ArtComputer

# Functions User Manual

Automated Test with the Robot

# Functions User Manual

## Contents

**Foreword** ..... **5**

**Functions to start** ..... **6**

Function: **url** ..... 7

Function: **geturl** ..... 7

Function: **switchToBrowserTab** ..... 8

Function: **newTab** ..... 8

Function: **newWindow** ..... 8

Function: **loginUser** ..... 9

Function: **loginPassword** ..... 10

Function: **dummyExtraInfo** ..... 11

Function: **dummyLogin** ..... 11

Function: **speak** ..... 12

Function: **debug** ..... 12

**Basic functions** ..... **13**

Function: **detectGUI** ..... 14

Function: **pause** ..... 14

Function: **waitFor** ..... 15

Function: **waitForNot** ..... 15

Function: **click** ..... 16

Function: **doubleClick** ..... 16

Function: **JSclick** ..... 17

Function: **enable** ..... 17

Function: **removeAttribute** ..... 18

Function: **setAttribute** ..... 18

Function: **readAttribute** ..... 19

Function: **setFocus** ..... 19

Function: **JSinput** ..... 20

Function: **keyboard** ..... 20

Function: **pressEnter** ..... 21

Function: **pressEscape** ..... 21
Function: **pressTab** ..... 21
Function: **acceptPopup** ..... 22
Function: **cancelPopup** ..... 22
Function: **rule** ..... 23
Function: **countElement** ..... 23
Function: **check** ..... 24
Function: **uncheck** ..... 24
Function: **message** ..... 25
Function: **printscreen** ..... 25
Function: **uploadFile** ..... 26
Function: **refreshURL** ..... 26
Function: **ask** ..... 27
Function: **email** ..... 28
**References and Data** ..... **29**
Function: **getReference** ..... 30
Function: **setReference** ..... 30
Function: **setVariable** ..... 31
Function: **getData** ..... 32
Function: **setData** ..... 32
**Condition** ..... **33**
Function: **stopTest** ..... 34
Function: **skipDescribe** ..... 34
Function: **skipIt** ..... 35
Function: **isCheck** ..... 35
Function: **isExist** ..... 36
Function: **isEnable** ..... 36
Function: **isVisible** ..... 37
**Functions to manage an element** ..... **38**
Function: **switchToFrame** ..... 39
Function: **getValue** ..... 39
Function: **setValue** ..... 40
Function: **select** ..... 41

Function: **selectCount** ..... 42
**Epoch Date Functions** ..... **43**
Function: **epoch** ..... 44
Function: **epochDate** ..... 44
Function: **epochAddHour** ..... 45
Function: **epochAddMinute** ..... 45
Function: **epochAddSecond** ..... 46
**Table Functions** ..... **47**
Function: **getTableHeader** ..... 48
Function: **getTableData** ..... 48
Function: **setTableData** ..... 49
Function: **clickCell** ..... 49
Function: **countTableRow** ..... 50
Function: **searchTableData** ..... 50
**Advanced functions** ..... **51**
Function: **callScenario** ..... 52
Function: **callSuite** ..... 52
Function: **startTimer** ..... 53
Function: **stopTimer** ..... 53

# Foreword

This user manual will give you detail on the functions available in the tests and in the rules.

**Tests versus Rules**

In the Rules, you can use all the available functions for the tests.
However, for the rules, the name of the function is prefixed by # and ended by : (E.g.: #click:)
The parameters are separated by a comma (E.g: #click: @OPSYS_Listbox, 5, 2)

**Naming convention**

- Dictionary starts always with @
- Dataset starts always with #
- Rule starts always with #
- Variable start always with $ (but in the case of a rule, it must be §)
- Naming convention can be all in uppercase or lowercase: @URL_ACCEPTANCE
- Naming convention can be a mix @URL_Acceptance
- Naming convention can be with spaces or not: @URL_Environment Acceptance
- Functions name are case sensitive

# Functions to start

## Function: url

### Objectives
Method to browse a website

### Parameter(s)

| | |
|---|---|
| **URL** | Link to the webpage to open (can be a word in the dictionary) |

### Example(s):

| | | |
|---|---|---|
| url | @URL_OPSYS_ACC EUROPA | Start the application in acceptance |
| url | https://webgate.acceptance.ec.europa.eu/mwp/home?1fa | |

## Function: geturl

### Objectives
Method to get the current url from the browser

### Parameter(s)

| | |
|---|---|
| **Variable** | The name of the variable to store the current url (starting with $) |

### Example(s):

| | | |
|---|---|---|
| geturl | $currentURL | Store the current url into the variable $currentURL |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #geturl: § currentURL

## Function: switchToBrowserTab

### Objectives

Method to switch to a specific tab on the browser

### Parameter(s)

| | |
|---|---|
| **Tab position** | tab position starting by 1 (0 for the last one) |

### Example(s):

| | | |
|---|---|---|
| **switchToBrowserTab** | 0 | Switch to the last tab |
| **switchToBrowserTab** | 2 | Switch to the second tab |

## Function: newTab

### Objectives

Method to create a new tab on the browser (the tab will become the active one)

### Example(s):

| | | |
|---|---|---|
| **newTab** | | Create a new tab on the browser |

## Function: newWindow

### Objectives

Method to create a new window on the browser (the window will become the active one)

### Example(s):

| | | |
|---|---|---|
| **newWindow** | | Create a new window on the browser |

# Function: loginUser

## Objectives

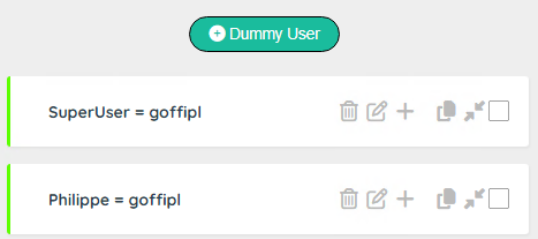
Method to login the user to an application.

