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DATA EXTRACTION MADE EASY USING RE-FRAMEWORK

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ABSTRACT

Within digital transformation, which is continuously growing, robotic process automation (RPA) is gaining much more corporate attention. While RPA is a Software Technology that Automates, deploys, and coordinates robots to do things that are insisted according to a set of rules. Conducting a literature review and tool analysis, I categorized specific information to adopt into my project for better implementation of the process. Software robots start to Automate processes similar to those originally performed by human work. So here is the process of my project which is gone through thoroughly and is functioned such that it automates client's information from mail and then implements the key modules specified to the software Robots using UiPath Studio, all this work done by a robot is the ease of use, more efficient and adaptability allow companies to conceive and implement software robots through (agile) projects. Governance structures, Organizational and IT strategies, therefore, must address the Main benefit of RPA is cost reduction without compromising on the quality of productivity. RPA seems the future of growing business organizations.

Keywords: RPA, Automation, Artificial Intelligence, Accounting, Robotics.

I. INTRODUCTION

Robotic Process Automation (RPA) is a software technology that handles robots such as attended and unattended robots that install and create in the same way that humans do by engaging with digital systems and software.

RPA solutions for retail banking, wealth management, corporate banking, and other bank services are more likely to aid banks and other financial organizations when it comes to consumer engagement.

Robots here execute tasks like those performed by humans, including understanding information on a screen, identifying, and retrieving information, and executing a variety of other tasks. Robotic process automation (RPA) aims to replace human intervention, which comes with the risk of errors and time loss that it entails, with robots.

Here in My project, I mainly focus on accounting and finance sectors where reporting of various information which might be formal or informal can be done easily using RPA specified with UiPath studio using Re-Framework, which in turn has various steps of integration such as initialization state which runs first time when the robot is triggered, Get Transaction data were every time the robot moves after initialization state.

Following with this later robot moves through the process transaction, where we can say that this state acts as a heart of entire Robotic Enterprise Framework. Now the file's extracted can be passed in the form of data rows so that it makes easy for a transaction to run smooth.

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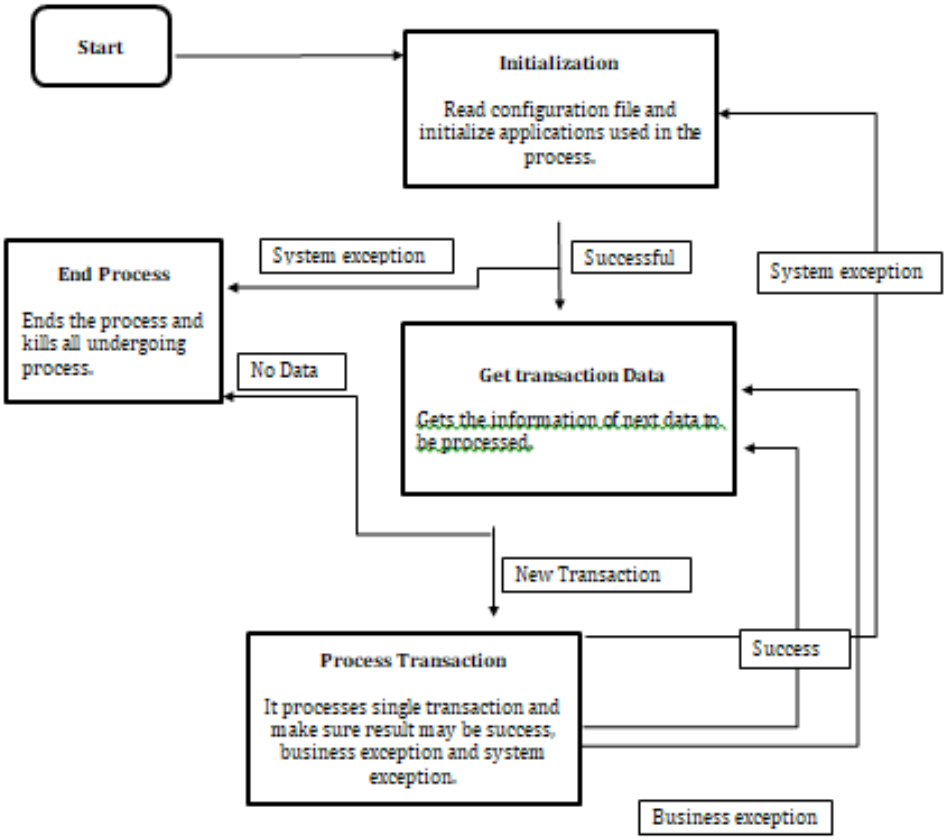
Overall Design of Re-framework:



II. METHODOLOGY

Process Overview:

In Data extraction, Robot intends to perform desired actions to work efficiently and helps the accounting staff to make the complex process better with no longer waste of time as mentioned in detail below.

Action 1: create a dynamic folder using UiPath Activity.

