Adding data to activities

https://documentation.dcr.design/documentation/adding-data-to-activities/

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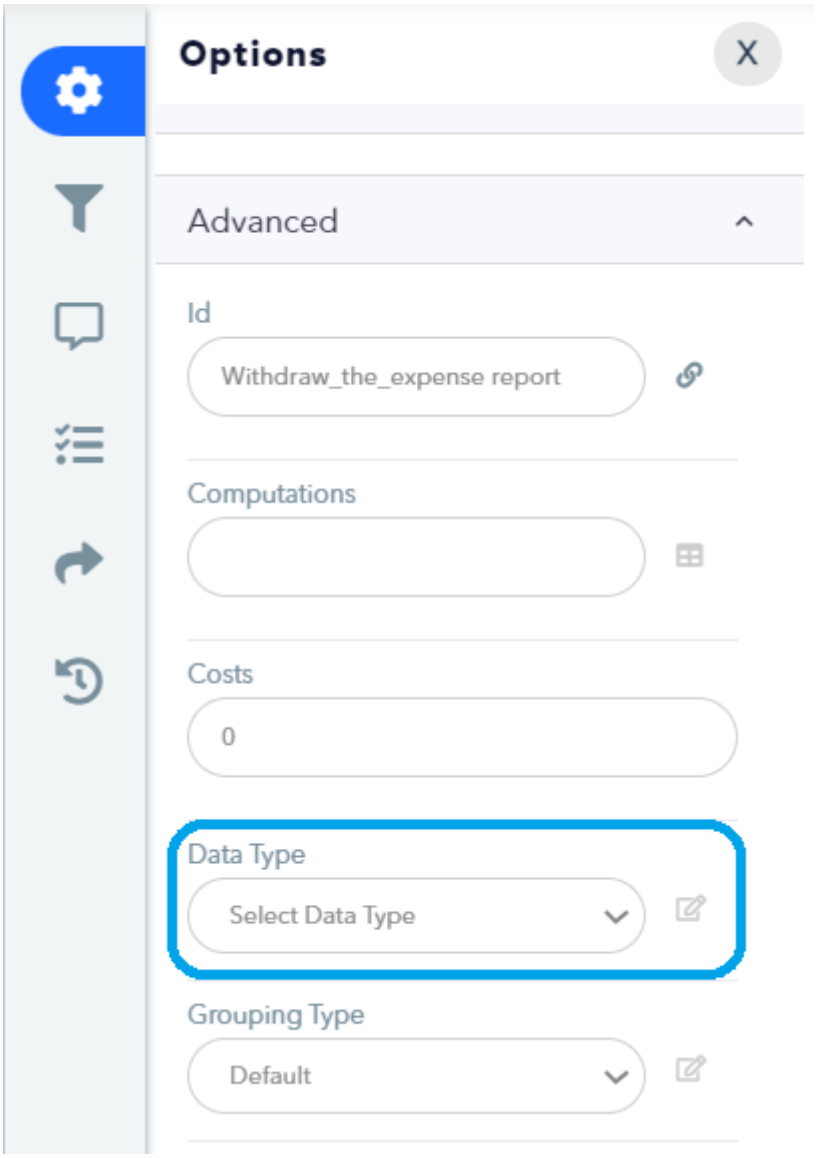
Data was introduced in DCR Forms in 2016. It has been possible to associate data with activities for a long time, but it has not been possible to specify data types or simulate processes that contains data types, e.g. in order to make decisions.

Datatypes

It is possible to associate a datatype with an activity. In the options panel under Advanced select Data Type:



