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Robotic Process Automation Bot to Compare and Analyze a Product from Different E- commerce Websites

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Abstract: ***Earlier it was easier to differentiate humans from machines and machines from humans but in today's world of digitalization it's no longer a reality. The emerging technologies such as Artificial Intelligence and Automation are making human lives easier. Robotic process automation (RPA) allows people to make a software robot that can do things from any system without human intervention. The RPA technology concept is discussed in this paper in the E-commerce field where it allows users to search for a product from two distinctable websites and makes the users to select the best product in terms of quality.***

Keywords: Automation, Robotic process automation, e-commerce, Artificial Intelligence, Digitalization.

I. INTRODUCTION

The main objective of this work is to create a bot that reduces the manual work by automation process and at the same time reduce the time and effort of a user to decide the best products from different Ecommerce Websites. Automation is the answer of each day task to increase the efficiency and productivity of people. Bots work based on automation. In contrast to humans, bots can work 365 days a year, seven days a week. Robotic process automation mimic the digital tasks performed by the humans. In the modern era and digitalized era, The role of technology is doing repeated, time consuming and frustrating tasks that include hours of human work. In E- commerce , a business builds its website and list the product they sell and deliver. A customer can simply enter the website and search for desired product the buys the goods and services. Now, Robotic process automation can be used to automate the tasks. It can be done by building a RPA bot using UiPath software environment. Ui path designs and develops the robotic software automation software. The advantage of UiPath is maintaining large amount of data and reducing the complex processes. It is easy to use and configure. UiPath components are open to users to make up the client layer. A user can use these components to design and create.

Different tasks that can be automated using the software. Processes are streamlined, efficiencies are discovered, and insights are provided by these tools, which speed up and save money on the road to digital transformation. It minimizes disruption by utilizing existing systems. Here, UiPath is utilized to create RPA bot to evaluate and analyse expenses of gadgets along with its ratings from two distinct notably preferred E-commerce websites to give out readability and guaranteed clearance to a customer about that particular product.

II. RELATED WORK

Neethu V Joy et al [4] (2020) discussed about "Robotic Process Automation role in Education Field". It talks about how RPA was used to get information for the Course Registration, Shortlisting, and Enrollment Process, manage attendance, and send parents and students automated notifications and reports. Students and staff at the institution are required to attend numerous events and meetings, which necessitates updating the schedule, scheduling meetings, making reservations for equipment, and so on. To save time, it is simple to automate sending updates to faculty and students as well as notifying them of meetings and events. Chabots can also help automate general questions from staff members, students, and website visitors, such as the admissions process, contact person, and course information.

Marcu Florentina (2020) [5] discusses about "Web Data Extraction With Robot Process Automation . Study on LINKEDIN Web Scraping Using UiPath studio.The paper discusses using UiPath Studio to extract data from the LinkedIn website. Information about the percentage of IT jobs posted or an overview of supply and demand in the labor market can be gleaned from these data. The information can be used to compare jobs in IT, financial accounting, construction, engineering, and other services.

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Siti Fatimah Abdul Razak et al.[11] (2021) discussed about "RPA-based Bots for Managing Online Learning Materials" utilizing UiPath to create and integrate RPA-based bots that may enhance student learning experiences. Instead of using instructions based on code, the RPA-based bots are trained to interact with the LMS and centralized learning materials in the same way that a student would. In addition, the bots are integrated with test banks to make it easier to obtain relevant exam or test papers from previous years. For students' convenience, all downloaded materials will be automatically managed and arranged in related file folders.
Mohammed Shijas Thekkethil et al.[12] (2021) explains about "Robotic Process Automation in Banking and Finance Sector for Loan Processing and Fraud Detection". It discusses banking operations like the collection of application forms, identification documents, and pre-qualification details. As per details collected by automation, the bank passes the application.
Himanshi Prajapati et al[13] (2021) explains about "Attendance Management System using RPA" . It discusses about using UiPath software to make a software robot. The file path where your Excel sheet is stored will be read by this software robot, which will then extract all of the data written in it. After that, it will carry out each and every calculation, including the percentage, feedback, and total working days, Total Present, Total Absent, and Total Working Days. Using the various activities provided by Ui path software, all of this is accomplished.

III.METHODOLOGY

The approach of the system is to create a Robotic process automation bot to find the best product from the two e-commerce website. This process is initialized by getting product name from the user. The workflow is designed to get the input, web scrap the details of the product entered by the user in two different websites and display the result.

