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|  | | Process Definition Document |

Stock Report RPA Test

06th Jan, 2023

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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**** |
| PDD | Kaustubh |  |  |
| Developer | Vamasi & Gokulnath |  |  |
| Tester | Ujjwal Kumar | Ujjwal.kumar2104@gmail.com |  |
| UAT | Prudhvi |  |  |
| Deployment | Manjunath |  |  |
|  |  |  |  |

## I.4 Minimum Pre-requisites for automation

1. UiPath Community installed and connected to community Orchestrator. The task will use the queue functionality on Orchestrator.
2. A browser with the UiPath extension installed. Preferably Chrome.
3. Access to email mailbox

# 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** | Stock Reports RPA Test |
| 2 | **Process Area** | Stock Exchange |
| 3 | **Department** | Finance |
| 4 | **Process short description (operation, activity, outcome)** | Capturing the data from Nasdaq & prepare the Stock Reports for multiple stocks |
| 5 | **Role(s) required for performing the process** | BA, Developer, Tester |
| 6 | **Process schedule and frequency** | Mon – Fri, Every 1 hours |
| 7 | **# of items processed /reference period** | 10 items |
| 8 | **Process execution time** | 3 min. 23 sec. |
| 9 | **Peak period (s)** | 10 am – 1 pm |
| 10 | **Transaction Volume During Peak period** | 20 items |
| 11 | **Total # of FTEs supporting this activity** | NA |
| 12 | **Expected increase of volume in the next reference period** | NA |
| 13 | **Level of exception rate** | Low |
| 14 | **Input data** | Stock |
| 15 | **Output data** | Modify Stock Report |

\*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.

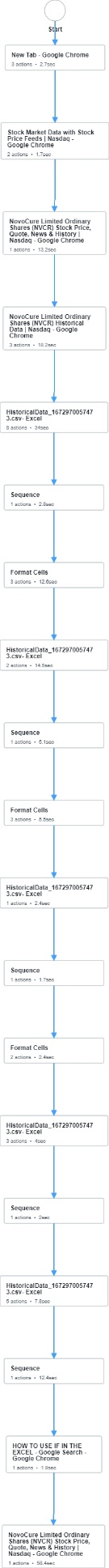
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # | Application name & version | System Language | Thin/Thick Client | Environment/ Access method | Comments |
|  | Chrome |  | Thick Client | https://www.nasdaq.com/market-activity/stocks/nvcr |  |
|  | Excel |  | Thick Client |  |  |
|  | Email |  | Thick Client |  |  |

\*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** |
| 3 | 9 | 43 | 35 | 6 | 2 | 1 | 3 min. 23 sec. |

### Detailed statistics

|  |  |  |  |
| --- | --- | --- | --- |
| Window name | Mouse Clicks | Text entries | Keys pressed |
| New Tab - Google Chrome | 1 | 0 | 0 |
| Stock Market Data with Stock Price Feeds | Nasdaq - Google Chrome | 1 | 1 | 4 |
| NovoCure Limited Ordinary Shares (NVCR) Stock Price, Quote, News & History | Nasdaq - Google Chrome | 2 | 0 | 0 |
| NovoCure Limited Ordinary Shares (NVCR) Historical Data | Nasdaq - Google Chrome | 3 | 0 | 0 |
| HOW TO USE IF IN THE EXCEL - Google Search - Google Chrome | 1 | 0 | 0 |
| HistoricalData\_1672970057473.csv - Excel | 17 | 0 | 0 |
|  | 4 | 0 | 0 |
| Format Cells | 5 | 1 | 2 |
|  | 1 | 0 | 0 |

## II.5 Detailed As-Is Process Actions

##### 1. Open Nasdaq website https://www.nasdaq.com/market-activity

|  |
| --- |
|  |
| image |

##### Read all the data from the table ‘Most Advanced + Declined’

#### Search each stock using Symbol in the ‘Find a Symbol’

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

##### Navigate to Historical Quotes

|  |
| --- |
|  |
| image |

##### Click on the 6M data

|  |
| --- |
|  |
| image |

##### Download the Report from DOWNLOAD DATA

|  |
| --- |
|  |
| image |

#### Open the downloaded csv file

##### Date format should be DD/MM/YYY, Difference: the difference between the High and Low Columns, Volume Indicator: if the volume is under 20,000,000 this column should be ‘Low’. Over 20,000,000 this value should be ‘High’

|  |
| --- |
|  |
| image |

##### Extract the Key data table & send in the email body

|  |
| --- |
|  |
| image |

## II.6 Exceptions Handling

* Please handle the non-existing stock symbol that was created in the dispatcher as a Business rule exception and email a configurable user’s email with the notification.
* In the Key Data, if there is no Market Cap value (i.e. it is ‘N/A’) please treat this as a System Exception.
* Please handle any other System or business exceptions you see fit.
* Goggle chrome is not responsive & unexpected pop-up, please treat this as a System Exception.
* Ms Excel is not responding, please treat this as a System Exception.
* Invalid email ids will not received an email from bot.

# 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 soon 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:

1. Every step mentioned can be automated via RPA Tools.

## 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 |
|  | NA |  |  |  |

\*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 |
| Non-existing stock symbol that was created in the dispatcher |  |

### 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 |
|  |  |  |  |  |

### 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 |
| Goggle Chrome | Site is down or not responding |  |
| Excel | Excel is not opening or responding |  |

### 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 / Internal Server Error | Any action | Error message | 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:

## III.7 Reporting

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Report type | Update frequency | Details | Monitoring Tool to visualise the data |
| 1 | Process logs | Daily | How many times was this process run since the beginning of the month and what was the average run duration? | Kibana |
| 2 | Process logs | Monthly | How many robots worked on this process per each month? | Csv file posted daily on share drive |
| 3 | Transaction logs | Daily | How many transactions were run by this process since the beginning of the month and what was the average transaction duration? | Kibana |
| 4 | Error logs | Daily | Average number of errors by type per day | Kibana |
| 5 | Error logs | Daily | All errors per month grouped by type | Csv file posted daily on drive |

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

# 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) | ACME-System1-Process-WI5-Manual-Walkthrough | Insert any relevant comments |
| Standard Operating Procedure (s) (Optional) |  | 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 |

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