|  |  |
| --- | --- |
|  | | Process Definition Document |

Excel-to-Form Student Enroller

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# Introduction

## I.1 Purpose of the document

The Process Definition Document outlines the business process chosen for automation using UiPath Robotic Process Automation (RPA) technology.

The document describes the sequence of actions performed as part of the business process, the conditions and rules of the process prior to automation and how they are envisioned to work after automating it, partly or entirely. This specifications document serves as a base for developers, providing them with the details required for applying robotic process automation to the selected business process.

## I.2 Objectives

The business objectives and benefits expected by the Business Process Owner after automation of the selected business process are:

* Reduce processing time per item by 80%
* Better Monitoring of the overall activity by using the logs provided by the robots.

## I.3 Process key contact

The specifications document includes concise and complete requirements of the business process and it is built based on the inputs provided by the **process** **Subject Matter Expert (SME)/ Process Owner.**

The **Process Owner** is expected **to review it and provide signoff for accuracy** and completion of the actions, context, impact and a set of process exceptions. The details are to be included in the table below.

|  |  |  |  |
| --- | --- | --- | --- |
| ****Role**** | ****Name**** | ****Contact details (email, phone number)**** | ****Notes**** |
| Software | Raya IT | [ahmed\_shawkey@rayacorp.com](mailto:ahmed_shawkey@rayacorp.com)  01111511797 |  |

## I.4 Minimum Pre-requisites for automation

1. A filled in Process Definition Document
2. Test Data to support development
3. User access and creation of user accounts (licenses, permissions, restrictions to create accounts for robots)

# As-Is process description

## II.1 Process Overview

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

|  |  |  |
| --- | --- | --- |
| **#** | **Item** | **Description** |
| 1 | **Process full name** | Excel-to-Form Student Enroller |
| 2 | **Process Area** |  |
| 3 | **Department** | Academy |
| 4 | **Process short description (operation, activity, outcome)** | Automates student enrollment by extracting data from Excel files and seamlessly populating Google Forms for each individual student |
| 5 | **Role(s) required for performing the process** | Fresh RPA developer |
| 6 | **Process schedule and frequency** | Attended |
| 7 | **# of items processed /reference period** | # of rows In the excel file |
| 8 | **Process execution time** | N x 3sec [N: Numbers of rows] |
| 9 | **Peak period (s)** | NA |
| 10 | **Transaction Volume During Peak period** | NA |
| 11 | **Total # of FTEs supporting this activity** | NA |
| 12 | **Expected increase of volume in the next reference period** | NA |
| 13 | **Level of exception rate** | Medium |
| 14 | **Input data** | Excel file |
| 15 | **Output data** | Information logs |

\*Add more rows to the table to include relevant data for the automation process. No fields should be left empty. Use “n/a” for the items that don`t apply to the selected business process.

## II.2. Applications used in the process­

The table includes a comprehensive list of all the applications that are used as part of the process to be automated to perform the given actions in the flow.

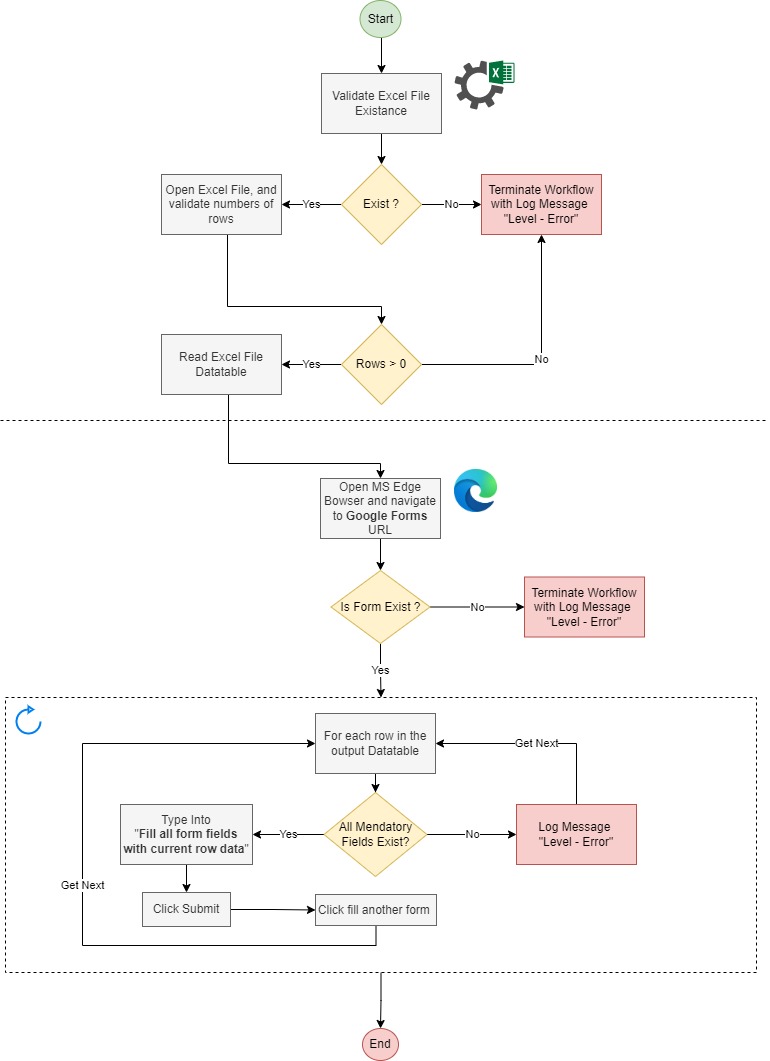
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # | Application name & version | System Language | Thin/Thick Client | Environment/ Access method | Comments |
| 1 | Excel | English | Thick | UiPath Activities |  |
| 2 | MS Edge | English | Thin | UI Interaction using UiPath Activities |  |