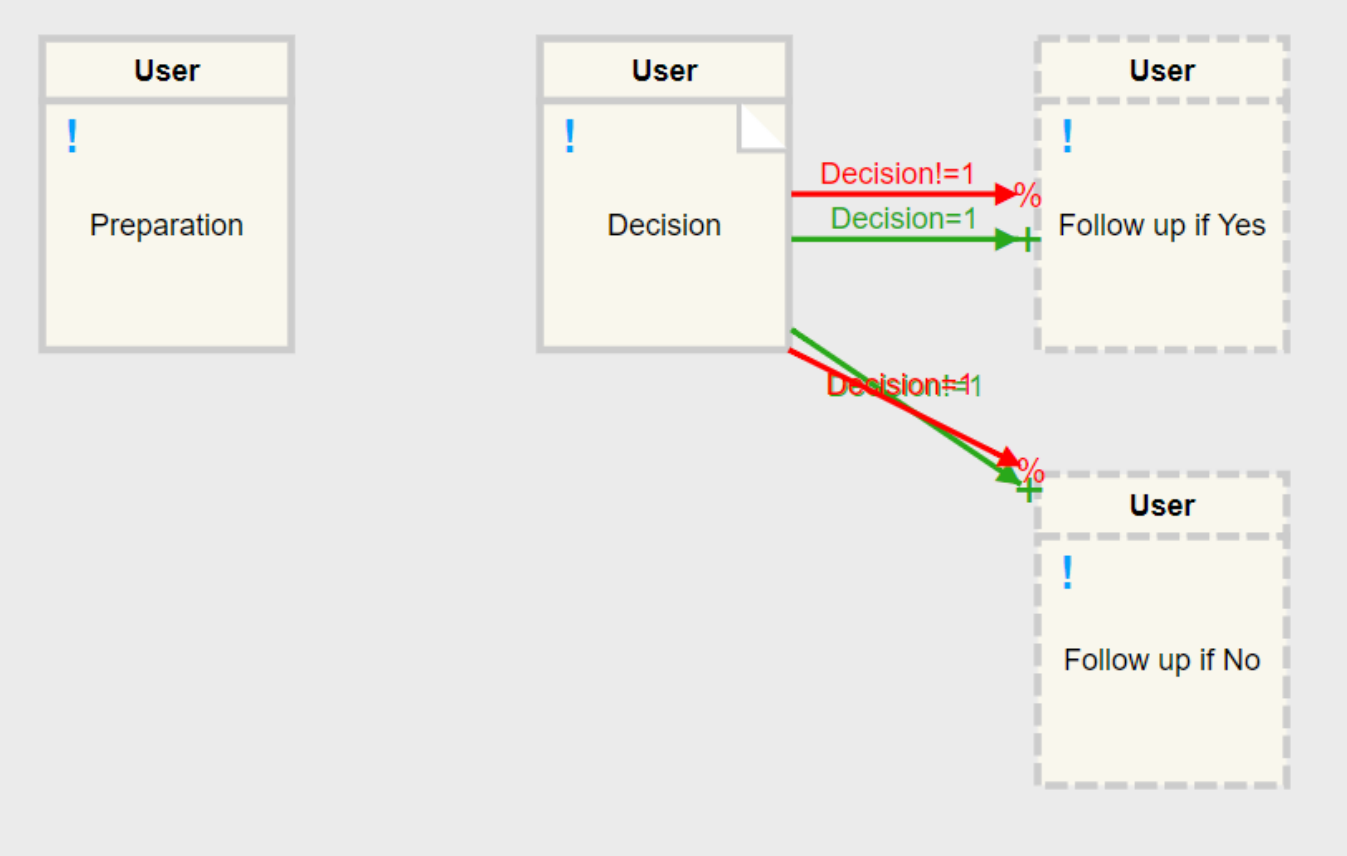
Valid datatypes are:

Name	Code
Button	
Checkbox	
Choice	
Date	
Datetime	
Duration	
Email address	
File	
Float	
HTML	
Image file	
Integer	
Label	
Money	
Password	

