

E-Commerce Data Manipulation using RPA

Lanitha B¹,Swathika.G²,Yeesha Sharookhan.S³,Sridhar.R⁴

¹Assistant Professor, Department of Computer Science, KGiSL Institute of Technology

^{2,3,4}UG Scholar/CSE, KGiSL Institute of Technology, Coimbatore, India

Abstract E-commerce data manipulation using RPA is an automation project that will produce the various book details to clients via e-mail. When we search for a particular book using ISBN number in any e-commerce website, the result is not ready for consumption and is not clearly formatted. ISBN refers to International Standard Book Number. This project reduces the time and effort required to drill down the relevant book Information and collates the automated results in excel which is easy to consume, visualize and understand by the clients. Our product will get the information details from the customer and then it will be processed then the product will automate those information's then it will fetch the details about the information and send to the customers. The information from the customer will be in the form of excel or PDF from the mail. We are going to automate the mail from the customer and then the product will fetch all the information's from the amazon.in website. This product is efficient for the large amount of data manipulation. The initial data which is not in documented form can be converted to Business file and can be exported via mail to required customer. The results of the E-Commerce search using RPA are in well documented format.

Keywords: data manipulation, International Standard Book Number, E-commerce, RPA, consumption, reduces the time well documented format, efficient.

I. INTRODUCTION

Amazon services is the top and No.1 reselling E-commerce website they has extracted millions of users to buy and get their information about the products and between the people and customers knowledge from the information provided in the amazon website, [2] as they offer large volumes of real time data, with around 310 Millions of active customers. They offered users not only a global shopping experience but many value-added services. Personally, the customers may not know the detailed information about the products they may get used with that website. For this, the customers must be able to understand the full information about the product and then only they can get efficient details. Now a days the customers will not able get the information about the details easily Its too complicate to access and get all the information's for the large amount of data manipulation. Our product will get the information from the customer in the form of ISBN number and it will be send through the E-mail via excel or PDF.

Then our product will starts the web scarping and extraction about the required information given by the customer and also we'll create an automation that will extract the titles, links and prices of the items and save it in a CSV file through a spreadsheet. Web data extraction automation out of multiple web pages works in few minutes by making just a few simple steps to define web extraction patterns and it will be stored in CSV files. Our product will get the information from the customer and then it will automate those information from the E-mail and it can automatically fetch to the amazon website and it can automatically log in to a web site then it will search all the information's about the ISBN number. Then it will generate the Business File Report and automatically file will be transfer via E-mail.

For example, in fig 1, in this example, the relation between the orchestrator and robot will give the publish number then the robot will check the publish number and it will pass to the studio and then the studio will send the machine key to the robot. Then the robot will generate the package and sends to the orchestrator.

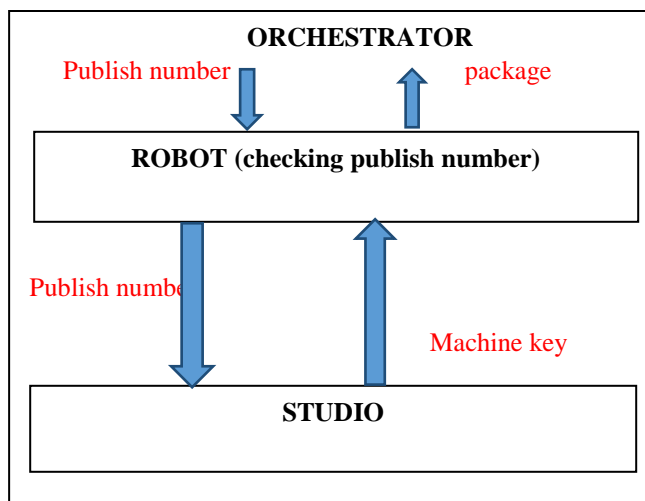


Figure 1

II. RELATED WORK

A literature review is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources, and do not report new or original experimental work. In Robotic Process Automation (RPA) is the use of software with capabilities to handle high-volume, repeatable tasks that previously required a human to perform. It aims to use a computer to manipulate existing application software in the same way that a person works with those systems and the presentation layer to perform a specific task. This technology increases the productivity for human employees who no longer are tasked with boring work. In the proposed system, we present Anna University Mark list automation and Result Analysis the PDF will get converted into Excel Sheet. The next step will be the Data Filtering where the excel sheets for separate departments are generated and the later comes the class-wise. After manipulating all the result analysis is done and it will generate a report. Then it will send the mail to the corresponding class advisors and the Head of the Department.