\*Add more rows to the table to include the complete list of applications.

## II.3 As-Is Process map

### High Level As-Is Process Map:

This chapter depicts the As-Is business process at a High Level to enable developers to have a high-level understanding of the current process.



## II.4 Process statistics

### High level statistics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Processes** | **Windows** | **Actions** | **Mouse clicks** | **Keys pressed** | **Text entries** | **Hotkeys used** | **Time** |
| 1 | 1 | 10 | 7 | N | 4 | 0 | 3 sex |

### Detailed statistics

|  |  |  |  |
| --- | --- | --- | --- |
| Window name | Mouse Clicks | Text entries | Keys pressed |
| Students - Work - Microsoft​ Edge | 6 | 4 | N |

\*\*\* N: is the number of characters entered per each text fields

## II.5 Detailed As-Is Process Actions

##### Open Student Form Excel File

|  |  |
| --- | --- |
|  | **Est. time: 2.0 sec.** |
|  | Action: Open Excel File  UiPath Activity :  **“Excel Scope Application”** |
|  | Read Excel File  UiPath Activity :  **“Read Range”** |

#### Open MS Edge Browser and navigate to Students Form

|  |  |
| --- | --- |
| image | **URL :[HERE](https://docs.google.com/forms/d/e/1FAIpQLScYMUm1eNoCgYOXm4v2-OICBG6YyGHyw-dQ9w0zJwAhjxp2Hw/viewform?vc=0&c=0&w=1&flr=0)**  UiPath Activity :  **“User Application/Browser”** |

##### Check Form Exist

|  |  |
| --- | --- |
| image | Action: Element Exist  UiPath Activity :  **“Check App State”** |

##### Type Into Name

|  |  |
| --- | --- |
|  | **Est. time: 0.9sec** |
| image | Action: Keyboard Input  UiPath Activity :  **“Type Into”** |

##### Type Into Phone

|  |  |
| --- | --- |
|  | **Est. time: 0.9 sec.** |
| image | Action: Keyboard Input  UiPath Activity :  **“Type Into”** |

##### Type Into Email

|  |  |
| --- | --- |
|  | **Est. time: 0.4 sec.** |
| image | Action: Keyboard Input  UiPath Activity :  **“Type Into”** |

##### Type Into City

|  |  |
| --- | --- |
|  | **Est. time: 0.5 sec.** |
| image | Action: Keyboard Input  UiPath Activity :  **“Type Into”** |

##### Click Submit

|  |  |
| --- | --- |
|  | **Est. time: 0.1 sec.** |
| image | Action: Keyboard Input  UiPath Activity :  **“Click”** |

##### Click

|  |  |
| --- | --- |
|  | **Est. time: 3.2 sec.** |
| image | Action: Keyboard Input  UiPath Activity :  **“Click** [**Submit another response**](https://docs.google.com/forms/u/0/d/e/1FAIpQLScYMUm1eNoCgYOXm4v2-OICBG6YyGHyw-dQ9w0zJwAhjxp2Hw/viewform?usp=form_confirm)**”** |

# To-Be Process Description

This chapter highlights the expected design of the business process after automation.

## III.1 To-Be Detailed Process Map

Highlight Bot interventions/ To-Be automated actions with different legend/ icon (purple)

\*Mention below if process improvements were performed on the To-Be design and provide details.

|  |  |
| --- | --- |
| Legend | Description |
|  | Action number in the process. Referred to in details or Exceptions and Errors table |
|  | This process action is proposed for automation |
|  | This process action remains manual (to be performed by a human agent) |

## III.2 Parallel Initiatives/ Overlap (if applicable)

This chapter covers the proposed Business, Process & System changes to be made in the near future and their impact.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.No | Initiative Name | Process Acion(s) where it is identified | Impact on current automation request? How? | Expected Completion Date | Contact person for more details |
|  | n/a |  |  |  |  |

## 

## III.3 In Scope of RPA

The activities **in scope of RPA**, are listed here:

 Read **Excel Data:**

* Use the "Excel Application Scope" activity to open the Excel file containing student data.
* Use the "Read Range" activity to read the data into a DataTable variable.

