VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

AN INTERNSHIP REPORT ON

ROBOTIC PROCESS AUTOMATION

RAKSHA SIDDESH G 4AL21CG044

ALVA'S Education Foundation

DEPARTMENT OF COMPUTER SCIENCE AND DESIGN

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

MOODBIDRI-574225, KARNATAKA 2022 – 2023

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CERTIFICATE

This is to certify that **RAKSHA SIDDESH G** bearing USN **4AL21CG044** has successfully completed **ROBOTIC PROCESS AUTOMATION** internship and submitted a report during the academic year 2022– 23 odd Semester. It is certified that all corrections/suggestions indicated in the presentation session have been incorporated into the report & scored 92 Marks out of 100 and deposited in the departmental library.

Internship Co-ordinator

Dept of CSD,AIET

HOD

Dept of CSD,AIET

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany a successful completion of any task would be incomplete without the mention of people who made it possible. Success is the epitome of hard work and perseverance, but steadfast of all is encouraging guidance.

So, with gratitude we acknowledge all those whose guidance and encouragement served as beacon of light and crowned the effort with success.

We thank our Subject Faculty, **Mr.Sharan Lional Pais**, Assistant Professor in the Department of Computer Science & Engineering, who has been our source of inspiration. He has been especially enthusiastic in giving his valuable guidance and critical reviews.

We sincerely thank **Mr.Venugopal Rao**, Professor and Head of the Department of Computer Science & Design who has been the constant driving force behind the completion of the group task.

We thank our beloved Principal, **Dr.Peter Fernandes,** for his constant help and support throughout.

We are indebted to the **Management of Alva's Institute of Engineering and Technology, Mijar, Moodbidri** for providing an environment that helped us in completing our internship.

Also, we thank all the teaching and non-teaching staff of the Department of Computer Science & Engineering for the help rendered.

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Chapter 1

INTRODUCTION

Robotic Process Automation (RPA) is a technology that uses software robots or bots to automate repetitive, rule-based tasks that were previously performed by humans. RPA can be used to automate a wide range of tasks, including data entry, data processing, customer service, and financial analysis. RPA bots can interact with multiple systems and applications, just like a human worker would. They can read and process information from different types of documents, such as invoices, receipts, and emails, and then enter the data into the relevant systems.

RPA has become increasingly popular in recent years, as organizations look for ways to increase efficiency, reduce costs, and improve accuracy in their business processes. By automating routine tasks, RPA frees up employees to focus on more complex and strategic work, and can help organizations achieve greater productivity and competitiveness. RPA is a powerful tool that enables businesses to automate repetitive and mundane tasks, while reducing the risk of errors and improving efficiency.

Robotic Process Automation (RPA) is a type of software that enables businesses to automate repetitive, rule-based tasks that were previously performed by humans. RPA technology is designed to mimic the actions of a human worker, interacting with multiple systems and applications to perform tasks such as data entry, data processing, customer service, and financial analysis.

The primary goal of RPA is to increase efficiency, reduce costs, and improve accuracy in business processes. By automating repetitive tasks, RPA frees up employees to focus on more complex and strategic work, and can help organizations achieve greater productivity and competitiveness.

RPA software is typically designed to be easy to use and implement, even for non-technical users. Many RPA tools use a drag-and-drop interface, allowing users to create automated workflows without needing to write complex code. This ease of use makes RPA accessible to a wide range of businesses, from small startups to large enterprises.

RPA is also flexible, and can be customized to fit the needs of specific business processes. RPA tools can be configured to work with different types of documents, such as invoices, receipts, and emails, and can be integrated with other systems and applications.

Overall, RPA is a powerful tool that enables businesses to automate repetitive and mundane tasks, while reducing the risk of errors and improving efficiency. As more and more businesses adopt RPA, it is becoming an essential technology for organizations looking to stay competitive in today's fast-paced business environment.

Chapter 2

TYPES OF RPA

There are various types of Robotic Process Automation (RPA) and automation, each with its own specific application and benefits. Here are some common types:

- Rule-based automation: This type of RPA involves automating repetitive, rules-based tasks such as data entry, form filling, and simple decision-making. Rule-based automation uses pre-programmed rules and decision trees to automate these tasks.
- Knowledge-based automation: This type of RPA involves automating more complex tasks that require some level of knowledge or decision-making. Knowledge-based automation uses artificial intelligence and machine learning to automate tasks that involve data analysis, natural language processing, and decision-making based on complex algorithms.
- Screen scraping: This type of RPA involves automating tasks that require extracting data from applications and websites that do not have an API or other integration method. Screen scraping can be used to automate tasks such as web form filling and data extraction from legacy systems.
- Workflow automation: This type of RPA involves automating entire workflows, including tasks performed by multiple people and systems. Workflow automation can be used to streamline complex business processes, such as supply chain management, order processing, and customer service.
- Cognitive automation: This type of RPA involves automating tasks that require cognitive skills such as problem-solving, decision-making, and language understanding. Cognitive automation can be used to automate tasks such as customer service, fraud detection, and financial analysis.
- Integration automation: This type of RPA involves automating tasks that require integration between multiple systems and applications. Integration automation can be used to automate tasks such as data transfer, file sharing, and database synchronization.

