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Process Definition

Document

Automated User Data Management and Image Storage System: A Gender-Specific Approach

This project aims to automate the management of user data and image storage by integrating API calls, database operations, and storage bucket interactions. The process begins with fetching 10 random user profiles from the randomuser.me API. For each user, the system checks if the user exists in the database. If the user exists, it verifies whether the image is available in the storage bucket; if not, the image is downloaded and stored. If the user data is not present in the database, it is stored accordingly. Only female users' data is downloaded, and any male user encounters trigger exceptions, which are recorded for the final report.

The final report consolidates user IDs, status (existence in the database and image availability), and the image's location in the storage bucket into one sheet. Additionally, the system sends an email using an enterprise email ID to notify relevant stakeholders.'

Table of Contents

[I. INTRODUCTION 4](#_Toc97211767)

[1.1 Purpose 4](#_Toc97211770)

[1.2 Objectives 4](#_Toc97211771)

[1.3 Key Contacts 5](#_Toc97211772)

[1.4 Minimum Pre-requisites for the Automation 5](#_Toc97211773)

[II. AS IS Process description 5](#_Toc97211774)

[2.1 Process Overview 5](#_Toc97211776)

[2.2 Applications Used 7](#_Toc97211777)

[2.3 AS IS Process Map 7](#_Toc97211778)

[2.3.1 High Level Process Map 8](#_Toc97211779)

[2.3.2 Detailed Level Process Map 8](#_Toc97211780)

[2.4 Process Statistics 8](#_Toc97211781)

[2.5 Detailed As Is Process Actions 9](#_Toc97211782)

[2.6 Exceptions Handling 9](#_Toc97211783)

[2.7 Input Data Description 10](#_Toc97211784)

[III. TO BE Process description 11](#_Toc97211785)

[3.1. Detailed TO BE Process Map 11](#_Toc97211786)

[3.2. Parallel Initiatives 11](#_Toc97211787)

[3.3. In Scope For RPA 12](#_Toc97211788)

[3.4. Out Of Scope for RPA 12](#_Toc97211789)

[3.5. Exceptions Handling 12](#_Toc97211790)

[3.5.1. Known Business Exceptions 12](#_Toc97211791)

[3.5.2 Unknown Business Exceptions 13](#_Toc97211792)

[3.6. Applications Errors & Exceptions Handling 13](#_Toc97211793)

[3.6.1. Known Applications Errors and Exceptions 13](#_Toc97211794)

[3.6.2. Unknown Applications Errors and Exceptions 13](#_Toc97211795)

[3.7. Reporting 14](#_Toc97211796)

[IV. Other 14](#_Toc97211797)

[4.1. Additional sources of process documentation 14](#_Toc97211798)

# INTRODUCTION



## Purpose

The Process Definition Document outlines the business process chosen for automation. The document describes the sequence of actions performed as part of the business process, the conditions and rules of the process prior to automation (**AS IS**) as well as the new sequence of actions that the process will follow as a result of preparation for automation (**TO BE**).

**The PDD is a communication document between:**

* The RPA Business Analyst and the SME/Process Owner. The goal is to ensure that the RPA Business Analyst has the correct understanding of the process and has represented it accurately.
* The RPA Business Analyst and the Development team (represented by the Solution Architect and RPA Development Lead). The goal is to ensure that the process is documented appropriately and to a sufficient level of detail so that the Solution Architect can then create the solution based on the PDD content.

## 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.

## Key Contacts

Add here any stakeholders that need to be informed or to approve changes to the process:

|  |  |  |  |
| --- | --- | --- | --- |
| Role | Name | Contact Details (email, phone number) | Notes |
| Process Owner | B Harish | Harish.bojji@gmail,com |  |
| SME | Umadevi | umadevi@gmail.com |  |

## Minimum Pre-requisites for the Automation

1. Filled in Process Definition Document
2. Test Data to support development
3. User access and user accounts creations (licenses, permissions, restrictions to create accounts for robots)
4. Credentials (user ID and password) required to logon to machines and applications

# AS IS Process description

In this section the Business Analyst will document the process. This section will serve as the starting point for the re-engineering and automation effort.



