Introduction to MM-Talk

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Table of contents

What is MM-Talk

What is MM-Talk

- Functional programming language

- Integrated into Infront Portfolio Manager, no stand-alone compiler

- A tool to modify and combine data

- An individualization layer between the core application and the user interface

How to use MM-Talk

How to use MM-Talk

- Formular editor
  - Input object
  - Value assignments
  - Output object
  - Return values

How to use MM-Talk

- Variables
  - Variables are declared with a preceding dollar sign „$"
  - Normal variables store values
  - Parameter variables are used for user input

- Control structures
  - If-Statement
  - Map
  - Fold
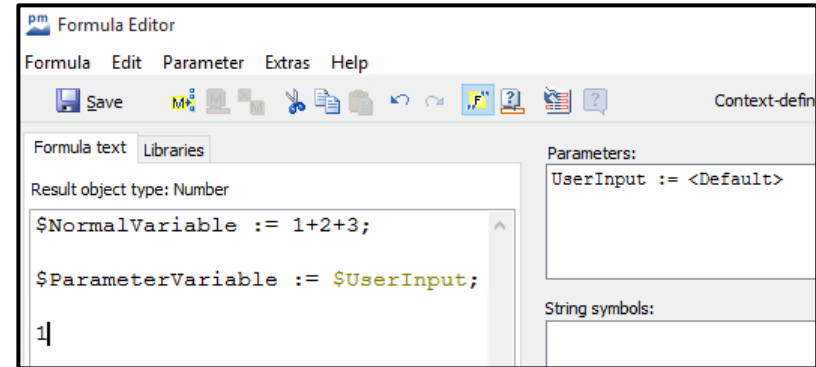
How to use MM-Talk

If-Statement

- Definition

    If(<condition>; <then>; <else>)

- Example

    If($ValueA > $ValueB;

    „Value a is greater than value b";

    „Value b is greater than or equal to value b")

How to use MM-Talk

Map-Statement

The map function applies the input functions to all objects in the input list.

- Definition

    Map(#[](<Formular that is applied to every element>); <InputList>)

- Example

    Map(#[](
    If(Is[„Transaction"]
    WP.ISIN;
    Kontonummer)
    ); $Assetlist)

How to use MM-Talk

Fold-Statement

Fold applies the function sequentially to each list element and the result of the previous calculation. The calculation starts with a start value and the first list element.

- Definition

  <Inputlist>.Fold[#[<Variable>](<Functions>); <StartValue>]

- Example

  List(1;2;3).Fold[#Plus;0]

  This expression returns 0+1+2+3=6

Where to use MM-Talk

Where to use MM-Talk

- Most common use cases
    - Tables
    - Reports
    - Restrictions
    - Asset allocations
    - Classifications
    - User-defined fields
    - Investment agents
    - Infront Advisory Solution

- Less common use cases
    - Charts
    - Report folders
    - Batch exports
    - Trading systems
    - Signal systems
    - Individual price calculations

Where to use MM-Talk
Tables

Tables are efficient views on all kinds of data. The data is collected and modified in the pre-formular and passed down as a list of objects. The column formular is used to read specific properties of these objects or use them for further callculations.

- Examples
  - Asset summary
  - Transaction list
  - Management fee controlling

New table

pre-formular

new column
(formular editor)

Where to use MM-Talk
Reports

Reports are similar to tables. The difference is that a report can have multiple nested preformulars for different aspects of the objects. Also SAP Crystal Reports Designer can be used to create a printable reporting (e.g. in pdf format).

- Examples
  - Asset summary
  - Performance report with chart

- Report-Folders
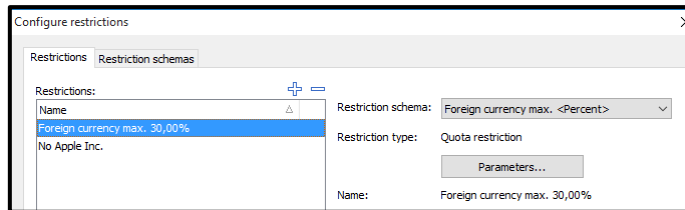 - Hiding unneeded Reports depending on existing data