RPA and automation has its own unique features and benefits, and can be applied to different tasks and functions depending on the specific needs of the organization.

Figure 2.1 Types of RPA

Chapter 3

ADVANTAGES

Robotic Process Automation (RPA) offers several advantages to businesses that implement it. Here are some of the key benefits of RPA:

- Increased Efficiency: RPA automates repetitive, rule-based tasks, which can be completed faster and with fewer errors than a human worker. This leads to greater efficiency in business processes, freeing up employees to focus on more complex and strategic work.
- Improved Accuracy: Because RPA is based on rules and logic, it is highly accurate and consistent in its work. This reduces the risk of errors and improves the quality of work output.
- Cost Savings: By automating tasks that were previously performed by humans, RPA can significantly reduce labor costs for businesses. Additionally, RPA tools are typically less expensive than traditional software development, making it an affordable solution for businesses of all sizes.
- Flexibility: RPA can be customized to fit the needs of specific business processes, making it a flexible solution for a wide range of industries and use cases
- .Scalability: RPA can be easily scaled up or down depending on the needs of the business. This means that businesses can start small with RPA and gradually expand its use as they see the benefits.
- Improved Compliance: RPA can help businesses comply with regulatory requirements by automating compliance-related tasks such as data entry and auditing.

RPA offers a powerful way for businesses to improve efficiency, reduce costs, and stay competitive in today's fast-paced business environment. By automating repetitive tasks, RPA frees up employees to focus on more strategic work, which can lead to increased innovation and growth for the business.

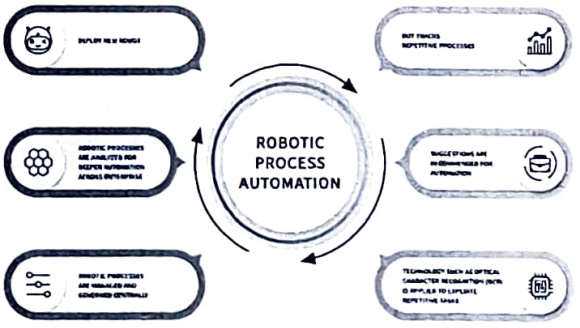

Figure 3.1 Advantages of RPA

Chapter 4

DISADVANTAGES

While Robotic Process Automation (RPA) and automation can bring many benefits to businesses, there are also several potential disadvantages that should be considered. Some of these disadvantages include:

- High initial costs: Implementing RPA and automation can be expensive, especially in the short term. There are costs associated with the technology itself, as well as training and development.
- Technical complexity: Implementing RPA and automation requires technical expertise, which can be challenging for businesses that don't have a dedicated IT team.
- Job displacement: RPA and automation can eliminate some jobs that were previously performed by humans, which can cause job displacement and impact the workforce.
- Lack of flexibility: Some RPA and automation solutions can be rigid and inflexible, which can limit their effectiveness in certain situations.
- Potential for errors: Although RPA and automation can reduce errors caused by human error, they can also introduce new errors if not implemented properly.
- Security risks: RPA and automation can create security risks, especially if sensitive data is involved. Proper security measures must be put in place to prevent data breaches and cyber attacks.
- Lack of personal touch: RPA and automation can reduce the human touch in customer interactions, which can impact customer satisfaction.

Businesses need to carefully consider the potential drawbacks of RPA and automation before implementing them. It's important to weigh the costs and benefits to determine whether RPA and automation are the right solutions for their specific needs.

Figure 4.2 Disadvantages of RPA

Chapter 5

APPLICATION

Robotic Process Automation (RPA) and automation have a wide range of applications across industries and business functions. Some common applications include:

- Data entry and processing: RPA can automate repetitive tasks such as data entry and processing, which can save time and reduce errors.
- Customer service: RPA can be used to automate customer service tasks such as responding to frequently asked questions or routing customer inquiries to the appropriate department.
- Finance and accounting: RPA can automate tasks such as invoice processing, account reconciliation, and financial reporting, which can reduce errors and improve efficiency.
- Human resources: RPA can automate tasks such as employee onboarding, benefits enrolment, and performance evaluations, which can improve accuracy and reduce administrative burden.
- Supply chain management: RPA can automate tasks such as order processing, inventory management, and shipping and receiving, which can improve efficiency and reduce costs.
- Healthcare: RPA can be used to automate tasks such as appointment scheduling, patient registration, and medical coding, which can reduce errors and improve patient care.
- Manufacturing: RPA can automate tasks such as quality control, assembly line monitoring, and inventory management, which can improve efficiency and reduce costs.