Firstly, the input Pdf file is now sent to an extraction process after business segregation, and the robot here takes the input Pdf File and stores it inside a dynamically created Folder with FolderName_PresentDate similarly to the screenshot below.

Name	Date modified	Type	Size
InputPDFS_06May2022	16-05-2022 14:38	File folder	
InputPDFS_24May2022	24-05-2022 15:38	File folder	

Action 2: Excel files with encrypted details are created and given as input for encrypted PDF.

The file which is stored in the previous step under a specific folder is given as input to this step where the password for encrypted files is given as input by a dynamically created excel file.

ClientName	Password
Goutham C m	Goutham!123

Action 3: Data Extraction Using String Manipulation.

Firstly, the pdf file is converted to the normal notepad text file and then that text file is stored inside a variable and this variable is now used to further extract data.

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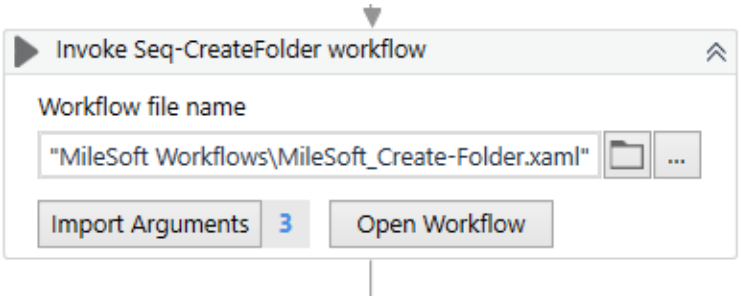
Following the robot uses the variable where all data is stored and manipulates it into a single Array which stores all information inside that variable as elements inside the same array. According to a set of rules and conditions specified to the robot, it Extracts the desired output columns and stores them inside a specific dynamically created excel file and gives it as an output of extracted file as shown below. {**Similar things can be extracted**}

	A	B	C
1	**ClientName**	**Client Code**	**Domain**
2	Goutham C M	BCC156	RPA & AI
3			
4			
5			

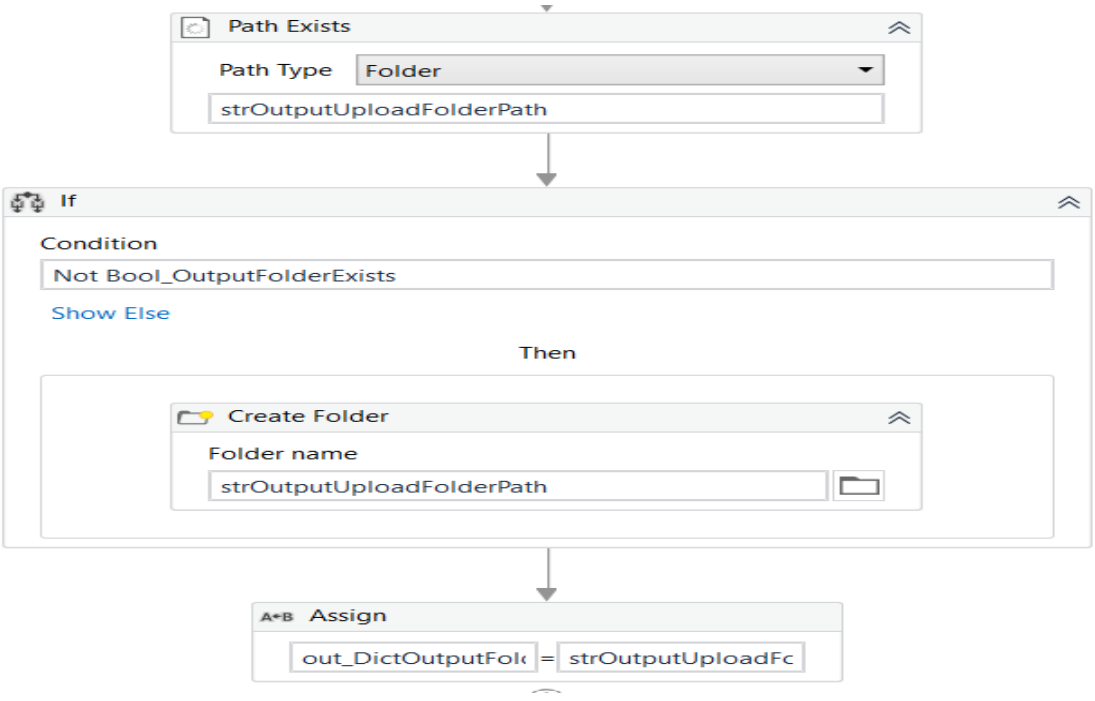
III. INTEGRATION OF DATA EXTRACTION USING RPA

1. Initialization state:

In the initialization state of the framework, the sequence which is set up and connected inside this run exactly only once, so here I have built the "Create Dynamic folder" workflow so that it creates a folder with Present Date format and the client name, and this pdf is in an encrypted format so we need to give a password for this encrypted pdf file in the form of another excel sheet which will be more effective so that whenever we deal with more clients or other client names in the dynamic way it will be very easy to build upon.