## Process Overview

Section contains general information about the process before automation.

|  |  |
| --- | --- |
| Item | Description/Answer |
| Process Full Name | Automated User Data Management and Image Storage System: A Gender-Specific Approach |
| Process Area | Banking |
| Department | loan |
| Short Description (operation, activity, outcome) | This project aims to automate the management of user data and image storage by integrating API calls, database operations, and storage bucket interactions. The process begins with fetching 10 random user profiles from the randomuser.me API. For each user, the system checks if the user exists in the database. If the user exists, it verifies whether the image is available in the storage bucket; if not, the image is downloaded and stored. If the user data is not present in the database, it is stored accordingly. Only female users' data is downloaded, and any male user encounters trigger exceptions, which are recorded for the final report.    The final report consolidates user IDs, status (existence in the database and image availability), and the image's location in the storage bucket into one sheet. Additionally, the system sends an email using an enterprise email ID to notify relevant stakeholders.' |
| Role(s) required in applications to perform the process | Loan officer |
| Process schedule and frequency | Weekly |
| Number of times the process is ran by selected frequency | 100 |
| Process execution time | 3.6 sec. |
| Process Restrictions | **e.g**. *This is necessary for the Solution Architect to decide how they will need to split the Master Project into smaller projects (the scheduling of the robots will depend on this)*  ***Example:*** *The applications can be used only between 7 AM-8PM during work days and not allowed to be used during weekend.* |
| Peak Period (s) | ***Last working day of month*** |
| Peak Volume Approximate increase | 200 |
| Number of persons performing the process | 3 |
| Expected Volume increase during next periods | ***e.g.*** *It is important to understand peaks in order to design a robust and scalable solution.*  *Example: 10-20%* |
| Percentage Un-handled exceptions |  |
| Input data description | **Web Api** |
| Output Data description | **Excel, Email Summary** |

\*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.

## Applications Used

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 | Application Language | Thin/Thick Client | Environment/ Access method | Comments |
| Microsoft Edge | 107.04.01 | English | Thick | Read/Write |  |
| Microsoft Excel | 20204.04 | English | Thick | Read/write |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

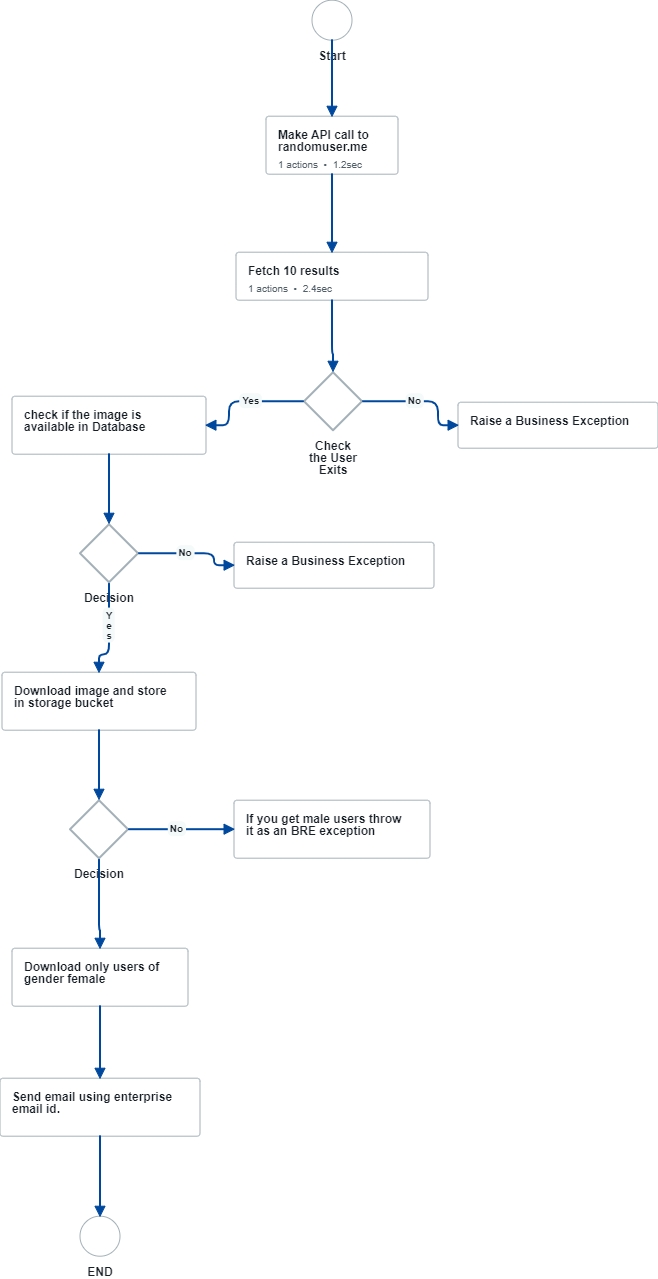
\*Add more rows to the table to include the complete list of applications.

## AS IS Process Map

This section contains various process maps contributing to a better understanding of how the process is performed pre-automation.

### High Level Process Map

This section is useful for the Business Analyst in presentations and discussions with management to underline areas of weakness, inefficiency or to demonstrate which actions could be in scope for automation.