## Parameter(s)

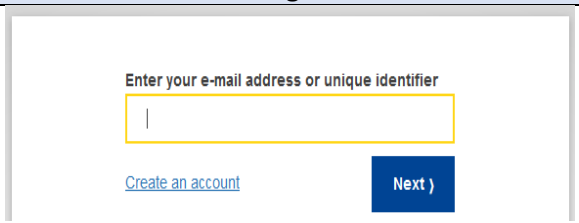
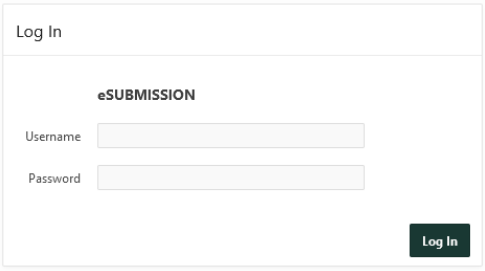
| | |
|---|---|
| **Dummy user** | The dummy user must be defined in the table (see: Tester User Manual) |
| **User tag** | Enter the xpath (or dictionary word) to access the user field |
| **Submit tag** | [Optional] Enter the xpath (or dictionary word) to access the submit button |

## Example(s):

The dummy user must be defined in the dummy user entity




| | | |
|---|---|---|
| loginUser | Philippe, @APP_tagLogin, @APP_tagSubmitLogin | Login the user to a screen with a submit button. |
| loginUser | Philippe, @APP_tagLogin | Login the user to a screen without a submit button. |

| Screen with a submit tag | Screen without a submit tag |
|---|---|
|  |  |

# Function: loginPassword

## Objectives

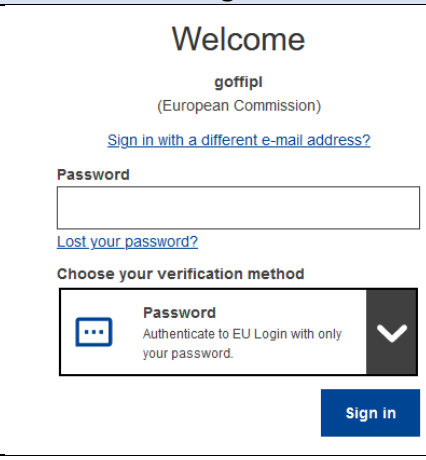
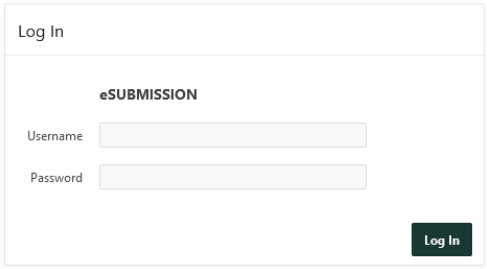
Method to key the password to an application.
For security reason, the password is decrypted (if necessary) by the server with the information contain in the dummy entity.

## Parameter(s)

| | |
|---|---|
| **Dummy user** | The dummy user must be defined in the table (see: Tester User Manual) |
| **Password tag** | Enter the xpath (or dictionary word) to access the password field |
| **Submit tag** | Enter the xpath (or dictionary word) to access the submit button |

## Example(s):

| | | |
|---|---|---|
| loginUser | Philippe, @APP_tagPassword, @APP_tagSubmitPassword | Key the password to a login screen. |

| Screen with a submit tag | Screen without a submit tag |
|---|---|
|  |  |

## Function: dummyExtraInfo

### Objectives

Method to get the extra info stored in the dummy user entity.
This information can be useful to complete a login.
It can be useful with the <ME> parameter to get information of the connected person

### Parameter(s)

| | |
|---|---|
| **Dummy user** | The dummy user must be defined in the table (see: Tester User Manual) |
| **Variable** | The name of the variable to store information (starting with $) |

### Example(s):

| | | |
|---|---|---|
| dummyExtraInfo | Philippe, $PhoneName | Get the phone name of the dummy user. |
| dummyExtraInfo | <ME>, $PhoneName | Get the phone name of the connected user. |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #dummyExtraInfo: Philippe, §PhoneName

## Function: dummyLogin

### Objectives

Method to get the login info stored in the dummy user entity.
This information can be useful with the <ME> parameter to get the login of the connected person.

### Parameter(s)

| | |
|---|---|
| **Dummy user** | The dummy user must be defined in the table (see: Tester User Manual) |
| **Variable** | The name of the variable to store information (starting with $) |

### Example(s):

| | | |
|---|---|---|
| dummyLogin | <ME>, $MyLogin | Get the login of the connected user. |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #dummyLogin: <ME>, §MyLogin

## Function: speak

### Objectives

Method to text-to-speech a message

### Parameter(s)

| | |
|---|---|
| **Text** | Text to say (can be variable starting with $) |

### Example(s):

| | | |
|---|---|---|
| speak | Hello dear tester | Say a sentence |

## Function: debug

### Objectives

Method to display more or less message to the console

### Parameter(s)

| | |
|---|---|
| **Debug level** | 0: No Debug, 1: Important info, 2: Full detail |

### Example(s):

| | | |
|---|---|---|
| debug | 0 | No debug message sent to the console |

# Basic functions

## Function: detectGUI

### Objectives

Method to detect the signature of an element based on generic patterns.
Patterns are generated by the AI Robot (see specific user documentation on AI Robot).
If detectGUI is successful, the variable **$GUI** will contain the xpath to access the element

### Parameter(s)

| | |
|---|---|
| **Element** | Select a selector (Button, Input filed…). selector depends on the project (stored in the entity: Selector in the AI Robot) |
| **Criteria** | Enter the criteria (generally the label) |
| **Position** | Enter the position/occurrence (1 by default), $$ for last record or $$-<position> |
| **Stop on Error** | [Optional]: Stop on error (otherwise a warning is sent) |

### Example(s):

| | | |
|---|---|---|
| **detectGUI** | Button, Save, 1<br>Button, Save, 1, 0 | Searching for the button ‘Save’. If not found, send a warning and continue the tests |
| **detectGUI** | Button, Save, 1, 1 | Searching for the button ‘Save’. If not found, stop all the tests |
| **detectGUI** | Button, Save, $$ | Searching for the last button ‘Save’ |

## Function: pause

### Objectives

Method to wait a few seconds before continuing the next step.