Text
Textbox
Weblink

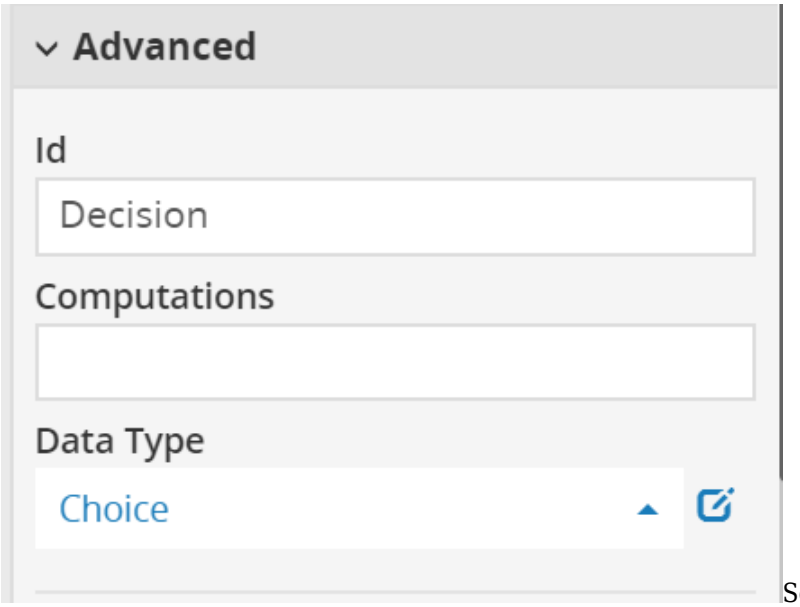
A simple example of data in DCR

Please look at this process for a simple example of making a decision in a process illustrated below:



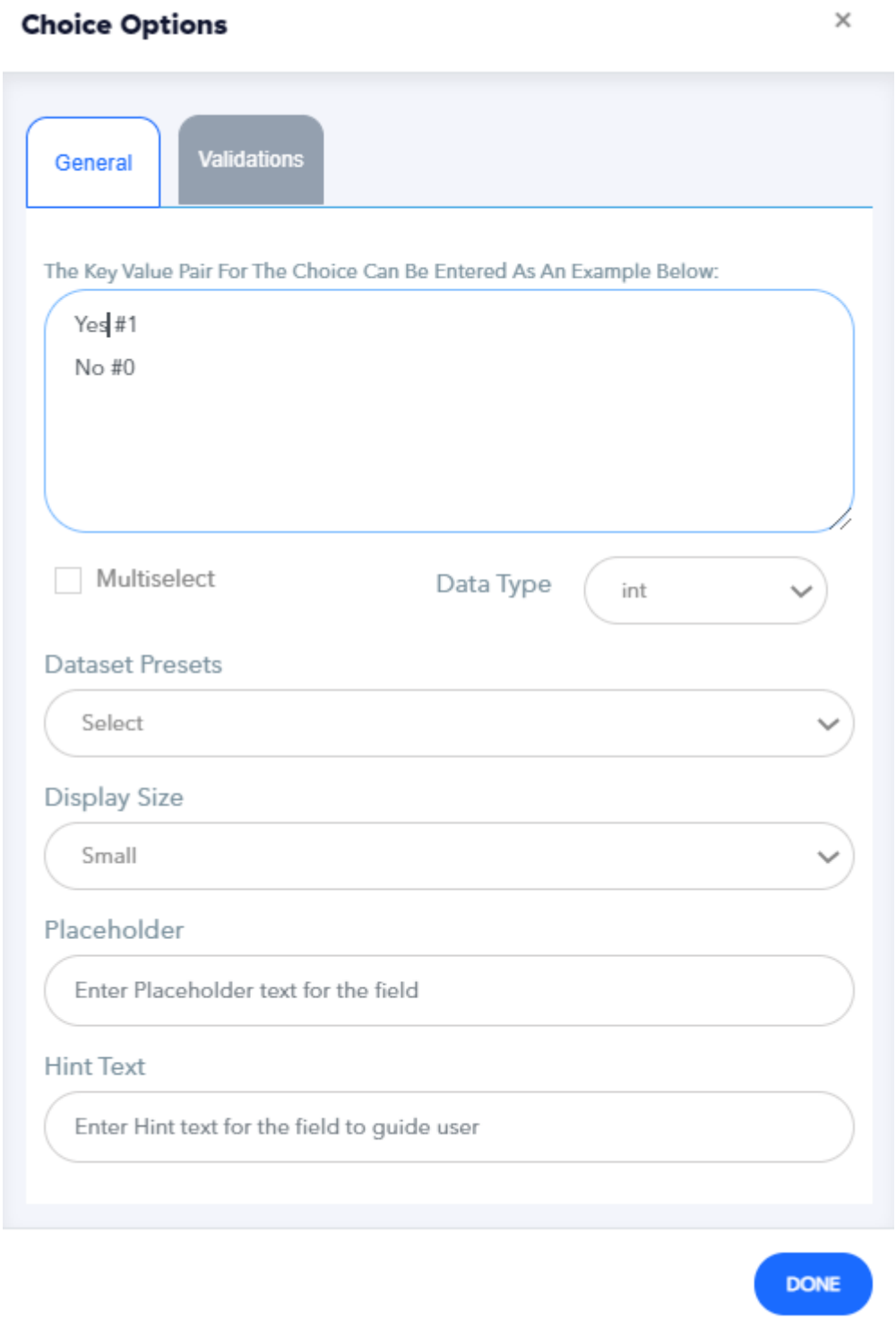
DCR Process with data

Notice the event “Decision”. It is a data event illustrated by the box in the upper right corner of the event. The data type in selected in the Option panel under Advanced



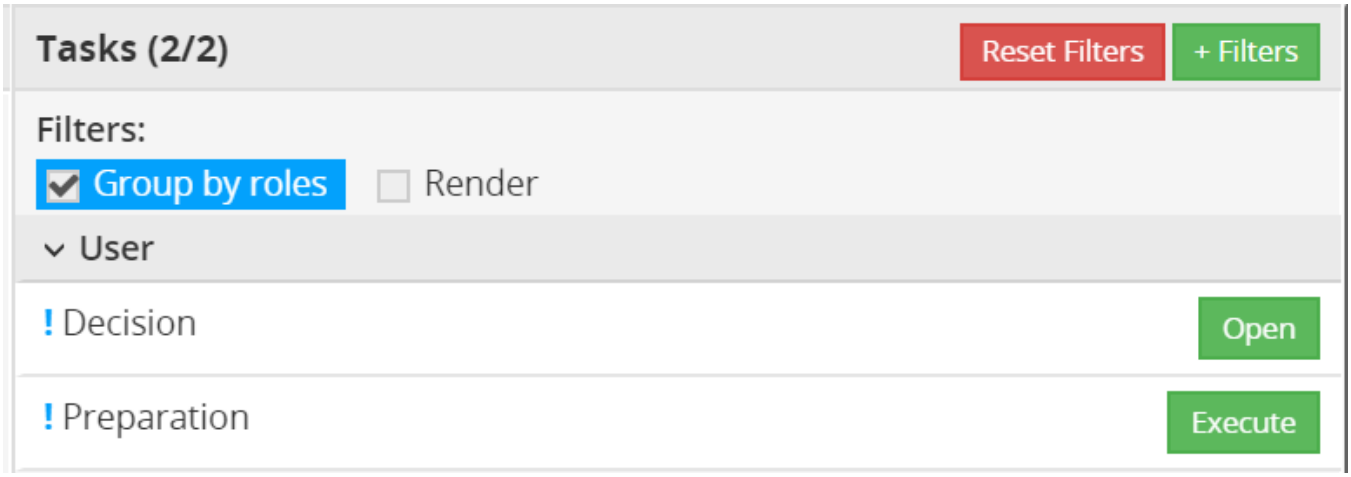
Setting the data type

The Decision event has two values, 1 as “Yes” and 0 as “No” as illustrated below. Note that the datatype of choice is integers, unless you select it to be a string using the "Data Type" field below the choice field. If you use strings as the datatype remember to quote string values in guards.



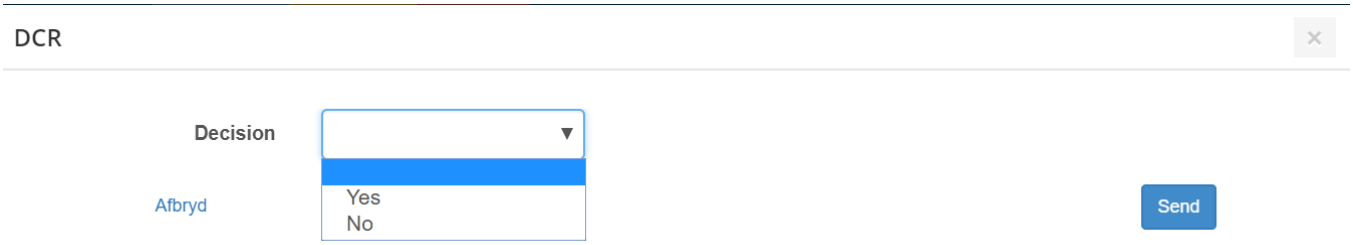
Setting the data type

When simulating an event with a data type cannot be executed directly as the user has to enter a value. Instead, the simulator will present the user for the value to be filled out using a DCR Form.



