Robotic Process Automation

Development Specifications Document (DSD)

*Process Name: <name>*

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Version Control

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Date | Version | Role | Name | Organization Department | Function | Comments |
| 1/12/2023 | 1.0 | Author | Mina Kamel | Udacity | RPA Developer |  |



# Document Overview

The Development Specifications Document (DSD) is created for every business process automated using RPA. The DSD needs to be reviewed and updated for every change requested and applied to the automated process. This document provides a technical snapshot and must always reflect the latest design and key features of the automated workflow.

The document naming convention will follow the naming convention and the version of the automated process. This can be “business process name version” or it can be defined, case by case, as part of the larger RPA project design.

This document is completed by the RPA Solution architect and RPA developer who automates the business process. It is reviewed by the business process owner, application owner, and CoE design authority.

This document is meant to assist the RPA COE, IT operations and process owners by providing a snapshot of the automated process details and components. It can also serve developers to have a quick glance at the setup, before diving into the code, to troubleshoot or update changes. The purpose of the document is to record the outcome specific to the automated master project and its subcomponents: projects, workflows, sequences etc.

# Master Project Details

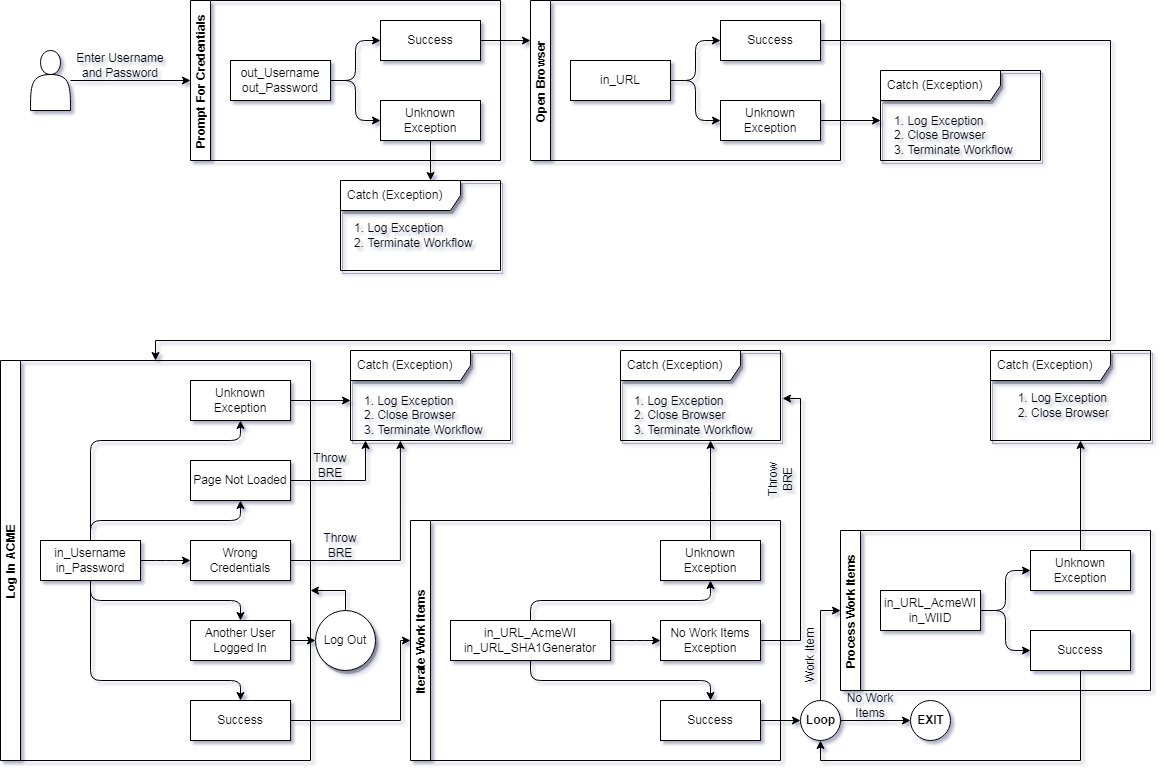
Details filled in by the developer reflect the actual information for the master project released for production.

|  |  |  |
| --- | --- | --- |
| # | Item | Details  Fill in with free text. If not applicable, mark the filed as "N/A". No empty fields. |
| 1 | Master Project Name and Version | Calculate Client Security Hash V 1.0 |
| 2 | Robot Type (attended/unattended/mix) | Attended |
| 3 | Is Orchestrator used? (Yes/No) | No |
| 4 | Scalable? (Yes/No)  Can the process be run by multiple robots in parallel? | No |

# Runtime Guide

## Runtime Diagram

**Architectural Structure of the Master Project** Display the interaction between components (package / robots, Orchestrator queues, and running order).



## List of Packages

Include **the list of packages and the high level description** for each of them, to explain each one's purpose:

|  |  |  |
| --- | --- | --- |
| # | Package Name | High-Level Description |
|  | N/A | N/A |

\*Add more rows to the table to include all the project names and versions. No fields should be left empty. Use “N/A” for the items that don't apply to your project.