### Detailed Level Process Map

This section describes the process at key-stroke level and is an essential part for the communication with the developers.

## Process Statistics

**High Level statistics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Processes | Windows | Actions | Mouse clicks | Keys pressed | Text entries | Hotkeys used | Time |
| 1 | 1 | 2 | 1 | 0 | 0 | 0 | 3.6 sec. |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

**Detailed statistics**

|  |  |  |  |
| --- | --- | --- | --- |
| Window name | Mouse clicks | Text entries | Key pressed |
| randomuser.me/api/?results=10 and 4 more pages - Work - Microsoft​ Edge | 1 | 0 | 0 |
|  |  |  |  |
|  |  |  |  |

## Detailed As Is Process Actions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| #Action | Input | Description | Details (Screen/Video Recording Index) | Exceptions Handling | Possible Actions |
| Randomuser.me | Web url | Fetching top 10 results from api |  |  |  |
| Email/Excel | 1 |  |  |  |  |

|  |  |
| --- | --- |
| 1. Make API call to randomuser.me | |
| Make API call to randomuser.me | **Est. time: 1.2 sec.** |

|  |  |
| --- | --- |
| * 1. Open Browser and Enter randomuser.me/api |  |
|  | Est. time: 1.2 sec. |
| image | Action: Special Key |

|  |  |
| --- | --- |
| 1. Fetch 10 results | |
|  | **Est. time: 2.4 sec.** |

|  |  |
| --- | --- |
| * 1. Fetch 10 Results from RandomUsers.me |  |
|  | Est. time: 2.4 sec. |
| image | Action: Click |

|  |  |
| --- | --- |
| 1. Check the User Exits | |
| If 'Yes' then go to '4. check if the image is available in Database'  If 'No' then go to '13. Raise a Business Exception' | **Est. time: 120.sec.** |

|  |  |
| --- | --- |
| 1. check if the image is available in Database | |
|  | **Est. time: 5.0 sec.** |

|  |  |
| --- | --- |
| 1. Decision | |
| If 'Y e s' then go to '6. Download image and store in storage bucket'  If 'No' then go to '12. Raise a Business Exception' | **Est. time: 5.0 sec.** |

|  |  |
| --- | --- |
| 1. Download image and store in storage bucket | |
|  | **Est. time: 5.0 sec.** |

|  |  |
| --- | --- |
| 1. Decision | |
| If '' then go to '8. Download only users of gender female'  If 'No' then go to '11. If you get male users throw it as an BRE exception' | **Est. time: 0.0 sec.** |

|  |  |
| --- | --- |
| 1. Download only users of gender female | |
|  | **Est. time: 5.0 sec.** |

|  |  |
| --- | --- |
| 1. Send email using enterprise email id. | |
|  | **Est. time: 20 sec.** |

|  |  |
| --- | --- |
| 1. END | |
|  | **Est. time: 0.0 sec.** |

|  |  |
| --- | --- |
| 1. If you get male users throw it as an BRE exception | |
|  | **Est. time: 0.0 sec.** |

|  |  |
| --- | --- |
| 1. Raise a Business Exception | |
|  | **Est. time: 0.0 sec.** |

|  |  |
| --- | --- |
| 1. Raise a Business Exception | |
|  | **Est. time: 0.0 sec.** |

## Exceptions Handling

## Input Data Description

The following table should contain details regarding the inputs that every action of the process takes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| #Action | Sample | Input Type | Location | Are inputs Natively Digital\*? | Are the Inputs Structured\*? |
| API URL |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

*\** ***Native Digital****: This is data that was originally created digitally e.g. excel, database or application reports etc. The non-native digital inputs are usually scanned images.*

***\* Structured Data****: has a predictable format and exists in fixed fields (e.g. an excel cell or a field in a form) and is easily detectable via search algorithms.*

# TO BE Process description

In this section the proposed improvements to the process, actions to the process will be outlined as well as the actions proposed for automation and the type of robot required. **This will be cross-checked by the Solution Architect.**

## Detailed TO BE Process Map

A detailed process map of the process as it will look like post-automation will be outlined here.  
  