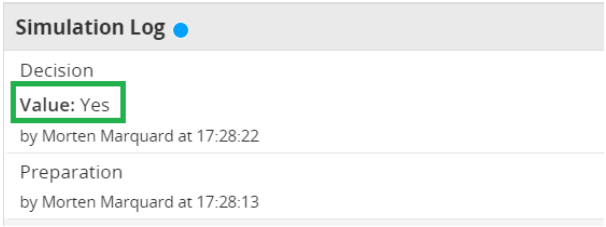
Data event in task list

Clicking “Open” will launch a DCR Form where the decision can be made.

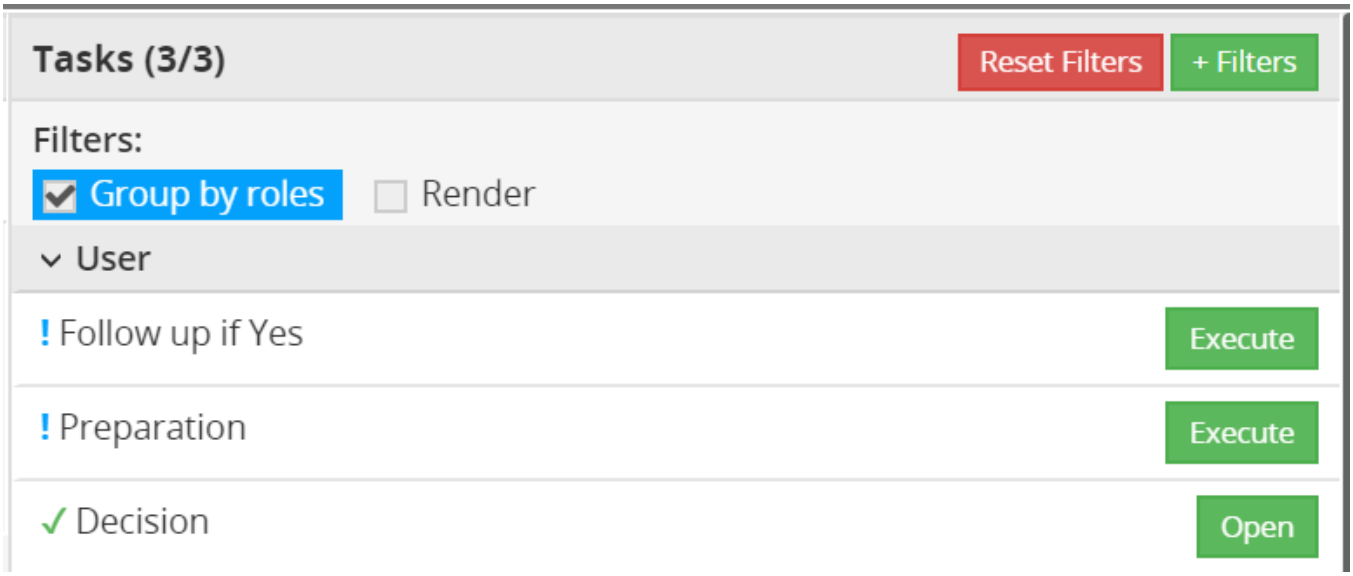


Data event filled out in DCR Form

The log shows the value of data activities once executed.



Once data is filled out and form is submitted pressing Send button the guards on the include/exclude rules will use Decision=1 (Yes) to show the next step.