### Parameter(s)

| | |
|---|---|
| **Delay** | Select a selector (Button, Input filed…). selector depends on the project (stored in the entity: Selector in the AI Robot) |

### Example(s):

| | | |
|---|---|---|
| **pause** | 3 | Wait 3 seconds |

## Function: waitFor

### Objectives

Method to wait for the refresh of an element (to be visible).

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait** | Waiting time in second(s) (default 5 sec) |
| **Continue** | What to do if the element is not ready after the waiting time:<br>1: Stop all the tests, 0: Continue even with an error, 2: Skip the IT |

### Example(s):

| | | |
|---|---|---|
| **waitFor** | @APP_Save, 5, 1 | Wait 5 seconds for the button Save to be visible.<br>If it is not the case, stop all the tests |

## Function: waitForNot

### Objectives

Method to wait for the element to disappear (reverse of waitFor)

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait** | Waiting time in second(s) (default 5 sec) |
| **Continue** | What to do if the element is still there after the waiting time:<br>1: Stop all the tests, 0: Continue even with an error, 2: Skip the IT |

### Example(s):

| | | |
|---|---|---|
| **waitForNot** | @APP_In Progress, 15, 1 | Wait 15 seconds for the text “in progress…”<br>disappears. If it is not the case, stop all the tests |

## Function: click

### Objectives
Method to click on an element.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait after** | Waiting time in second(s) after the click |
| **Focus** | 1: set the focus on the element, 0: no focus on the element |

### Example(s):

| | | |
|---|---|---|
| **click** | @APP_Save, 3, 1 | Set the focus on the button 'Save', click on it and wait 3 seconds |

## Function: doubleClick

### Objectives
Method to double click on an element.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait after** | Waiting time in second(s) after the double click |

### Example(s):

| | | |
|---|---|---|
| **doubleClick** | @APP_Save, 3 | Double click on the button 'Save' and wait 3 seconds |

## Function: JSclick

### Objectives

JavaScript method to click on an element this method is more brutal force).
Can be used, if the click() is not working due to an invalid webpage status (stale)

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait after** | Waiting time in second(s) after the click |

### Example(s):

| | | |
|---|---|---|
| **JSclick** | @APP_Save, 3 | Click on the button 'Save' (CSS/Xpath in the dictionary) and wait 3 seconds |

## Function: enable

### Objectives

JavaScript method to enable an element (by removing disabled attributes)

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |

### Example(s):

| | | |
|---|---|---|
| **enable** | @APP_Save, 5 | Make the button save enabled |

## Function: removeAttribute

### Objectives

JavaScript method to remove attribute of an element.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Attribute** | Attribute to be removed |

### Example(s):

| | | |
|---|---|---|
| **removeAttribute** | @APP_Save, 5, color | Remove the attribute: color |

## Function: setAttribute

### Objectives

JavaScript method to remove attribute of an element.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Attribute** | Attribute to assign |
| **Value** | Value of the attribute |

### Example(s):

| | | |
|---|---|---|
| **setAttribute** | @APP_Save, color, blue | set the attribute color: blue |

## Function: readAttribute

### Objectives

JavaScript method to get the value of an attribute of an element.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Attribute** | Attribute to read |
| **Variable** | The name of the variable to store information (starting with $) |

### Example(s):

| | | |
|---|---|---|
| **setAttribute** | @APP_Save, tagElement, $Tag | get the attribute tag into the variable $Tag |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #setAttribute: @APP_Save, tagElement, §Tag

## Function: setFocus

### Objectives

JavaScript method to get the focus on an element.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Wait after** | Waiting time in second(s) after the click |

### Example(s):

| | | |
|---|---|---|
| **setFocus** | @APP_Save, 5, 2 | Set the focus on the button save |

## Function: JSinput

### Objectives

JavaScript method to input a value into an element.
Can be used, if the setValue() is not working due to an invalid webpage status (stale) - this method is a brutal force.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Value** | Value to key in the field |

### Example(s):

| | | |
|---|---|---|
| **JSinput** | @APP_Name, 5, Phil | Key 'Phil' into the field 'Name' |

## Function: keyboard

### Objectives

JavaScript method to key a value to simulate the keyboard.
Can be used, if the setValue() is not working due to an invalid webpage status (stale) - this method is a brutal force, you cannot detect if something goes wrong! (except, if your read the value after to compare the data with the keyed value).

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Value** | Value to key in the field |

### Example(s):

| | | |
|---|---|---|
| **JSinput** | @APP_Name, 5, Phil | Key 'Phil' into the field 'Name' |

## Function: pressEnter

### Objectives
JavaScript method to send an Enter key

### Parameter(s)

| | |
|---|---|

### Example(s):

| | | |
|---|---|---|
| **pressEnter** | | Sent an 'Enter' key |

## Function: pressEscape

### Objectives
JavaScript method to send an Escape key

### Parameter(s)

| | |
|---|---|

### Example(s):

| | | |
|---|---|---|
| **pressEscape** | | Sent an 'Escape' key |

## Function: pressTab

### Objectives
JavaScript method to send an tab key

### Parameter(s)

| | |
|---|---|
| **Number** | Number of tab to send |

### Example(s):

| | | |
|---|---|---|
| **pressTab** | 2 | Sent 2 'tab' key |

## Function: acceptPopup

### Objectives

JavaScript method to accept a JavaScript popup

### Parameter(s)

| | |
|---|---|

### Example(s):

| | | |
|---|---|---|
| **acceptPopup** | | Acknowledge the popup |

## Function: cancelPopup

### Objectives

JavaScript method to reject a JavaScript popup

### Parameter(s)

| | |
|---|---|

### Example(s):

| | | |
|---|---|---|
| **cancelPopup** | | Cancel the popup |

## Function: rule

### Objectives
Method to call a rule

### Parameter(s)

| | |
|---|---|
| **Rule** | Name of the rule |
| **Parameter 1** | Parameter 1 for the rule (will be represented by the variable $P1) |
| **Parameter 2** | Parameter 2 for the rule (will be represented by the variable $P2) |