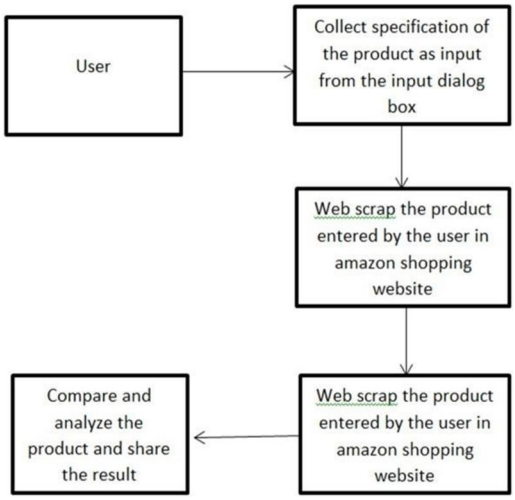


Fig. 3.1 Flow diagram of system model

IV.SYSTEM IMPLEMENTATION

The system has the following four modules:

1) Getting input from the customer to evaluate and analyze the products from two distinct notably preferred.
2) Amazon shopping website Web Scraping using Ui path Studio.
3) Flipkart shopping website Web Scraping using Ui path Studio.
4) Decision making based on analysis done by web scraping tool

A. Getting Input From The Customer To Evaluate And Analyze The Products From Two Distinct Notably Preferred

This module uses INPUT DIALOG activity to get or to receive the required product from the user.

B. Amazon shopping website Web Scraping using Ui path Studio.

The received input from the user will be then preceded to the process. To do so it should use OPEN BROWSER activity and then enter the specific link address of the e-shopping. Then it should teach or train our system by using indicators. This will let bot know that where to go & type out the required product of the customer & also it will let our bot to know about the required details to be displayed by the bot. All these can be done only by training the bot by using INDICATORS.

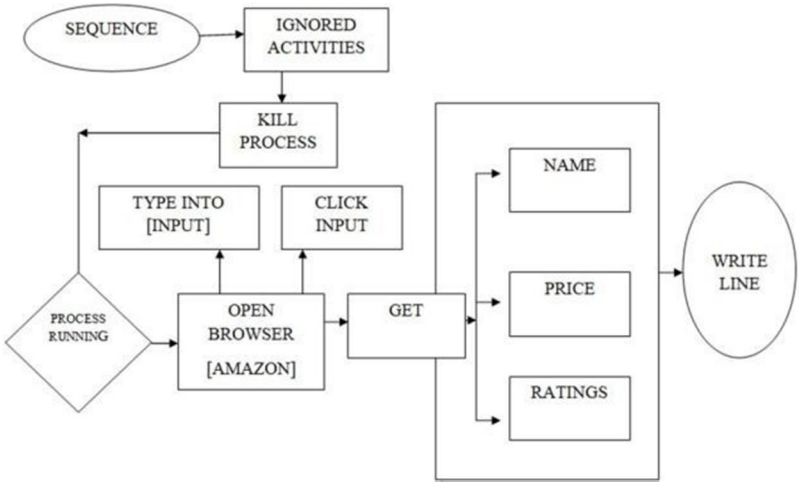


Fig. 4.2 Flow diagram of Amazon shopping website web scraping

C. Flipkart Shopping website Web Scraping using Ui path Studio

This process includes Flip kart SEQUENCE we should give the link address of Flip kart website. Then we should teach or train our system by using indicators. This will let our bot know that where to go & type out the required product of the customer & also it will let our bot to know about the required details to be displayed by the bot. All these can be done only by training the bot by using INDICATORS. This process also includes storing of variables at each step of indications.

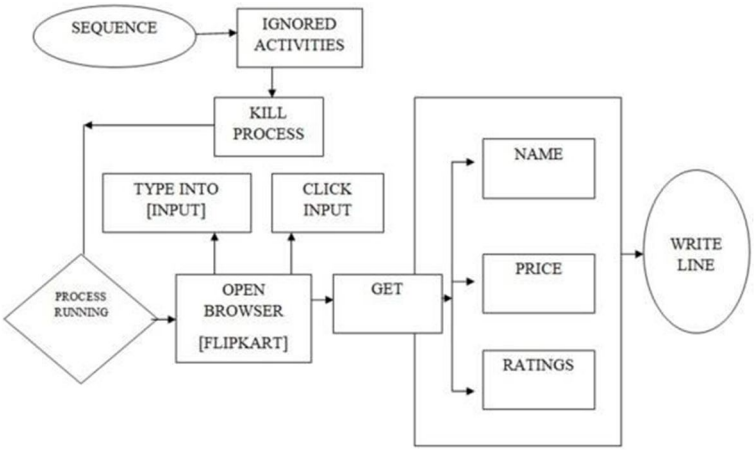


Fig 4.3 Flow diagram of Flipkart shopping website web scraping

D. Decision Making Based on Analysis done by Web Scraping Tool

Here the result from both the websites are been displayed by using the MESSAGE BOX activity**.**

