# Business Rule Engine

## Detailed Listing of Actions

**for Jare Version 0.76**

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# Overview

This document contains a detailed listing of the available actions for the Business Rule Engine „Jare". It lists the available data types, their combinations and possible optional or required parameters.

Actions are defined on the rulegroup level. When a rulegroup fails or passes then none, one or multiple actions can be executed. Actions are executed in the sequence that they have been defined. It is also possible to define actions that are execute when the rulegroup passes and actions when the rulegroup fails at the same time.

A condition must be specified when to execute the action – when the rulegroup fails or passes. Additionally a field - and it's type - must be specified that will be updated by the action.

Sometimes an action will require additional values to be passed to it. This can either be the value of another field or a defined fixed value.

The values selected in the action from "Field to retrieve data", "Parameter 1", "Parameter 2" and "Parameter 3" are passed to the action in this sequence. The "Field to retrieve data" is optional and indicates from which other field a value should be retrieved. It can be specified but must not be.

If for example the action requires two values (arguments) then either "Field to retrieve data" and "Parameter 1" have to be specified or alternatively "Parameter 1" and "Parameter 2" (in this case "Field to retrieve data" is left blank). Then in turn the "Field to update" will be updated with the resulting value.

# Prerequisites

The default date format used is: yyyy-MM-dd (four digits for the year, two digits for the month and two digits for the day of the month). If not otherwise specified for String to Date conversions, it is assumed that the value is provided in this format. Date formats need to be according to the Java SimpleDateFormat Class format definitions.

All data types listed here are Java related data types.

# Add Leading Spaces

| | |
|---|---|
| Purpose: | Add leading spaces to a value until a given length of the value is reached |
| Java Class: | StringAction |
| Interface Name: | add leading spaces |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | Integer |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Add Leading Zeros

| | |
|---|---|
| Purpose: | Add leading zeros to a value until a given length of the value is reached |
| Java Class: | StringAction |
| Interface Name: | add leading zeros |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | Integer |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Append Value

| | |
|---|---|
| Purpose: | Append a given value to the end of another value |
| Java Class: | StringAction |
| Interface Name: | append |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | String |
| String | Integer |
| String | Long |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| Value 3: String | Separator to be used between the values |

# Prepend Value

| | |
|---|---|
| Purpose: | Prepend a given value to the start of another value |
| Java Class: | StringAction |
| Interface Name: | prepend |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | String |
| String | Integer |
| String | Long |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| Value 3: String | Separator to be used between the values |

# Trim Value

| | |
|---|---|
| Purpose: | Remove all leading and trailing space characters from a String |
| Java Class: | StringAction |
| Interface Name: | trim |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Concatenate Values

| | |
|---|---|
| Purpose: | Concatenate two values |
| Java Class: | StringAction |
| Interface Name: | append value |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | Double |
| String | Float |
| String | Long |
| String | Integer |
| String | String |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| Value 3: String | Separator to be used between the value |

# Lowercase Value

| | |
|---|---|
| Purpose: | Change a value to it's lowercase representation |
| Java Class: | StringAction |
| Interface Name: | lowercase |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Uppercase Value

| | |
|---|---|
| Purpose: | Change a value to it's uppercase representation |
| Java Class: | StringAction |
| Interface Name: | uppercase |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Replace Value

| | |
|---|---|
| Purpose: | Replace a given value – or part of it - with another value |
| Java Class: | StringAction |
| Interface Name: | replace |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | String |
| Note: Value 2 has to contain a regular expression. All found occurrences of the regular expression will be replaced with value 3. | |
| **Required Value(s)** | **Explanation** |
| Value 3: String | the replacement for the original value or parts of it |

# Set Value (String)

| | |
|---|---|
| Purpose: | Sets a given value of a string |
| Java Class: | StringAction |
| Interface Name: | set value (string) |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Set Value (Date)

| | |
|---|---|
| Purpose: | Sets a given value of a date |
| Java Class: | DateAction |
| Interface Name: | set value (date) |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Date | |
| String | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| Value 2: String | In case the given date is a String, this value optionally defines the date format of the date. |