RPA and automation can be applied to a wide range of tasks and functions, and can benefit organizations in many ways including increased efficiency, reduced errors, and improved customer and employee satisfied

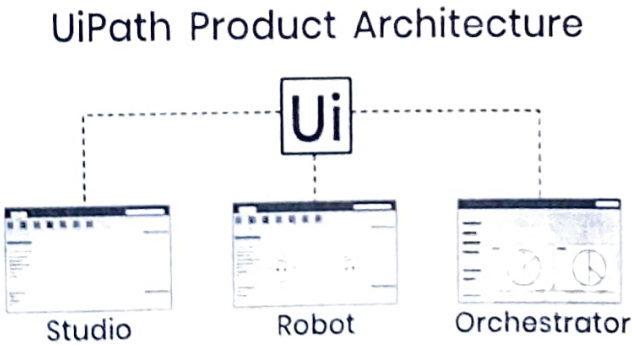

Figure 5.1 Application of RPA

HAND ON TASK DURING THE INTERNSHIP

Robotic Process Automation (RPA) and automation can be valuable topics of study for students across various disciplines, including computer science, engineering, business, and management. Here are some key things that I learnt from studying RPA and automation:

TASK 1: Structure of attended and unattended RPA Ui studio software where studio is community and studiox is entrepreneur edition of basic instruction required for the follow chart design in Ui studio

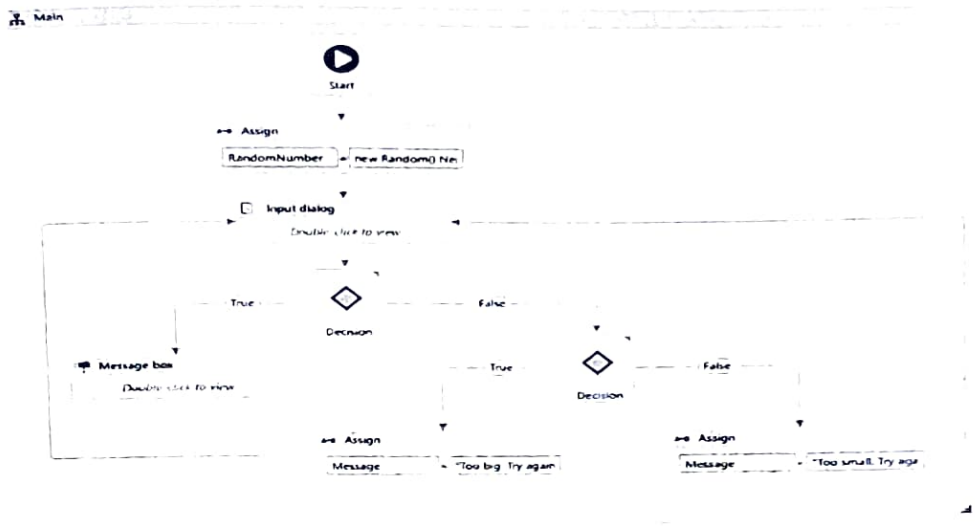

Figure 6.1 Flow chart design in Ui studio

TASK 2: Introduction of sequence, classic activity and array element addition , array operation , factorial of given numbers covered courses about variable and Ui path , academy declaration of array

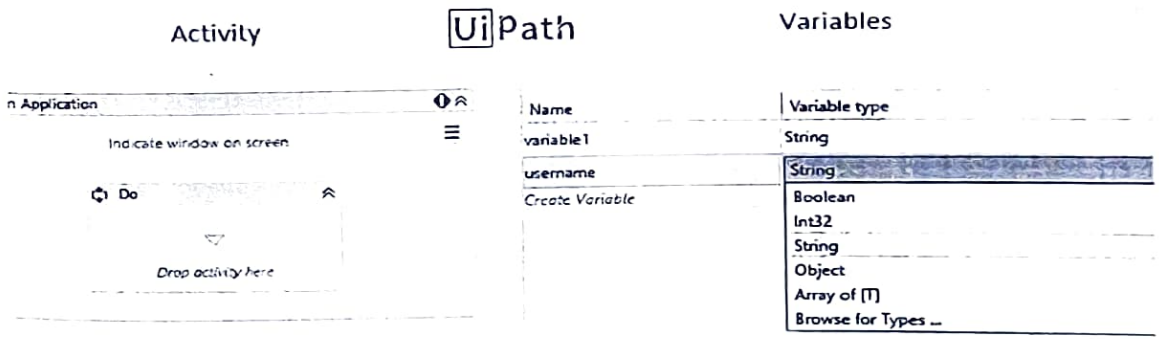

Figure 6.2 Variable creation in Ui path

TASK 3: Entering student details in excel using Ui path (USN , email , name) creating data table with student data