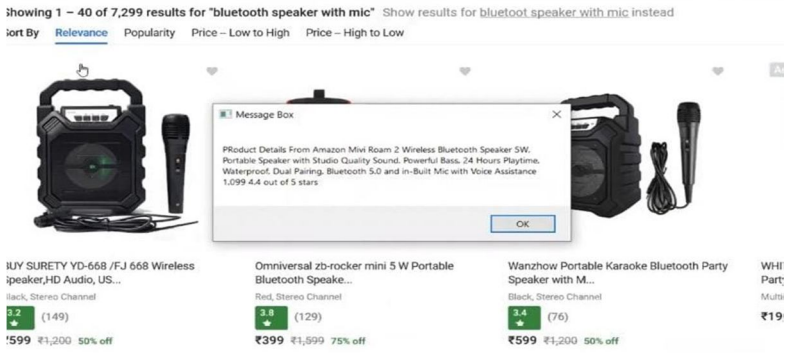


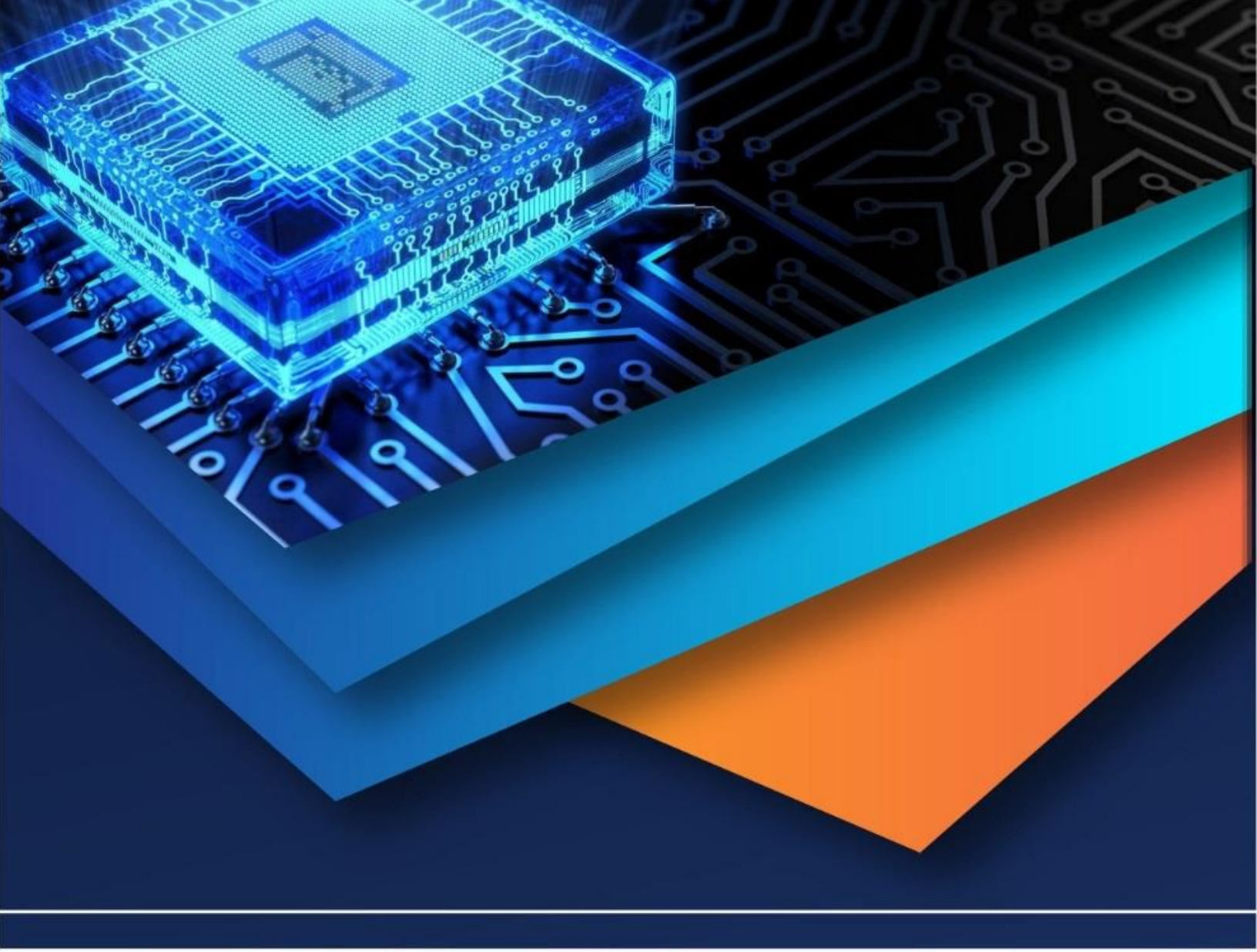
Fig 4.4 Output display for finding the best product from two e-commerce websites