### Example(s):

| | | |
|---|---|---|
| **Rule** | Login ECAS, $DummyUser | Rule to login with a dummy user |

## Function: countElement

### Objectives
Method to call a rule

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Variable** | The name of the variable to store information (starting with $) |

### Example(s):

| | | |
|---|---|---|
| **countElement** | @APP_section, $NbSection | Count the number of sections on the screen |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #countElement: @APP_section, §NbSection

## Function: check

### Objectives

Method to check a checkbox (if necessary)

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |

### Example(s):

| | | |
|---|---|---|
| **check** | @APP_approve, 5 | Check the approve checkbox |

## Function: uncheck

### Objectives

Method to uncheck a checkbox (if necessary)

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |

### Example(s):

| | | |
|---|---|---|
| **uncheck** | @APP_approve, 5 | Uncheck the approve checkbox |

## Function: message

### Objectives

Method to write a message in the log file

### Parameter(s)

| | |
|---|---|
| **Message** | Message to display in the log file |
| **Category** | Info, Message, Warning or Error |

### Example(s):

| | | |
|---|---|---|
| **message** | Test successful, Info | Write a message |

## Function: printscreen

### Objectives

Method to take a print screen and store the image on a slot (up to 5 slots available)

### Parameter(s)

| | |
|---|---|
| **slot** | From 1 to 5 |

### Example(s):

| | | |
|---|---|---|
| **printscreen** | 1 | Take a print screen and store it in the slot 1 |

## Function: uploadFile

### Objectives

Method to upload a file from the repository uploads of your project.
The repository is managed by the Administrator.

**Note**: Prior to use the function, the ADMIN must store the document in the Upload section of the project.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **File** | Name of the file (without a path) |

### Example(s):

| | | |
|---|---|---|
| **uploadFile** | @APP_Upload, price.pdf | Upload the file price.pdf |

## Function: refreshURL

### Objectives

Method to refresh the current page (equivalent to F5)

### Parameter(s)

| | |
|---|---|
| | |

### Example(s):

| | | |
|---|---|---|
| **refreshURL** | | Refresh the screen |

## Function: ask

### Objectives

Method to display a popup window to invite the user to enter a value

### Parameter(s)

| | |
|---|---|
| **Message** | The message to display to the user |
| **Default value** | [Optional] Default value |
| **Variable** | Name of the variable to store the value (by default $Ask) |
| **Timeout** | Timeout in seconds (default 30 seconds) |

### Example(s):

| | | |
|---|---|---|
| **ask** | Enter the environment, ACC, $Env, 20 | Ask the user to provide the name of the environment. After 20 seconds the variable $Env is filled with ACC |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #ask: Enter the environment, ACC, §Env, 20

# Function: email

## Objectives

Method to send an email with attachment(s) (optional).
The originator of the message is managed by the Administrator and is stored in the project parameters:

> Email Host - smtpmail.cec.eu.int:25

> Email From - automated-notifications@nomail.ec.europa.eu (AutoTest)

## Parameter(s)

| | |
|---|---|
| **Email To** | Recipient (comma separated for multiple people) |
| **Subject** | subject of the message |
| **Body** | body of the message (keywords: <BLUE><RED>..<BOLD><ITALIC><NORMAL><br>Body can contain html tag (E.g.: <table>, <body>, <tr>, <td>….) |
| **Attachment** | [optional] Full path name of the attachment(s) - use ';' as a separator |

## Example(s):

| | | |
|---|---|---|
| **email** | $To, $Subject, $Body, $Attachment | Send an email |

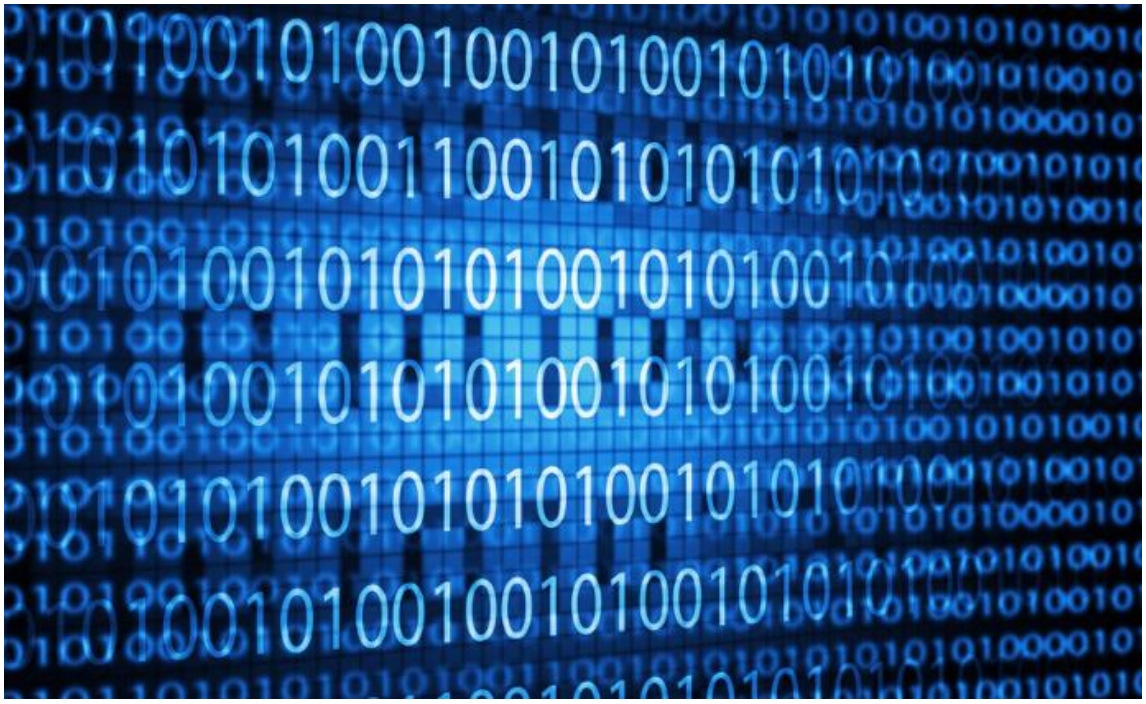
| |
|---|
| Example of body for a sanity check with an error in one of the environment.<br><BOLD><RED>Error detected in $Environment<NORMAL><NORMAL> |