 Open **Google Form:**

* Use the "User Application/Browser" activity to navigate to the Google Form URL where students will be enrolled.

 Iterate **Through Student Data:**

* Use a "For Each Row in DataTable" activity to loop through each row in the DataTable obtained from Excel.

 Fill **Google Form:**

* Inside the "For Each Row" loop:
  + Use activities like "Type Into", "Click", "Select Item", etc., to fill out the Google Form fields with data from the current row of the DataTable.
  + Ensure proper handling of special cases such as dropdowns, checkboxes, radio buttons, etc., using appropriate activities.

 Submit **Form:**

* After filling out all necessary fields, use the appropriate activities to submit the form (e.g., clicking the "Submit" button).

 Handling **Errors and Validation:**

* Implement error handling using "Try Catch" activities to manage any exceptions that may occur during the process (e.g., form submission failures, network issues).
* Include validation steps to verify successful form submission if required.

 Logging **and Reporting:**

* Use the "Log Message" activity to record important events and messages in the UiPath Output panel.
* Optionally, use "Write Line" activities or log files to keep track of processed rows or any errors encountered.

 Close **Browser:**

* Use the "Close Tab" or "Close Application" activities to close the Google Form browser tab.

## III.4 Out of Scope of RPA

The activities **Out of scope of RPA**, are listed here:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sub-process (if applicable) | Activity (action) | Reasons for Out of scope\* | Impact on the To-Be | Possible measures to be taken into consideration for future automation |
| 1.1 | 1.1.1 | Input: handwritten form | After processing action 1.1.2, an email is sent to the user to perform action 1.1.3 in a csv file  In order to go to action 1.1.4, the robot will read the csv file | Collect the form in an editable pdf format and electronically signed |

\*Add more rows to the table to reflect the complete documentation provided to support the RPA process.

## 

## III.5 Business Exceptions Handling

The Business Process Owner and Business Analysts are expected to document below all the business exceptions identified in the automation process. These can be classified as:

|  |  |
| --- | --- |
| Known | Unknown |
| Previously encountered. A scenario is defined with clear actions and workarounds for each case. | New situation never encountered before. It can be caused by external factors. Cannot be predicted with precision, however if it occurs, it must be communicated to an authorized person for evaluation. |

### Known Exceptions

The table below reflects all the business process exceptions encountered during the process evaluation and documentation. These are **known exceptions** that occurred before. For each of these exceptions, define a corresponding expected action that the robot should complete if it encounters the exception.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| BE # | Exception name | Action | Parameters | Action to be taken |
| 1 | Empty Excel File | Terminate |  | Log Error |
| 2 | Mandatory fields missed | Skip Row |  | Log Error |

### Unknown Exceptions

For all other unanticipated or unknown business (process) exceptions, the robot should:

## III.6 Application Error and Exception Handling

A comprehensive list of all errors, warnings or notifications should be consolidated here with the description and action to be taken, for each, by the robot.

Errors identified in the automation process can be classified as:

|  |  |  |
| --- | --- | --- |
| Area | Known | Unknown |
| Technology/Applications | Experienced previously, an action plan or a workaround available. | Never encountered before, or may happen independently of the applications used in the process. |

### Known Errors or Exceptions

The table below reflects all the errors identified in the process evaluation and documentation.

For each of these errors or exceptions, define a corresponding expected action that the robot should complete if it is encountered.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Error name | Action | Parameters | Action to be taken |
| 1 | Application Crash  Excel, MS Edge | Terminate |  | Recover & retry for maximum 3 times. Close the applications and run the sequence again |

### Unknown Errors and Exceptions

For all the other unanticipated or unknown application exceptions/errors, the robot should:

# Other Observations

Include below any other relevant observations you consider needed to be documented here.

Example: Specific Business monitoring requirements (audit and reporting) etc.

# Additional sources of process documentation

If there is additional material created to support the process automation please mention it here, along with the supported documentation provided.

|  |  |  |
| --- | --- | --- |
| Additional Process Documentation | | |
| Video Recording of the process (Optional) |  |  |
| Standard Operating Procedure (s) (Optional) |  |  |
| Business Rules Library (Optional) |  |  |
| Other documentation (Optional) |  |  |

\*Add more rows to the table to reflect the complete documentation provided to support the RPA process.