## Master Project Runtime Details

Details of the automated process:

|  |  |  |
| --- | --- | --- |
| # | Item | Details  (Fill in with free text. If the section does not apply to your automation, mark the field as “N/A”. No empty fields. ) |
| 1 | Production Environment Details | Running on Windows PC, On demand |
| 2 | Prerequisites to run | Google Chrome 84.0.4147.125, UiPath.Robot |
| 3 | Input Data | User Credentials, Client Data (Work Item Details) |
| 4 | Expected Output (output data) | Client Security Hash |
| 5 | How to start the automated process? | The Process will be started by the user |
| 6 | Resuming the process from a particular step | Can only be started from the start (User credentials required) |
| 7 | Reporting  queues reporting, Kibana or another platform | Orchestrator Logs |
| 8 | Manual Error Handling  roll back or manually complete failed transactions. Procedures to reset the item. Ex “set status as investigating” | The Process can be restarted upon failure no need for manual fix |
| 1. How to resume the process in case of error | N/A |
| 1. How to manually fix transactions with error | N/A |
| 9 | Use of Orchestrator | No |
| 1. Password Policies   specific compliance requests? | N/A |
| 1. Stored Credentials   Never hard code credentials in the workflow | N/A |
| 1. List of Asset Names | N/A |
| 1. List of Queues Name | N/A |
| 1. Schedule Details | N/A |
| 10 | Recommended Resolution | N/A |

# Project Details

In this section describe all the projects that compose the automated process.

For each project, describe the workflow(s) in the logical order that they are called in.

If the workflow is a flowchart, also include the exported image from Studio.

If the automated process is composed of multiple projects, copy paste and fill in the table below for each project with its specific details (there are 2 here already, assuming a dispatcher and performer project)

## Project Name: Calculate Client Security Hash

General information about the process selected for RPA prior to automation.

|  |  |  |
| --- | --- | --- |
| # | Item Name | Details  Fill in with free text. If not applicable, mark the field as “N/A". No empty fields. |
| 1 | Environment used for development  name, location, configuration details etc | Windows 7 PC with UiPath Studio 2020.10.6 Community License |
| 2 | Environment prerequisites  OS details, libraries, required apps | Windows 7 or above, Google Chrome (Latest Version) |
| 3 | Logging level | Info |
| 4 | Details about automation  if the apps were automated using UI Automation, Image & Text | UI elements detection and interaction with simulate option, Data scraped from the web and get text used |
| 5 | In case of attended bot, can the user operate the computer while the robot is running? | Yes |
| 6 | Repository for project  where the developed project is stored | N/A |
| 7 | List of reused components | N/A |
| 8 | Custom logs defined in the workflows  where Throw Activity was used or custom log message was defined | 1. Wrong Credentials: The user entered wrong credentials 2. Browser Loading Error: The Browser didn’t load the page 3. No Work Items: No work Items of specified type and status exist 4. Successful Login: Info when user logged in ACME 5. Work Items: Info Number of total work items scraped 6. Selected Work Items: Info Number of queried work items 7. Client Details: Info The ID Name and Country of the Client processed |
| 9 | Frequent errors found in the development phase | Errors due to web page not loading correctly handled |
| 10 | Workarounds used in the automation phase | N/A |
| 11 | Configuration method  assets, excel file, Json file | User entry |
| 12 | Configuration details  path for input files, configuration Orchestrator assets used | N/A |

### Workflow(s) specific to the Project

Define below all the workflow files (.xaml files) used in the project, with the Input and Output data.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Workflow File Name | Description | Arguments | Comments |
| 1 | Main | Entry point | N/A | N/A |
| 2 | PromptForCredentials | Prompts the user to enter their username and password for the ACME test site | out\_Username out\_Password | Arguments values entered by user |
| 3 | OpenBrowser | Opens a browser to the input URL | in\_URL | Argument value hardcoded |
| 4 | LogInACME | Logs into the ACME test site and ensures the login was successful | in\_Username  in\_Password | N/A |
| 5 | IterateWorkItems | Scrapes the work items from ACME and filters by open WI5 types. If there are open WI5s, it will invoke updating each work item with the hash | in\_URL\_AcmeWI  in\_URL\_SHA1Generator | Arguments value hardcoded |
| 6 | ProcessWorkItem | Process a work item 5 by scraping the data from its page, calculating the hash and updating the page | in\_URL\_AcmeWI  in\_WIID | N/A |

# Compliance Considerations and Reporting Requirements

* N/A

# Other Details

## Future Improvements

* Remove any hard coded arguments and use Assets to store their values and user credentials.
* Use Queues and Triggers to run unattended.
* Use retry scopes to retry failed transaction instead of aborting and restarting the process

## Debugging Tips

* N/A

## Other Remarks

* N/A

# Post UAT Specifications

* Average duration per transaction (varies depending on the Test environment):
* Recommended number of robots for the specified volumes:v1
* Specified schedule: N/A

# Glossary

* **Master project** - the overall output of the development, containing one or multiple projects that together cover the scope of the robotic process automation.
* **Project** - a UiPath Studio project containing one or multiple workflow files. A project can be converted to a package and run independently, covering a particular scope within the master project. The project is used when defining the development and support phase of the automation.
* **Package** - the output of compiling a project. A package can be deployed on the robot machine and be executed by the robot service. Only one package can be executed at a given time by a robot. The package is used when defining the running phase of the automation
* **Workflow** - a component of the package, the workflow encapsulates a part of the project logic. The workflow can be of type: sequence, flowchart or state machine. a workflow is saved as an .xaml file inside the project folder. A workflow file can be invoked from another workflow and by default there is an initial workflow file that will run when executing the package.
* **Activity** - an action that the robot executes.
* **Sequence** - a workflow where activities are executed one after another, in a sequential order
* **Flowchart** - a workflow where activities are connected by arrows and the logic of the workflow can be easily followed in a visual manner. The flowchart can also be exported as an image from UiPath studio
* **State machine** - a more advanced way of organizing a workflow, similar to a flowchart.
* **BOR** - Back office robot
* **FOR** – Front office robot
* **Orchestrator** – Enterprise architecture server platform supporting: release management, centralized logging, reporting, auditing and monitoring tools, remote control, centralized scheduling, queue/robot workload management, assets management.