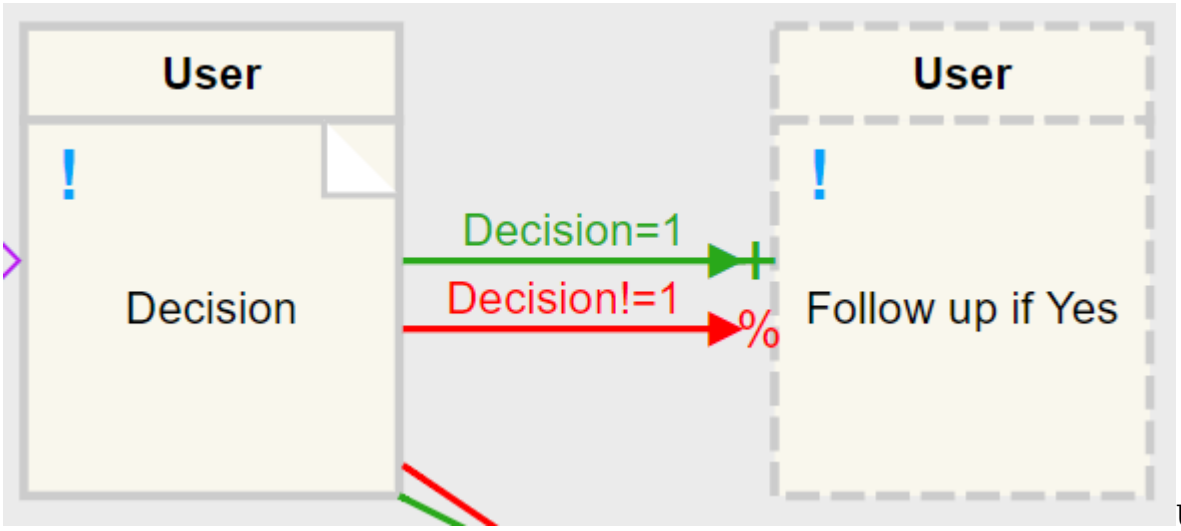


Tasks list after choosing Yes

Using guards in business rules

Business rules can be *guarded*, i.e. controlled by an *expression*. If the expression evaluates to true the rule is included in the calculation of semantics, whereas if the expression evautes to false it is the same as the rule does not exist at all.

The include and exclude rules below are both guarded by an expression, i.e. “Decision=1” and “Decision!=1”. If Decision=1 include is then only relevant rule as the guard “Decision!=1” evaluates to false and therefore is not relevant for the process.



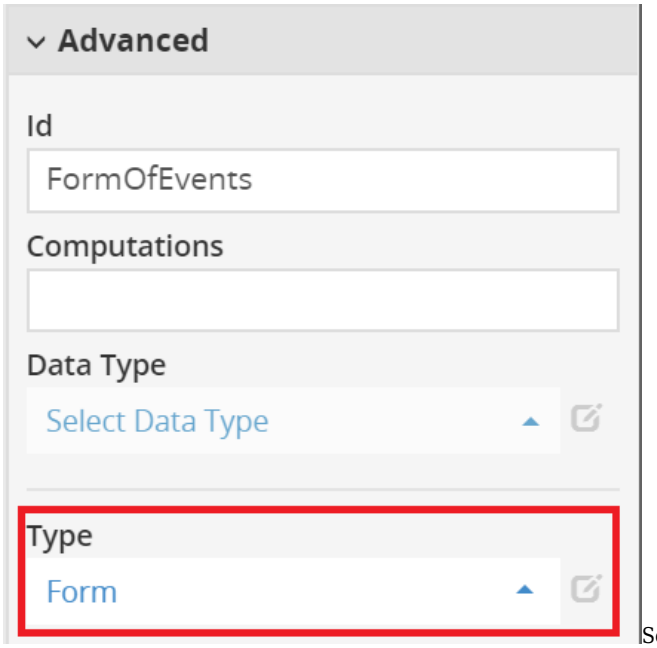
Using guards

We’re planning to define a new meta-rule called a *logical include* which will act as an include if it evaluates to true and as an exclude if it evaluates to false.

DCR use an expression language which is [defined on git].