III. LINK AMAZON BY ISBN LIBAPP

In the Link Amazon by ISBN LibApp, There is a Link Barnes and Noble by ISBN LibApp that searches for the item's by searching of the ISBN number and displays a initial information and stores the data to the Barnes and Noble item's page that will link the user to a search for the required item based on users ISBN number. The Virginia Tech badge displayed to the right of the item's image and details.

When the user clicks on the start, the user is led to a search page for that item which has been given to search for the related items and it will be conducted based on the item's ISBN. However, the cue will appear regardless of whether your library owns this item or not – for most editions, LibX is unable to check the catalog before display the item. The Virginia Tech Edition was used, and its primary catalog is Summon.

IV. SYSTEM ARCHITECTURE

Initially the product results published manually by other systems may at tend to contain any errors and fault data whereas the results of E-Commerce search using RPA are in well documented format and the time consumption for this process is dramatically reduced with lesser man power support. The automated results as a result of RPA can be produced in excel format or pdf format which is easy to visualize and could be understood easily by the users. As a result of using the RPA systems the computational errors and mistakes are minimized and a well-documented data can be produced. All the data's will be send automatically to the customer in well documented form.

Apart from the previous mentioned techniques some of the other techniques involved in the paper are described below:-

- **Mail automation:**

The mail will get the details from the customer that will be automated using UiPath which will be directly processed.

- **Excel automation:**

In this the excel automation is mainly automate the excel details given from the customers.

- **PDF automation:**

The PDF automation will get the information of details from the customer and then it will directly send the product then all the information's will be processed

- **WEB automation:**

Web Automation used to built-in recorder and that can read and make web-based activities. It identifies web elements by their properties and it will collect all the data's and it will manipulates them while keeping up with website changes. By automating web-based workflows you save time and money.

A Data Flow Diagram is a graphical technique that depicts information flow and transforms that are applied as data move from input to output. The DFD is used to represent increasing information flow and functional details. A level 0 DFD represents the entire software elements as a bubble with input and output indicated by incoming and outgoing arrows respectively. Additional process and information flow parts are represented in the next level. Each of the processes represented at Level 1 are sub functions of overall system depicted in the Context Model. Any processes, which are complex in Level 1, will be further represented into sub functions in the next Level, i.e., in level 2.

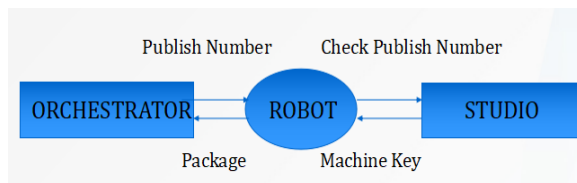


Fig 2 DFD Level 0

The users of the E-commerce data manipulation bot are clients and developers. The output of the system is reported in the form of business file such as excel sheet. The users store and retrieve data from the business file.

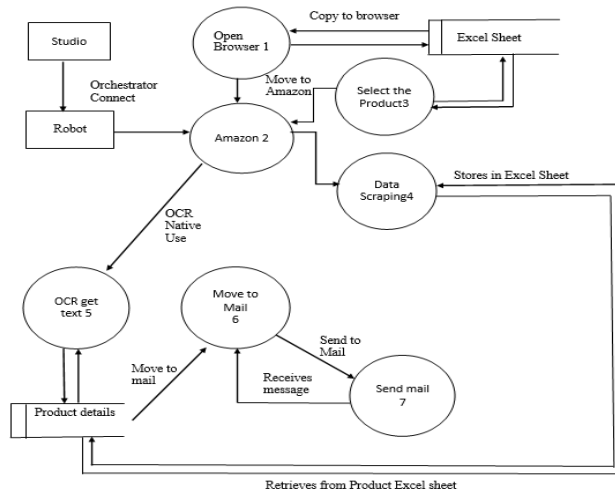


Fig. 3 DFD LEVEL 0

An output is one, which meets the requirements of the end user and offers the information clearly. In any system, the outcome of processing are sent to the end users and to other system as outputs. In output design it is resolute how the information is to be evacuated for immediate need and also the hard copy output. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system's relationship to help user to make any decision.