**Note**: a tag <NORMAL> must be added after the tags <BLUE><RED>..<BOLD><ITALIC>

In order to use the function, the ADMIN must create two parameters at the project level

| Parameter name | Example |
|---|---|
| Email Host | smtpmail.cec.eu.int:25 |
| Email From | automated-notifications@nomail.ec.europa.eu (AutoTest) |

# References and Data



## Function: getReference

### Objectives

Method to get a reference by Code. The reference is used by the Robot to exchange (read/write) data between the scenarios.

### Parameter(s)

| | |
|---|---|
| **Code** | Code of the reference |
| **Variable** | Name of the variable to store the value (starting with $) |

### Example(s):

| | | |
|---|---|---|
| getReference | Dataset, $Dataset | Get the value of the dataset in the reference |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #getReference: Dataset, §Dataset

## Function: setReference

### Objectives

Method to get a reference. The reference is used by the Robot to exchange (read/write) data between the scenarios.

### Parameter(s)

| | |
|---|---|
| **Code** | Code of the reference |
| **Value** | Value of the reference (can be a variable starting with $) |
| **Comment** | []Optional If Comment is empty, the value will not be overridden |

### Example(s):

| | | |
|---|---|---|
| getReference | Dataset, $Dataset | Get the value of the dataset in the reference |

# Function: setVariable

## Objectives

Method to set a variable.

## Parameter(s)

| | |
|---|---|
| **Variable** | Name of the variable (starting with $) |
| **Value** | Enter a value or <EMPTY> or an expression (must start with =) |

## Example(s):

| | | |
|---|---|---|
| setVariable | $Test, A simple test | Set a text into the variable |
| setVariable | $Test, = 1 + 1 | Set 2 into the variable |
| setVariable | $Test, <EMPTY> | Reset the variable |
| setVariable | $Test, <TODAY> | Use a keyword to get the current date |

**Note 1**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #setVariable: §Test, A simple test

**Note 2:** Special keywords are:

With **nn** as a numeric value

<TODAY>, <TODAY+**nn**>, <TODAY-**nn**> to get the current date + or – days(s) – Format: DD/MM/YYY
<NOW>, <NOW+**nn**>, <NOW-**nn**> to get the current date + or – day(s) - Format: DD/MM/YYYY HH:mm
<YEAR>>, <YEAR+**nn**>, <YEAR-**nn**> to get the current year + or – year(s) – Format: YYYY
<MONTH>>, <MONTH+**nn**>, <MONTH-**nn**> to get the current month + or – month(s) – Format: MM
<DAY>>, <DAY+**nn**>, <DAY-**nn**> to get the current day + or – days(s) – Format: DD
<HOURS>, <HOUR+**nn**>, <HOUR-**nn**> to get the current hour + or – hour(s) – Format: HH
<SEQUENCE> to get a unique number – Format: YYYYMMDD_hmmss

## Function: getData

### Objectives

Method to get a data by its code. Data are store in a dataset and are managed by the Tester.

### Parameter(s)

| | |
|---|---|
| **Code** | Code of the data Code of the data (format: #<dataset>_<data>) |
| **Variable** | Name of the variable to store the value (starting with $) |

### Example(s):

| | | |
|---|---|---|
| getData | #Data_Dataset, $Dataset | Get a value from the dataset |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #getData: #DATA_DirectLink, §DirectLink

## Function: setData

### Objectives

Method to set a data with a value. Data are store in a dataset and are managed by the Tester.

### Parameter(s)

| | |
|---|---|
| **Code** | Code of the data Code of the data (format: #<dataset>_<data>) |
| **Value** | Name of the variable to store the value (starting with $) |
| **Comment** | Comment for the data |

### Example(s):

| | | |
|---|---|---|
| setData | #Data_Dataset, SEA-2023, Contract SEA-2023 | Set a value in the dataset |

# Condition

## Function: stopTest

### Objectives

Method to stop all the tests if a condition is true.

### Parameter(s)

| | |
|---|---|
| **Condition** | Any valid JavaScript expression that returns true or false (or a variable) |
| **Message** | Message to display when the condition is true |

### Example(s):

| | | |
|---|---|---|
| stopTest | $Error == 1, Error detected stop the tests | Error detection |

**Note:** Condition is a JavaScript expression so: equal is ==, not equal is !=

## Function: skipDescribe

### Objectives

Method to skip the Describe section if the expression is true.

### Parameter(s)

| | |
|---|---|
| **Condition** | Any valid JavaScript expression that returns true or false (or a variable) |
| **Message** | Message to display when the condition is true |

### Example(s):

| | | |
|---|---|---|
| skipDescribe | $Action != 'Document', Skip the document section | Skip a Describe section |

**Note:** Condition is a JavaScript expression so: equal is ==, not equal is !=

## Function: skipIt

### Objectives

Method to skip the IT section if the expression is true.

