Formula</b>	PARSEFLOAT(\$col)

date column:

For the date column, the PARSEDATE function supports a default set of Datetime formats. Since some of the listed formats are different from these defaults, you must specify all of the formats. These formats are specified as an array of string values as the second argument of the function:

**Tip:** For the PARSEDATE function, it's useful to use the Preview to verify that all of the dates in the column are represented in the array of output formats. You can see the available output formats through the data type menu at the top of a column. See *Choose Datetime Format Dialog*.

<b>Transformation Name</b>	Edit column with formula
<b>Parameter: Columns</b>	date
<b>Parameter: Formula</b>	PARSEDATE(\$col, ['YYYY-MM-dd', 'YYYY\MM\dd', 'M\ d\ /yy hh:mm', 'MMMM d, YYYY', 'MMM d, YYYY'])

After all of the date values have been standardized to the output format of the PARSEDATE function, you may choose to remove the time element of the values:

<b>Transformation Name</b>	Replace text or pattern
<b>Parameter: Column</b>	date
<b>Parameter: Find</b>	` {digit}{2}:{digit}{2}:{digit}{2}{end}`
<b>Parameter: Replace with</b>	' '

## Results:

After executing the above steps, the data appears as follows. Notes on each column's output are below the table.

racelId	disqualified	date	racerId	time_sc
1	false	2020-02-01	1	24.22
2	false	2020-02-08	1	25

3	false	2020-02-08	1	24.11
4	false	2020-02-01	2	26.1
5	true	2020-02-08	<i>null</i>	-25.22
6	true	2020-02-08	2	25.44
7	true	2020-02-01	3	24
8	true	2020-02-08	33	29.22
9	false	2020-02-08	3	24.78
10	true	2020-02-01	4	<i>null</i>
11	false	2020-02-08	<i>null</i>	<i>null</i>
12	false	2020-02-08	4	27.11

disqualified column:

- The PARSEBOOL function normalizes all valid Boolean values to either *false* or *true*.

racerId column:

- The PARSEINT function writes invalid values as null values.
- The function writes empty values as null values.
- The value 33 remains, since it is a valid Integer. This value should be fixed manually.

time\_sc:

- The PARSEFLOAT function writes the source value 25.00 as 25 in output.
- The source value -25.22 remains. However, since this is time-based data, it needs to be fixed.
- Invalid values are written as nulls.

date column:

- All values are written in the standardized format: *yyyy-MM-dd HH:mm:ss*. Time data has been stripped.