V. DEVELOPMENT APPROACH

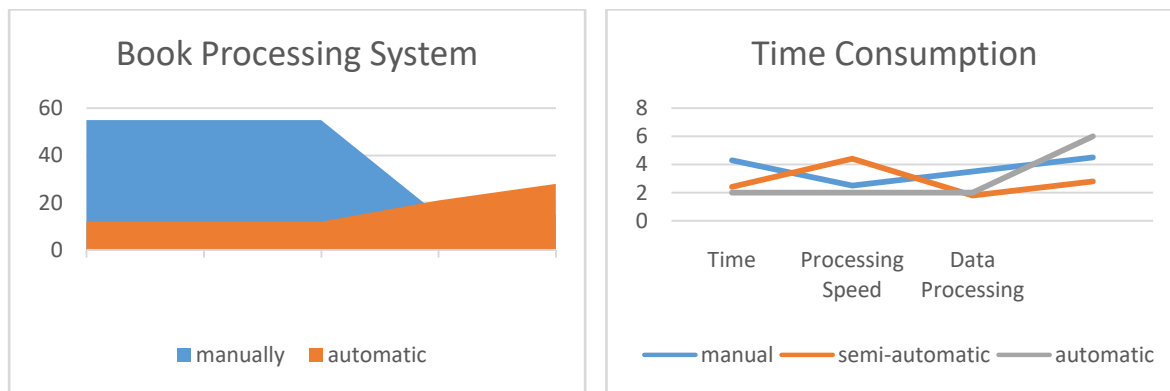
UiPath studio conversion was designed and developed based on the Waterfall Model. This model particularly expresses the interaction between subsequent phases.

Testing Uipath is not an activity, which strictly follows the implementation phase. In each phase of the Uipath development process, we have to compare the results obtained against that which is required. In all phases quality has to be assessed and controlled.

VI. PERFORMANCE EVALUATION

The capability of the computer depends on the performance of the software. The software can take any number of input provided the file size is large enough. This would depend on the available memory space.

The system specification is produced from the detailed definitions. This document should clearly define the product function.



VII. CONCLUSION AND FUTURE DIRECTIONS

The main aim of this paper is to provide how to automate the manual process of data search using the ISBN numbers of various books in an E-Commerce website such as Amazon. **Robotic process automation (RPA)** is the use of software with artificial intelligence (AI) and machine learning capabilities to handle high-volume, repeatable tasks that previously required humans to perform. Software named as “robot” captures and interprets the customer requirements and initiates operations across multiple digital systems. These software bots which perform these activities can also be termed as virtual or digital workforce in today's work environment. Results of the project highlight that factors such as security, privacy, reliability and usefulness are significant in advancing RPA in the E-commerce websites. This can be helpful for the users to get the information's easily.

REFERENCES

- [1]. *Comparative Analysis of E-commerce Professional Employee Needs and University Curriculum Setting*
Lei Zhu ; Wei Zhang, 2012 *International Conference on Management of e-Commerce and e-Government*. Year: 2012
- [2], *A Corporate Integrated Model Combing E-commerce with Internal Management Based on Knowledge Flow*,
Hongtao Zhu ; Shaohua He
2009 *International Conference on Management of e-Commerce and e-Government*, Year: 2009
- [3] *The Application of Artificial Intelligence Techniques for Automatic Synthesis Substation Configuration Files in Accordance with IEC 61850*
A.A. Voloshin ; E.A. Voloshin ; T.G. Busygin. 2018 *International Youth Scientific and Technical Conference Relay Protection and Automation (RPA)*, Year: 2018