V. CONCLUSION

In conclusion, this proposed work offers a solution to reduce the time taken by users in selecting the product with satisfaction, as more amount of time is taken by user to search about the product details and to compare that product in many known shopping website. In the proposed work, the input given by user will be web scrapped using UiPath studio and the specification of the product will be collected. In this work, the bot is trained using indicators, so that the bot can acknowledge the ratings of the product and compare and give the best product in terms of quality.

REFERENCES

[1] S. Z. Jovanović, J. S. Đurić, and T. V. Šibalija, "Robotic process automation: overview and opportunitie,". International Journal Advanced Quality, (pp. 35 - 39). Belgrade, Serbia: Vol. 46, No. 3- 4, 2018
[2] S. Madakam, R. M. Holmukhe, and D. K. Jaiswal, "The future digital work force: robotic process automation (RPA)," JISTEM-Journal of Information Systems and Technology Management, 16, 2019.
[3] F. Santos, R. Pereira and J. B. Vasconcelos"Toward robotic process automation implementation: an endto-end perspective," Business Process Management Journal, Vol. 26 No. 2, 2019, pp. 405-420.
[4] Neethu V Joy, Sreelakshmi P G,"Robotic Process Automation role in Education Field",nsdarm-2020-volume-8-issue-04,DOI: 10.17577/IJERTCONV8IS04016
[5] . Marcu Florentina, The Bucharest University of Economic Studies, Bucharest, romania,"web data extraction with robot process automation. study on linkedin web scraping using uipath studio", Annals of the Constantin Brancusi" University of Targu Jiu, Engineering Series , No. 1/2020.
[6] C. Vijai, S.M. Suriyalakshmi and M. Elayaraja, "The Future of Robotic Process Automation (RPA) in the Banking Sector for Better Customer Experience", Journal of Commerce, vol. 8, no. 2, pp. 61-65, 2020.
[7] Y. Rizk, V. Isahagian, S. Boag, Y. Khazaeni, M. Unuvar, V. Muthusamy, et al., "A Conversational Digital Assistant for Intelligent Process Automation", International Conference on Business Process Management, pp. 85-100, September 2020.
[8] B. Axmann and H. Harmoko, "Robotic Process Automation: An Overview and Comparison to Other Technology in Industry 4.0," 2020 10th International Conference on Advanced Computer Information Technologies (ACIT), Deggendorf, Germany, 2020, pp. 559-562, doi: 10.1109/ACIT49673.2020.9208907..
[9] O. Doguc "Robot Process Automation (RPA) and Its Future" 2020 .
[10] J. G. Enr´ıquez, A. Jime´nez-Ram´ırez, F.J. Dom´ınguez-Mayo and J. A. Garc´ıaGarc´ıa "Robotic Process Automation: A Scientific and Industrial Systematic Mapping Study," in IEEE Access, vol. 8, pp. 39113-39129, 2020, doi: 10.1109/ACCESS.2020.2974934
[11] Siti Fatimah Abdul Razak, Faizuniza Mashhod ,Zulfadhli Najmi Bin Zaiden, Sumendra Yogarayan,"RPA-based Bots for Managing Online Learning Materials", 9th International Conference on Information and Communication Technology (ICoICT),2021.
[12] Mohammed Shijas Thekkethil,Vinod Kumar Shukla,Fatima Beena, Ashok Chopra, Robotic Process Automation in Banking and Finance Sector for Loan Processing and Fraud Detection, 9th International Conference on Information and Communication Technology (ICoICT),2021.
[13] Himanshi Prajapati, Akshata Rane, Kavita Vanve, Amruta Chintawar,"Attendance Management System using RPA", 2021 JETIR October 2021, Volume 8, Issue 10.
[14] S. Aguirre and A. Rodriguez, "Automation of a business process using Robotic Process Automation (RPA): a case study. In Applied Computer Sciences in Engineering, 2022 (pp. 65-71). Springer International Publishing AG, DOI: 10.1007/978-3-319-66963- 2_7
[15] R. Mehta and R. Chaher, "Implementation of Robotic Process Automation (RPA) in Digital Marketing," 2022 3rd International Conference for Emerging Technology (INCET), Belgaum, India, 2022, pp. 1-4, doi: 10.1109/INCET54531.2022.9824263



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