*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). |

## Parallel Initiatives

The table below will capture the proposed Business, Process or Application changes to be made in the near future that would impact the process at hand (if any).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Initiative Name | Process Action(s) where it is identified | Impact on current Automation Request | Expected Completion Date | Contact Person |
|  |  |  |  |  |
|  |  |  |  |  |

## In Scope For RPA

The actions in scope for RPA should be listed below:

## Out Of Scope for RPA

The actions **out of scope** for RPA should be listed in the table below together with the reasoning.

|  |  |  |  |
| --- | --- | --- | --- |
| Activity/Action\* | Reason for out of scope | Impact on the TO BE | Possible measures to be taken into consideration for future automation |
| *e.g. Action 3* | ***e.g.*** *Input is handwritten* | ***e.g.*** *after action 2 an e-mail is sent to the user to manually perform action 3* | ***e.g.*** *collect the input in pdf form and use electronic signature* |

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

## Exceptions Handling

The Business Process Owner and Business Analysts are expected to document below all the business exceptions identified in the automation process. Exceptions are of 2 types and both need to be addressed:

**Known exceptions** = previously encountered. A scenario is defined with clear actions and workarounds for each case.

**Unknown** = New situation that was not encountered before. It cannot be predicted and in case it happens it needs to be flagged and communicated to an authorized person for evaluation.

### Known Business Exceptions

Details regarding how the robot should handle the exceptions.

|  |  |  |  |
| --- | --- | --- | --- |
| Exception Name | Action | Parameters | Action to be taken |
| *No image found*  *Male gender users* | ***Send Business Exceptions*** | ***No Image found*** | *send an e-mail to* [*h*arish*@company.com*](mailto:harish@company.com) *withthe text: “Employee ID <> 6 characters”*  *Go to the next transaction* |

### 3.5.2 Unknown Business Exceptions

An umbrella rule that includes a notification needs to be designed for all other exceptions that could happen and cannot be anticipated.

***e.g.:*** *for all other cases which do not follow the rules defined an e-mail should be sent to:* [*exceptions@company.com*](mailto:exceptions@company.com) *with a screen shot and robot should proceed to next transaction.*

## Applications Errors & Exceptions Handling

A comprehensive list of all errors, warnings or notifications should be consolidated here together with the action to be taken for each by the Robot. There are 2 types of exceptions/errors:

**Known** = Previously encountered and action plan or workaround available for it (e.g. SAP unresponsive during peak times)

**Unknown** = these are exceptions and errors that cannot be anticipated but for which the robot needs to have a rule so that the RPA solution is sustainable.

### Known Applications Errors and Exceptions

Details regarding how the robot should handle the exceptions.

|  |  |  |  |
| --- | --- | --- | --- |
| Error/Exception Name | Action | Parameters | Action to be taken |
| Browser Not Responding | ***e.g****. Any action* | ***e.g.*** *Error message* | *recover and retry 3 times* |
| Email Not Sent |  |  | Contact the Mail Server Team  info@mailserver.team |

### Unknown Applications Errors and Exceptions

An umbrella rule that includes a notification needs to be designed for all other exceptions that could happen and cannot be anticipated.

*e.g. robot should attempt to access the application 3 times then it should terminate thread.*

## Reporting

In this section all the reporting requirements of the business should be detailed so that when the RPA solution is moved to production the administrators can track the performance of the solution.

|  |  |  |  |
| --- | --- | --- | --- |
| Report Type | Update frequency | Details | Monitoring Tool to visualize the data |
| *e.g. Process logs* | ***e.g.*** *Daily* | ***e.g.*** *How many times was this process run since the beginning of the month and what was the average run duration* | ***e.g.*** *Kibana* |
| *e.g Process logs* | ***e.g.*** *Monthly* | ***e.g.*** *How many robots worked on this process per each month?* | ***e.g.*** *Csv file posted daily on share drive* |
| *e.g Transaction logs* | ***e.g.*** *Daily* | ***e.g.*** *How many transactions were run by this process since the beginning of the month and what was the average transaction duration?* | ***e.g.*** *Kibana* |
| *e.g Error logs* | ***e.g.*** *Daily* | ***e.g.*** *Average number of errors by type per day* | ***e.g.*** *Kibana* |
| *e.g Error logs* | ***e.g.*** *Daily* | ***e.g.*** *All errors per month grouped by type* | ***e.g.*** *Csv file posted daily on share drive* |

\* For complex reporting requirements, include them into a separate document and attach it to the present documentation

# Other

## 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) | Acme-System1-Process-WI5-Manual-Walkthrough | Insert any relevant comments |
| Business Rules Library (Optional) | Insert link to Business rules library | Insert any relevant comments |
| Other documentation (Optional) | Insert link to any other relevant process documentation (L4, L5 process description, fields mapping files etc.) | Insert any relevant comments |
| Standard Operating Procedure(s) (Optional) |  | Insert any relevant comments |
| High Level Process Map (Optional) |  | Insert any relevant comments |
| Detailed level process map (Optional) |  | Insert any relevant comments |
| Work Instructions (Optional) |  | Insert any relevant comments |
| Input Files (Optional) |  | Insert any relevant comments |
| Output Files (Optional) |  | Insert any relevant comments |

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