### Parameter(s)

| | |
|---|---|
| **Condition** | Any valid JavaScript expression that returns true or false (or a variable) |
| **Message** | Message to display when the condition is true |

### Example(s):

| | | |
|---|---|---|
| skipIt | $Exits == 0, Skip the test, no field detected ! | Skip a IT section |

**Note:** Condition is a JavaScript expression

## Function: isCheck

### Objectives

Method to detect if an element is checked. 1: if element is checked, otherwise 0

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Variable** | Name of the variable to store the result: 1 or 0 (starting with $) |

### Example(s):

| | | |
|---|---|---|
| isCheck | @APP_checkbox, 5, $Agree | Check if the checkbox is checked |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #isCheck: @APP_checkbox, 5, §Agree

## Function: isExist

### Objectives

Method to detect if an element exists. 1: if element exists, otherwise 0

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Variable** | Name of the variable to store the result: 1 or 0 (starting with $) |

### Example(s):

| | | |
|---|---|---|
| isExist | @APP_checkbox, 5, $Exist | Check if the checkbox exists |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #isExist: @APP_checkbox, 5, §Exist

## Function: isEnable

### Objectives

Method to detect if an element is enabled. 1: if element is enabled, otherwise 0

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Variable** | Name of the variable to store the result: 1 or 0 (starting with $) |

### Example(s):

| | | |
|---|---|---|
| isEnable | @APP_checkbox, 5, $Enabled | Check if the checkbox is enabled |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #isEnable: @APP_checkbox, 5, §Enabled

## Function: isVisible

### Objectives

Method to detect if an element is visible. 1: if element is visible, otherwise 0

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready |
| **Variable** | Name of the variable to store the result: 1 or 0 (starting with $) |

### Example(s):

| | | |
|---|---|---|
| isVisible | @APP_checkbox, 5, $Visible | Check if the checkbox is visible |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #isVisible: @APP_checkbox, 5, §Visible

# Functions to manage an element

## Function: switchToFrame

### Objectives

Method to get a value from a field.

**Note:** the Robot is able to manage automatically the frame and the iFrame. This function is there only in case you need to perform a special operation.

### Parameter(s)

| | |
|---|---|
| **Frame** | Frame 0 is the default one |

### Example(s):

| | | |
|---|---|---|
| switchToFrame | 1 | Switch to frame 1 |

## Function: getValue

### Objectives

Method to get a value from a field.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| getValue | @APP_Name, $Name | Get the value of the field Name |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #getValue: @APP_Name, §Name

# Function: setValue

## Objectives

Method to set a value into a field.

## Parameter(s)

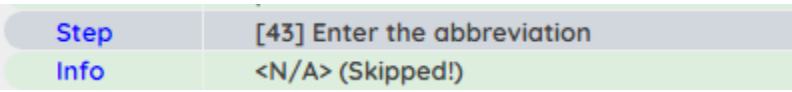
| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Value** | Value to key (by default closed by TAB), or use <ENTER> or a variable |
| **Delay** | [Optional] Delay in second(s) before the <TAB> or <ENTER> or after keying the value – Very useful, when you have to wait for the construction of a list |

## Example(s):

| | | |
|---|---|---|
| setValue | @APP_Name, $Name | set the value in the field Name |
| setValue | @APP_Decision, $Decision<TAB>, 3 | Enter a decision, wait for 3 sec and key a Tab |

If the value is <N/A> or <EMPTY> the function will not be executed but will return with the status success.

In the logfile, the info will be <N/A> or <EMPTY> (Skipped!)



# Function: select

## Objectives

Method to select a value from a list.

## Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Value** | Value to key or a variable or a position (@<position>) |
| **Wait for element** | Waiting time in second(s) for the element to be ready (default 5 sec) |
| **Wait after** | Waiting time in second(s) after the click (default 2 sec) |

## Example(s):

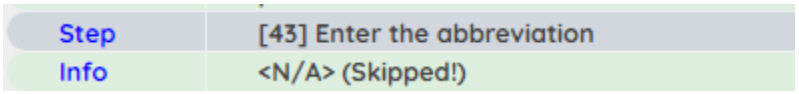
| | | |
|---|---|---|
| select | @APP_Country, $Country, 5, 3 | Select a country |

**Note 1**: Only the standard html <select><option> is recognized.

**Note 2**: Value is by default searched with a contains (approximate matching).
For compliance reason, you can use <*> but it has no impact!
To force an exact match: use = as the first character - Example: =Dupond
To get a specific option: use @<position> - Example @2 to get the second option
<Aa> is not a valid option. Value is always case sensitive.

**Note 3**: $Value contains the item selected from the list (useful when using position: E.g. @1)

If the value is <N/A> or <EMPTY> the function will not be executed but will return with the status success.
In the logfile, the info will be <N/A> or <EMPTY> (Skipped!)



## Function: selectCount

### Objectives

Method to count the number of values in a list.