- Automation in excel
- Defining arguments and variables

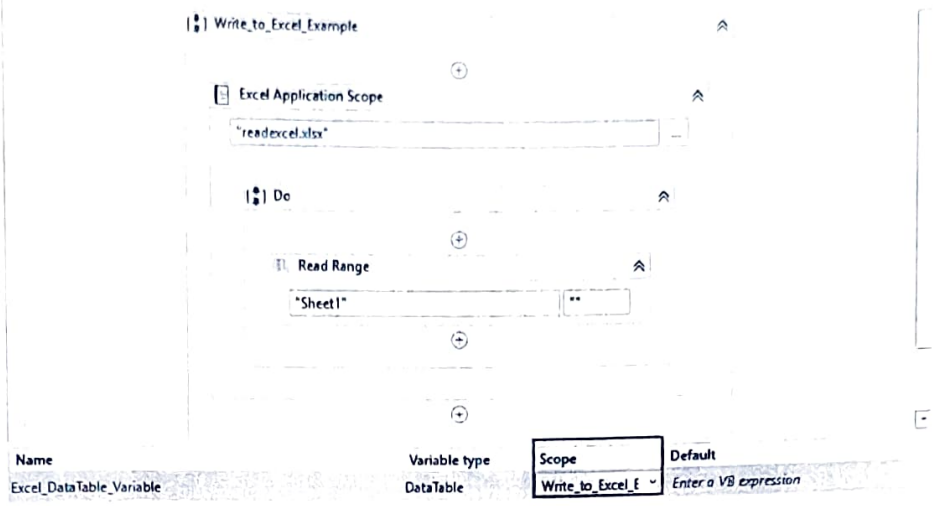

Figure 6.3 Excel using Ui path

TASK 4 : Our next task was to read the value from excel to data table given in the google form using open browser

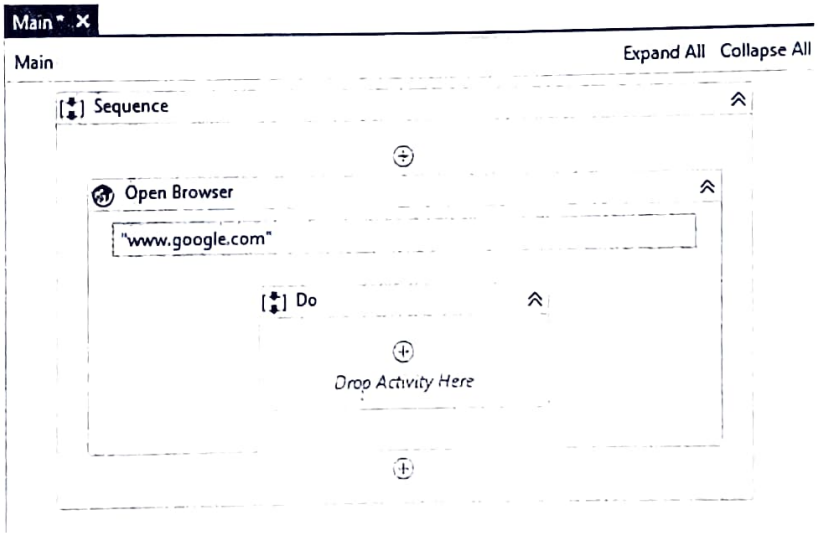

Figure 6.4 Google form using open browser

TASK 5 : Extracting the entire table values to a excel file using different activity and filing values in the download excel form and displaying the message by Ui path studio.

Chapter 7

CONLUSION

Robotic Process Automation (RPA) and automation have revolutionized the way businesses operate by enabling the automation of repetitive and rule-based tasks. By automating these tasks, organizations can improve efficiency, reduce errors, and free up time for employees to focus on higher-value tasks.RPA and automation have a wide range of applications across industries and business functions, including data entry and processing, customer service, finance and accounting, human resources, supply chain management, healthcare, and manufacturing. They can be applied to tasks of varying complexity, from simple data entry to complex decision-making based on artificial intelligence and machine learning. By studying RPA and automation, students can develop a wide range of technical and business skills, including programming, data analysis, process analysis, project management, ethics, and creativity. These skills can be valuable in many different fields and industries.

In conclusion, RPA and automation have transformed the way businesses operate, and their applications are only expected to grow in the coming years. By embracing these technologies and investing in training and education, organizations can stay ahead of the curve and reap the benefits of increased efficiency, reduced costs, and improved customer and employee satisfaction.