Where to use MM-Talk
Restrictions

- Position restriction
  - Looks only at the data of a single security
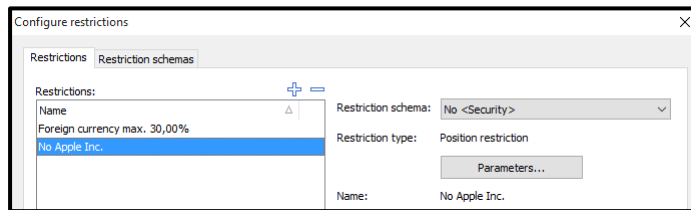
- Quota restriction
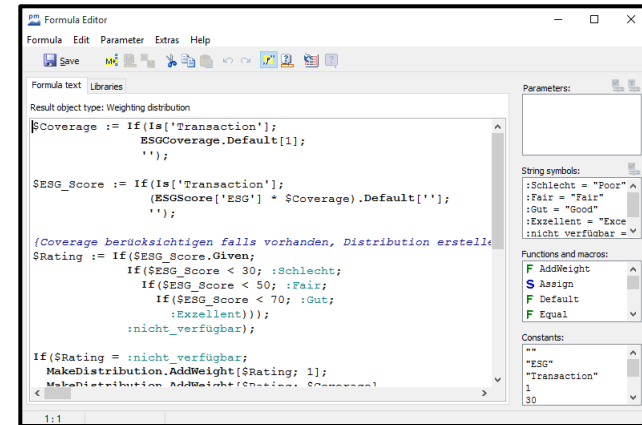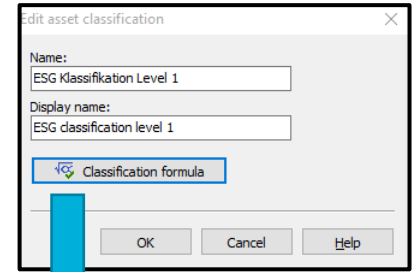 - Can check quotas of e.g. asset classes or segments

Where to use MM-Talk
Asset classification

- Securities can be automatically classified into categories
  - Asset class
  - Segment

- Base asset classes
  - Usually tied to an existing asset classification
  - MM-Talk used to define more complex combinations
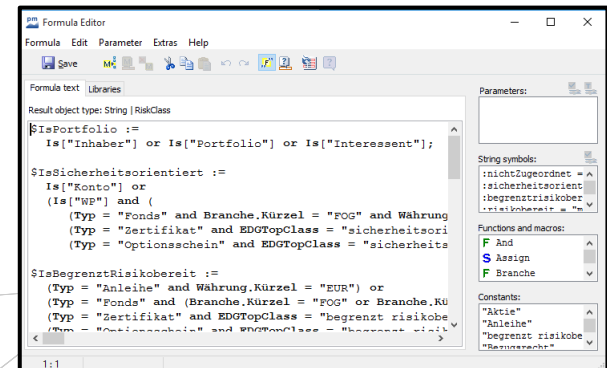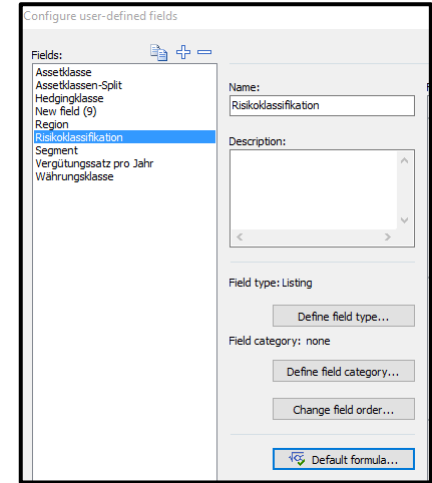 - Used to set quotas in the asset allocation

Where to use MM-Talk
User-defined fields

- User-defined fields are used to expand the possible data on e.g. securities
  - Asset class
  - Currency class
  - Rating
- MM-Talk can generate default values for a field

Where to use MM-Talk

Investment agent

Aside from model portfolio rebalancing there is also the possibility to create dynamic rebalancing algorithms based on the portfolio data.

- Using the asset-allocation as quota for different modules
- Selecting a module based on strategy data on the portfolio
- Creating dynamic modules

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