### Parameter(s)

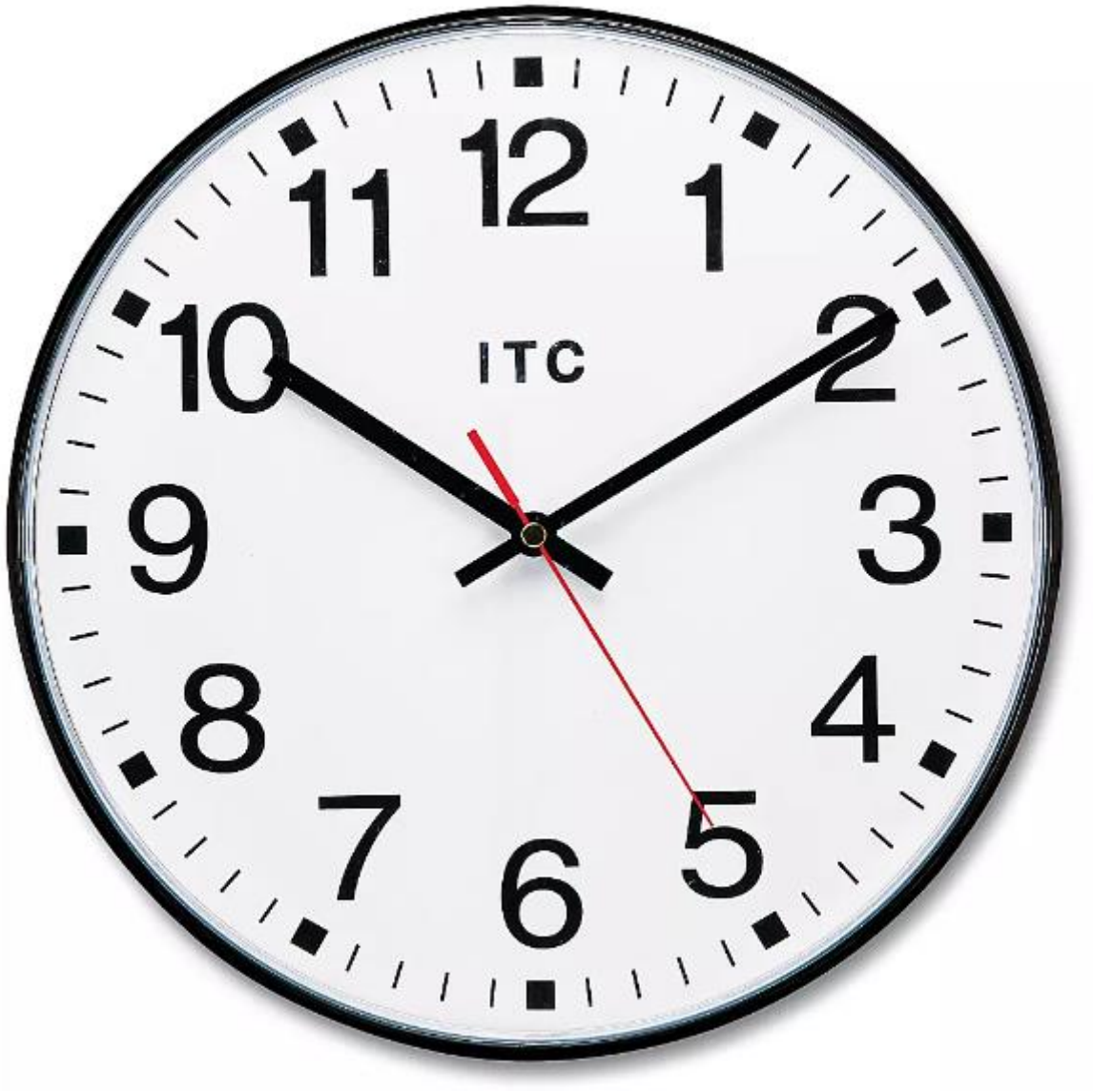
| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Wait for element** | Waiting time in second(s) for the element to be ready (default 5 sec) |
| **Variable** | Name of the variable to store the result: 1 or 0 (starting with $) |

### Example(s):

| | | |
|---|---|---|
| selectCount | @APP_Country, 5, $Countries | Count the number of countries |

**Note 1**: Only the standard html <select><option> is recognized.

# Epoch Date Functions



## Function: epoch

### Objectives

Method to get a date converted into epoch (Unix) date and time.

### Parameter(s)

| | |
|---|---|
| **Date** | A date in any valid format |
| **Format** | Any valid format (E.g.: 'DD/MM/YYYY HH:mm:ss') |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| epoch | 22/05/2024, DD/MM/YYYY, $EpochDate | Convert a date |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #epoch: 22/05/2024, DD/MM/YYYY, §EpochDate

## Function: epochDate

### Objectives

Method to convert an epoch date into a date.

### Parameter(s)

| | |
|---|---|
| **Epoch Date** | An epoch date |
| **Format** | Any valid format (E.g.: 'DD/MM/YYYY HH:mm:ss') |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| epochDate | $EpochDate, DD/MM/YYYY, $Date | Convert an epoch date |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #epochDate: $EpochDate, DD/MM/YYYY, §Date

## Function: epochAddHour

### Objectives

Method to get a date + hour(s) converted into epoch (Unix) date and time.

### Parameter(s)

| | |
|---|---|
| **Date** | A date in any valid format or NOW for the current date time |
| **Format** | Any valid format (E.g.: 'DD/MM/YYYY HH:mm:ss') |
| **Hour** | Number of hour(s) to add to the date |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| epochAddHour | NOW, DD/MM/YYYY, 2, $Date | Add 2 hours and convert in epoch |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #epochAddHour: NOW, DD/MM/YYYY, 2, §Date

## Function: epochAddMinute

### Objectives

Method to get a date + minute(s) converted into epoch (Unix) date and time.

### Parameter(s)

| | |
|---|---|
| **Date** | A date in any valid format or NOW for the current date time |
| **Format** | Any valid format (E.g.: 'DD/MM/YYYY HH:mm:ss') |
| **Minute** | Number of minute(s) to add to the date |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| epochAddMinute | NOW, DD/MM/YYYY, 10, $Date | Add 10 seconds and convert in epoch |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #epochAddMinute: NOW, DD/MM/YYYY, 10, §Date

## Function: epochAddSecond

### Objectives

Method to get a date + second(s) converted into epoch (Unix) date and time.

### Parameter(s)

| | |
|---|---|
| **Date** | A date in any valid format or NOW for the current date time |
| **Format** | Any valid format (E.g.: 'DD/MM/YYYY HH:mm:ss') |
| **Second** | Number of second(s) to add to the date |
| **Variable** | Name of the variable to store the result (starting with $) |