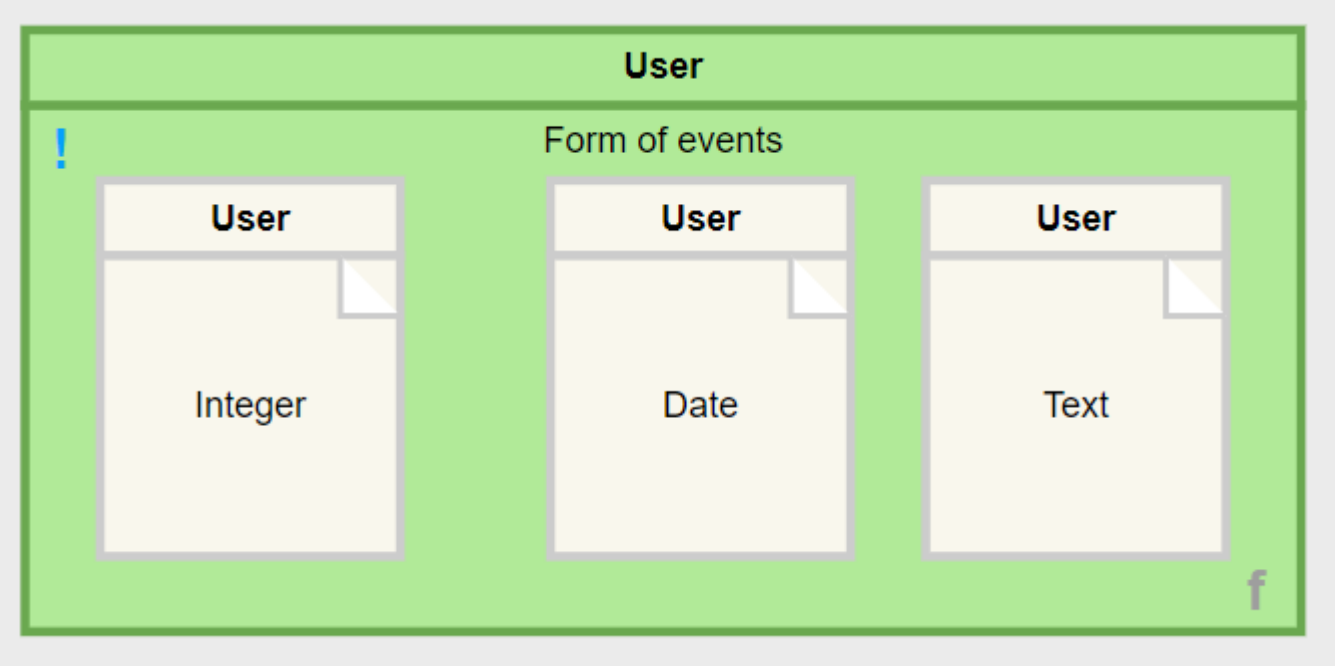
Grouping data events into a DCR Form

Several data events can be grouped together and the grouping marked as a [DCR Form]



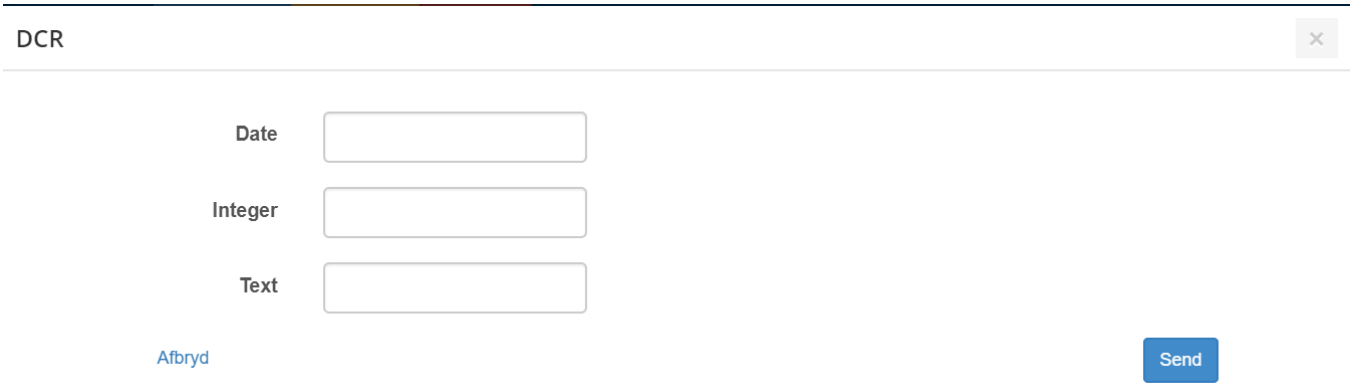
Setting Type to Form

Once events as grouped into the form object it will display green with the events inside.



Grouping events into a DCR Form

When the user click Open the following form is shown



Events grouped into a DCR Form

Type: User guide
Audience: Modelers