

# Calculate Client Security Hash

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# 1. Prerequisites

The automation will need to process Data Rows for each transaction so the data type for Transaction Item will be DataRow.

## 2. Configuration in UiPath Studio

### 2.1. Create a new project

Create a new project using the Robotic Enterprise Framework template. Set a proper name for the project. Provide a proper description.

### 2.2. Whiteboard your workflows

Module Name	Description	Pre-condition	Post-action	Arguments
System1_Login	Opens a Microsoft Edge browser to access System 1 and log in using provided credentials	N/A	Opens Edge System 1 Dashboard if credentials are correct.	in_System1URL - String in_System1Credential - String
System1_Close	Closes System 1 in Microsoft Edge browser	System 1 Opened, Log Out button accessible	Logs Out and Closes the browser	N/A
System1_Navigate_To_WIDetails	Navigates to the WI Details Page using the WIID input argument	System 1 is open at any page	WI Details opened	in_WIID - string in_System1_WorkItemURL - String
System1_Navigate_To_WorkItems	Navigates to Work Items Page	System 1 Dashboard is opened	Work Items Page opened	N/A
System1_Navigate_To_UpdateWorkItem	Navigates to Update Work Item Page	System 1 Work Items Page is opened	Update Work Item Page opened	in_WIID - String in_System1_UpdateWorkItemURL – String
System1_Extract_WIsDataTable	Extracts the entire Table of all Work Items in the output argument	Work Items Page is opened	None	out_DataTable - DataTable
System1_Extract_ClientInformation	Extracts the ClientID, ClientName and ClientCountry and writes to the output arguments	Work Item Details Page is opened	None	out_ClientID - String out_ClientName - String out_ClientCountry - String
System1_UpdateWorkItem	Updates the Work Item to the Status and Comment using input arguments. Status can be "Open", "Completed" or "Rejected"	System 1 Update Work Item Page is opened	None	in_Comment - String in_Status - String in_WIID - String
SHA1_Open	Opens SHA1 generator from the URL argument	None	Opens Edge SHA1 generator	in_SHA1URL - String
SHA1_Close	Closes SHA1 generator	SHA1 generator Main Page is opened	Closes Edge SHA1 generator	N/A
SHA1_ProcessHash	Retrieves the HashResult based on the input HashFormula	SHA1 generator is opened	None	in_HashFormula - String

Module Name	Description	Pre-condition	Post-action	Arguments
				out_HashResult - String
SendEmail	Sends Exception Email using Outlook and the Input Arguments	None	None	in_To - String in_Subject - String in_Body - String

## 2.3. Develop your workflows

Create three new folders in the project folder. Name them **System1**, **SHA1** and **Common**. Inside the three folders, develop sequence-based workflows for each application, based on the process whiteboard. Use the Common folder for SendEmail.xaml.

## 2.4. Edit the Configuration file

In the Settings sheet of Config.xlsx, store the important settings for your project:

- The URLs for System 1
- The System1 credentials stored in Orchestrator or Windows Credential Manager
- The URL for SHA1 generator
- The Business Process Name

In the Constants sheet, set the MaxRetryNumber to 2.

## 3. Change the TransactionItem Data Type

In Main, update the datatype for the TransactionItem variable to DataRow. Make the remaining changes indicated in the REF without Queue Items checklist. You should resolve all validation errors and update all argument mappings which use TransactionItem.

## 4. Applications Used: open/close/kill

### 4.1. Edit the InitAllApplications.xaml workflow

Invoke the workflows used to log into System 1 and to open the SHA1 generator. Pass the URLs and credential values to the workflows.

### 4.2. Edit the Framework/CloseAllApplication.xaml workflow

Invoke the workflows used to close System 1 and the SHA1 generator.

### 4.3. Edit the Framework/KillAllProcesses.xaml workflow

Use a Kill Process activity here to indicate the browser you want to force-close.

## 5. Business Process: Transaction Data and Process

### 5.1. Edit GetTransactionData.xaml workflow

Change the data type for the `out_TransactionItem` argument from `QueueItem` to `DataRow` and delete the Get Transaction Item activity.

Use an If activity to check if this is the first run of the workflow. Note that `io_dt_TransactionDate` should be empty only on the first run. If it is the first run, then invoke the workflows used to navigate to the Work Items page and extract the `DataTable`.

Filter the `DataTable` using a Filter Data Table activity or the Select method to keep only the items with the Type WI5 and the Status 'Open'. Log the total number of transactions.

Use an If activity to assign the correct value to the Transaction Item if the Transaction Number is lower or equal to the number of available transactions or assign Nothing to the `TransactionItem` if the Transaction Number exceeds the number of available transactions.

### 5.2. Edit Process.xaml workflow

Set the correct datatype for `in_TransactionItem`. Invoke the workflows to navigate to the Work Item Details page, extract client information, process the Hash code, and update the Work Item.