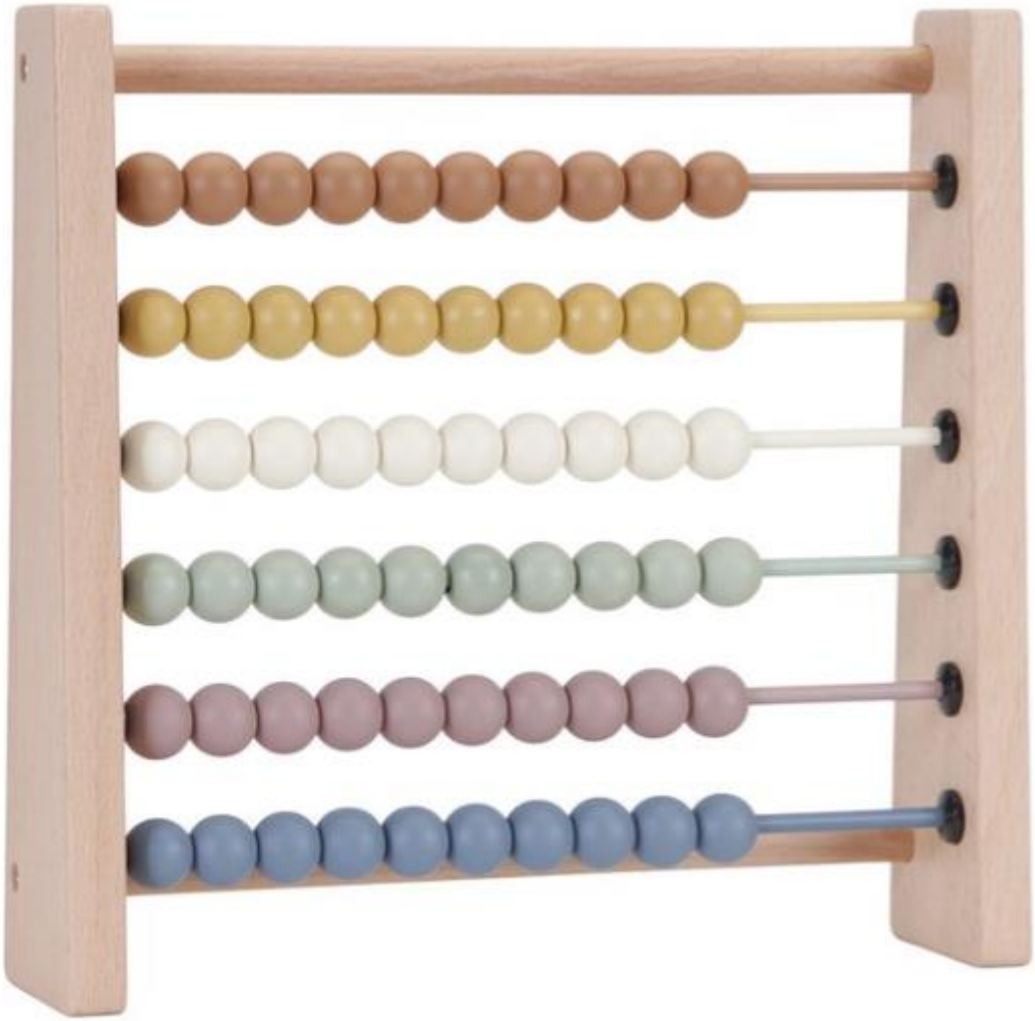
### Example(s):

| | | |
|---|---|---|
| epochAddSecond | NOW, DD/MM/YYYY, 5, $Date | Add 5 minutes and convert in epoch |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #epochAddSecond: NOW, DD/MM/YYYY, 5, §Date

# Table Functions



## Function: getTableHeader

### Objectives

Method to get a header from a table.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Row** | The row position in the table |
| **Column** | The column position in the table |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| getTableHeader | @APP_Amount, 1, 3, $AmountID | Get the value of the header (1,3) |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #getTableHeader: @APP_Amount, 1, 3, §AmountID

## Function: getTableData

### Objectives

Method to get a value from a cell of a table.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Row** | The row position in the table |
| **Column** | The column position in the table |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| getTableData | @APP_Amount, 1, 3, $Amount | Get the value of the cell (1,3) |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §

Example: #getTableData: @APP_Amount, 1, 3, §Amount

## Function: setTableData

### Objectives

Method to set a value into a cell of a table.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Row** | The row position in the table |
| **Column** | The column position in the table |
| **Value** | Value or variable (starting with $) |

### Example(s):

| | | |
|---|---|---|
| setTableData | @APP_Amount, 1, 3, $Amount | set the amount into the cell (1,3) |

## Function: clickCell

### Objectives

Method click on a cell of a table.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Row** | The row position in the table |
| **Column** | The column position in the table |
| **Delay** | Duration (in second(s) after the click) |

### Example(s):

| | | |
|---|---|---|
| clickCell | @APP_Amount, 1, 3, 5 | Click in the cell (1,3) |

## Function: countTableRow

### Objectives

Method count the row(s) of a table.

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Variable** | Name of the variable to store the result (starting with $) |

### Example(s):

| | | |
|---|---|---|
| countTableRow | @APP_Table, $Row | Count the number of row(s) of a table |

**Note**: in the rule, the sign $ for the variable must be replaced by the sign: §
Example: #countTableRow: @APP_Table, §Row

## Function: searchTableData

### Objectives

Method search for a value in a table at a specific column.
Result is stored in the variable $Row (-1 if not found).

### Parameter(s)

| | |
|---|---|
| **Name** | Xpath or dictionary word (starting with @) of the element or $GUI |
| **Column** | The column position in the table |
| **Search Value** | Value to search in the table |
| **Occurrence** | Occurrence of the search (default 1) |

### Example(s):

| | | |
|---|---|---|
| searchTableData | @APP_Table, 3, Belgium, 1 | Search for Belgium in a table |

# Advanced functions

## Function: callScenario

### Objectives

Method to execute a scenario based on its id

### Parameter(s)

| | |
|---|---|
| **Scenario ID** | Id of the scenario (visible in the detail of the scenario) |

### Example(s):

| | | |
|---|---|---|
| **callScenario** | 126 | Execute the tests of the scenario 126 |

## Function: callSuite

### Objectives

Method to execute a suite based on its id

### Parameter(s)

| | |
|---|---|
| **Suite ID** | Id of the suite (visible in the detail of the suite header) |

### Example(s):

| | | |
|---|---|---|
| **callSuite** | 25 | Execute the tests of the suite 25 |

## Function: startTimer

### Objectives

Start a timer to measure a performance

### Parameter(s)

| | |
|---|---|
| **Topic** | A short name to identify the timer |

### Example(s):

| | | |
|---|---|---|
| **startTimer** | login | Start a timer to measure the performance of the login |

## Function: stopTimer

### Objectives

Stop a timer and store the elapsed time in the database.
Note: The timer is global to an application (not specific to a user)

### Parameter(s)

| | |
|---|---|
| **Environment** | Name of the environment |
| **Topic** | The identifier of the timer (must be the same name as in the startTimer) |

### Example(s):

| | | | |
|---|---|---|---|
| **stopTimer** | PROD | login | Store the elapsed time in the database |

Note: See also the chapter on the performance in the Designer manual