## Class Definition Worksheet

### Introduction

Class Definition Worksheet is used to describe basic Class information and linkage the relationship with Business Logic Sheets and Package Worksheets.

### Base Settings

Define the basic information for a Java Class.

|  |  |
| --- | --- |
| **Item** | **Description** |
| Configuration Type | Default ‘Java Class’ |
| Package Name | Define the Java Package Name to link with this Java Class |
| Class Name | Define the name of this Java Class |

### Functions

Define the function list included in this Java Class

##### Function Point

An easy to read function name for this method and to be linked with the method in this Java Class.

The function point list will be shown in AlchemyJ > Run Function Point.

##### Method Name

Name of the method in the generated Java class. It must begin with an alphabet and contain no space and dot.

##### Return Type

The output data type of this Java Class, the Return Type can be:

Basic Data - Integer, Double, String, Date, Boolean

Basic Data List - a list of basic data type

Object - an entity would be presented as a Java Object, such as customer, stock, order etc. The object should be defined in the Java Package Definition sheet

Object List - a List of Object.

##### Return Class

If Return Type is Basic Data or Basic Data List, Return Class can be: Integer, Double, String, Date, Boolean

If Return Type = Object or Object List, Return Class is the Object Name. The object should be defined in the Java Package Definition sheet

##### Return Value Cell Address

The cell address that Alchemy should refer to for the output of this function. It should include the sheet name. For example, Sheet1!A2.

When Return Type is Object or Object List, the value of the reference cell should contain a Json representation of the object.

##### Return Value Row Span

If the String return value is longer than the Excel cell maximum number of character (32727) limitation, Alchemy can get the value from multiple consecutive cells. This field indicates the number of rows it should get starting from Return Value Cell Address. If this feature is not need, this field should be blank.

##### Return Value Col Span

If the String parameter value is longer than the Excel cell maximum number of character (32727) limitation, Alchemy can get the value from multiple consecutive cells. This field indicates the number of columns it should get starting from Return Value Cell Address. If this feature is not need, this field should be blank.

##### List Row Size

If Return Type is an Object List or Basic Data List, this field indicates the row size of the list. Otherwise, it should be empty. If the list should be a column list, this field should also be empty.

##### List Col Size

If Return Type is an Object List or Basic Data List, this field indicates the column size of the list. Otherwise, it should be empty. If the list should be a row list, this field should also be empty.

##### DB Operation Type

Define whether DB connection is required and the DB Operation Type. It can be

Blank - This method does involve any database operation.

Non Transaction – DB connection is required, but Transaction is not required. That means the SQL would not be rolled back if any error encounter.

Transaction - DB connection is required, and Transaction is required. If any error generated when multiple database operations executed, the transaction should be rolled back.

### Functions input parameters

Input parameters for defined functions if any

##### Method Name

The method this input parameter refers to. The value must exist in the Function Definition table Method Name column.

##### Parameter Type

Object - an entity would be presented as a Java Object, such as customer, stock, order etc. The object should be defined in the Java Package Definition sheet

Object List - a List of ~~Java~~ object.

Basic Data - Integer, Double, String, Date, Boolean

Basic Data List - a list of basic data type

##### Parameter Class

If Parameter Type is Basic Data or Basic Data List, Return Class can be: Integer, Double, Boolean, Date, String

If Parameter Type = Object or Object List, Parameter Class is the Object Name. The object should be defined in the Java Package Definition sheet

##### Parameter Name

Name of this parameter. It must begin with an alphabet and contain no space and dot.

##### Write to Cell Address

The cell address that this parameter value should be written to. It should include the sheet name. For example, Sheet1!A2.

##### Object Extraction JsonPath

Alchemy passes in object as Json string. This field specifies the JsonPath that can extract the value of this parameter.

##### Extraction Value Type

The data type of the extracted field in the object. It can be String, Integer, Double, Date, Boolean.

##### Extraction Value Date Format

Indicates the date format string when Extraction Value Type is Date. Otherwise, it should be empty.

##### Value Row Span

If the String parameter value is longer than the Excel cell maximum number of character (32727) limitation, Alchemy can set ~~a~~ the value to multiple consecutive cells. This field indicates the number of rows it should get starting from Write to Cell Address. If this feature is not need, this field should be blank.

##### Value Col Span

If the String parameter value is longer than the Excel cell maximum number of character (32727) limitation, Alchemy can set ~~a~~ the value to multiple consecutive cells. This field indicates the number of rows it should get starting from Write to Cell Address. If this feature is not need, this field should be blank.

##### List Row Size

If Parameter Type is an Object List or Basic Data List, this field indicates the row size of the list. Otherwise, it should be empty. If the list should be a column list, this field should also be empty.

##### List Col Size

If Parameter Type is an Object List or Basic Data List, this field indicates the column size of the list. Otherwise, it should be empty. If the list should be a row list, this field should also be empty.

### Sheet Details

Define required sheets to compile the Java Program, it should include below 3 basic sheets and the Business Logic sheets.

%%AppConfig

%%SysConfig

%%SysRuntime

##### Sheet Name

Sheet name of the worksheet that this class depends on.

For better performance, only include the sheets that are related to this class.

##### Start Address

This defines the cell address of the start (bottom right) of the defined range.

For better performance, only include the range that formulas related to this class depend on.

##### End Address

This defines the cell address of the end (bottom right) of the defined range.

For better performance, only include the range that formulas related to this class depend on.