Checks for Path Exists and creates only if there is no folder already present



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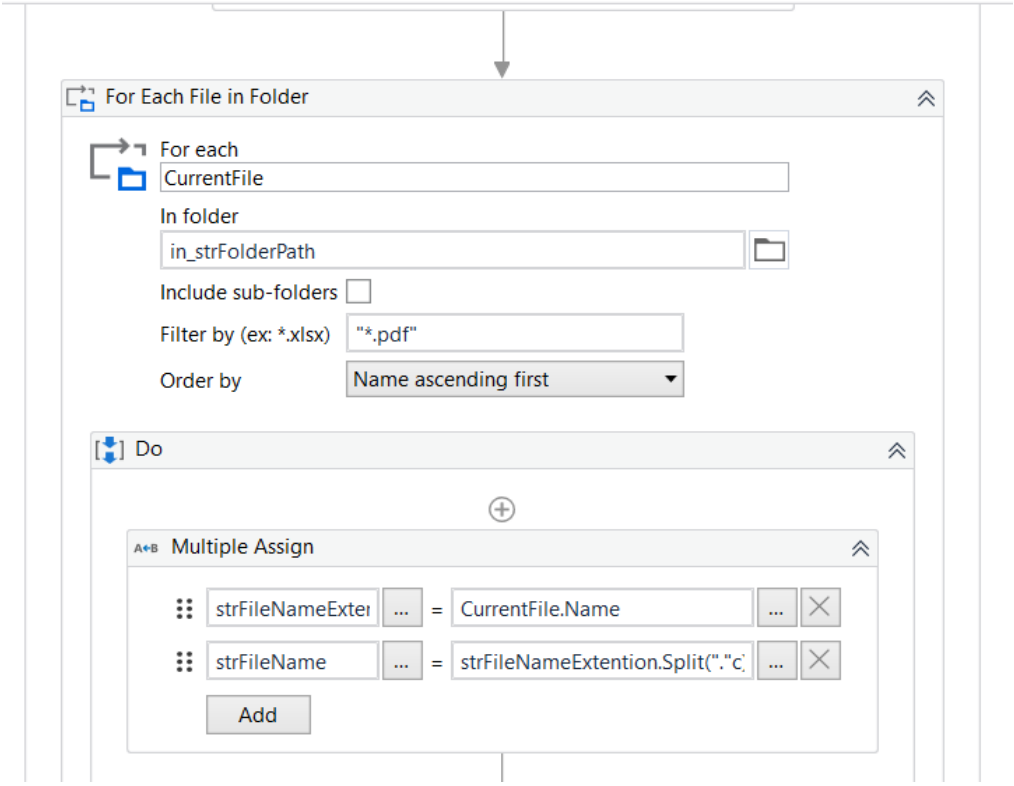
2. Get Transaction Data State:

Here is all the information from the credential excel file such as client name, client Pdf Path, and Password is stored and given as an input to this state from the previous state, and here all these each row from excel sheet are stored in the form of Data Rows and each row at a time is sent to **Process Transaction**.

3. Process Transaction State:

In process Transaction, each row is taken as input from getting transaction data state, and then robot verifies whether the name of the client is same as input and then takes password from that row and gives it to a variable later the pdf file is opened dynamically by inputting the password which changes every time along with the pdf changing every time.

Further, the necessary fields such as Example **Client Name, Client Code, and Domain** is extracted from pdf and made as an excel sheet and stores all this information under data table and finally writes it to an excel file as output and makes simple using Re-Framework. {**Similarly, like snapshot below**}



Here the Multiple Assign statement can be replaced with the necessary information and conditions according to one's requirement where this is only given as sample information.

Benefits of RPA in Accounting:

- Standardization of Processes with Efficiency gains and reduced cost.
- Knowledge about Human Resource Utilization and Reliability of Tools in UiPath.
- Reduce Risk of Fraud, Compliance, and History of Audit Methods.
- RPA makes Customer data Maintenance, Portfolios, funds in accounts, data entry, and payment processing automated with clear Analysis.
- Minimize expenditure on budget, human resources, intelligence, efficiency, and quality in the accounting Sectors.

IV. CONCLUSION

RPA has the ability to reduce human-caused errors while also increasing productivity and helping to create an optimal workplace. Repetitive human activity can also be completed more quickly and effectively, allowing humans to focus on more human-centric tasks such as logic, judgement, and emotional intelligence. We may

face some resistance and obstacles when adopting an RPA solution. RPA deployment in businesses provides an efficient way for employees to perform more value-added tasks. Employee and consumer satisfaction both rise because of this. Robotic Process Automation can be simply introduced, and early processes can be automated fast due to the challenging integration into the existing system environment. As a result, it's an excellent way to address the topic of digitalization.

V. REFERENCES

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