# Set Value (Number)

| | |
|---|---|
| Purpose: | Sets a given value of a number |
| Java Class: | MathAction |
| Interface Name: | absolute |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Float | |
| Long | |
| Integer | |
| Boolean | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Substring Value

| | |
|---|---|
| Purpose: | Sets the value to a given substring |
| Java Class: | StringAction |
| Interface Name: | set value (String) |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | Integer |
| Note: Value 2 defines from which position of the value the substring will start | |
| **Optional Value(s)** | **Explanation** |
| Value 3: Integer | Defines at which position the substring will end |

# Set Todays Date

| | |
|---|---|
| Purpose: | Set the value to the current date |
| Java Class: | DateAction |
| Interface Name: | |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| String | |
| Note: Value 1 contains the date format to use | |
| **Optional Value(s)** | **Explanation** |
| Value 2: Integer | Define an offset of days – positive or negative – that will be added to the current date |

# Absolute Value

| | |
|---|---|
| Purpose: | Calculates the absolute value of a given value |
| Java Class: | MathAction |
| Interface Name: | absolute |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Float | |
| Long | |
| Integer | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Acosinus Value

| | |
|---|---|
| Purpose: | Calculates the acosinus of a given value |
| Java Class: | MathAction |
| Interface Name: | acosinus |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Cosinus Value

| | |
|---|---|
| Purpose: | Calculates the cosinus of a given value |
| Java Class: | MathAction |
| Interface Name: | cosinus |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Cosinush Value

| | |
|---|---|
| Purpose: | Calculates the cosinush of a given value |
| Java Class: | MathAction |
| Interface Name: | cosinush |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Asinus Value

| | |
|---|---|
| Purpose: | Calculates the asinus of a given value |
| Java Class: | MathAction |
| Interface Name: | asinus |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Sinus Value

| | |
|---|---|
| Purpose: | Calculates the sinus of a given value |
| Java Class: | MathAction |
| Interface Name: | sinus |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Sinush Value

| | |
|---|---|
| Purpose: | Calculates the sinush of a given value |
| Java Class: | MathAction |
| Interface Name: | sinush |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Atangens Value

| | |
|---|---|
| Purpose: | Calculates the atangens of a given value |
| Java Class: | MathAction |
| Interface Name: | atangens |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Tangens Value

| | |
|---|---|
| Purpose: | Calculates the tangens of a given value |
| Java Class: | MathAction |
| Interface Name: | tangens |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Tangensh Value

| | |
|---|---|
| Purpose: | Calculates the tangensh of a given value |
| Java Class: | MathAction |
| Interface Name: | tangensh |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Square Root Value

| | |
|---|---|
| Purpose: | Calculates the square root of a given value |
| Java Class: | MathAction |
| Interface Name: | square root |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Square Value

| | |
|---|---|
| Purpose: | Calculates the square of a given value |
| Java Class: | MathAction |
| Interface Name: | square |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Float | |
| Long | |
| Integer | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Add Values

| | |
|---|---|
| Purpose: | Calculates the sum of two values |
| Java Class: | MathAction |
| Interface Name: | sum |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | Double |
| Float | Float |
| Integer | Integer |
| Integer | Long |
| Long | Integer |
| Long | Long |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Subtract Values

| | |
|---|---|
| Purpose: | Subtracts two values |
| Java Class: | MathAction |
| Interface Name: | subtract |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | Double |
| Float | Float |
| Integer | Integer |
| Integer | Long |
| Long | Integer |
| Long | Long |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Devide Values

| | |
|---|---|
| Purpose: | Calculates the devision of two values |
| Java Class: | MathAction |
| Interface Name: | devide |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| BigDecimal | BigDecimal |
| Double | Double |
| Double | Integer |
| Float | Float |
| Integer | Integer |
| Integer | Long |
| Long | Integer |
| Long | Double |
| Long | Long |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Multiply Values

| | |
|---|---|
| Purpose: | Multiplies two values |
| Java Class: | MathAction |
| Interface Name: | multiply |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | Double |
| Double | Integer |
| Float | Float |
| Integer | Integer |
| Integer | Long |
| Long | Double |
| Long | Integer |
| Long | Long |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |

# Round Value

| | |
|---|---|
| Purpose: | Rounds a given value |
| Java Class: | MathAction |
| Interface Name: | round |

Applicable to:

| **Value 1** | **Value 2** |
|---|---|
| Double | |
| Float | |
| Note: | |
| **Optional Value(s)** | **Explanation** |
| | |