AUTOMATED SALES PERFORMANCE TRACKER

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report **"Automated Sales Performance Tracker"** is the bonafide work of **"Sameer D(220701242)"** who carried out the project work for the subject OAI1903- Introduction to Robotic Process Automation under my supervision.

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ABSTRACT

Abstraction in the context of the Automated Sales Performance Tracker focuses on simplifying the process by highlighting its core tasks, such as data extraction, report generation, conversion, and distribution, while concealing the underlying technical details. The system automates repetitive tasks like extracting sales data, generating personalized reports, converting them into standardized PDFs, and automatically distributing them via email, all without human intervention. By removing the complexities of tools like UiPath, Excel, and email automation, the system becomes easier to understand and provides clear value to both technical and non-technical users. This abstraction improves efficiency, reduces human error, and saves time, enabling employees to focus on more strategic tasks.

Furthermore, the abstraction allows the system to operate as a plug-and-play solution that can be quickly integrated into any business process that requires sales reporting. Users do not need to understand the intricacies of automation tools, as the focus is on the high-level business functions and the end result—the automated reports. This approach ensures that businesses can adopt the system with minimal disruption to their existing workflows.

The simplified view of the system's operation also makes it easier to scale. As business needs grow and new report types or data sources are introduced, the system can be easily adapted to accommodate these changes without needing significant modifications. This scalability ensures the system’s long-term viability and its ability to handle increasing data volumes and complexity.

The abstraction also plays a significant role in improving user adoption. When the technology is abstracted, employees can see how it directly impacts their work without feeling overwhelmed by technical jargon. It enables users across departments to understand how the system simplifies their work processes and leads to quicker, data-driven decision-making.

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LIST OF ABBREVIATIONS

ABBREVIATION	ACCRONYM
RPA	Robotic Process Automation
PDF	Portable Document Format
DOCX	Word Document (XML)
XL	Excel
VBA	Visual Basic for Applications
OCR	Optical Character Recognition
API	Application Programming Interface
XAML	Extensible Application Markup Language
For Each Row	For Each Row (Excel)
Invoke	Invoke Method

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The **Automated Sales Performance Tracker** is a solution designed to enhance the efficiency and accuracy of creating and distributing sales reports within an organization. Traditionally, this process has been manual, involving time-consuming tasks such as data extraction, report formatting, and email distribution. This system automates these tasks, significantly reducing human intervention and the risk of errors, while ensuring timely and consistent delivery of reports.

Using **Intelligent Robotic Process Automation (IRPA)** technologies, the system begins by extracting sales data from sources such as Excel or databases. It then processes and formats this data into customized, personalized reports for stakeholders, including sales managers, executives, and team members. These reports are automatically converted into a standardized **PDF** format to ensure compatibility and easy sharing across various platforms. Once generated, the reports are automatically emailed to the designated recipients without any manual input.

By automating repetitive processes, the system not only saves time but also ensures greater accuracy and consistency in the reports. This allows employees to focus on more strategic and value-driven tasks, while the automation handles the routine, operational aspects of report generation and distribution. The system is also designed to be scalable and adaptable, capable of handling larger datasets or additional report types as the business evolves.

In summary, the **Automated Sales Performance Tracker** simplifies a traditionally complex and time-consuming process. It enhances operational efficiency, reduces the chances of errors, and provides decision-makers with accurate, up-to-date reports on

time. The system’s automation brings measurable business benefits, such as improved productivity and streamlined workflows, enabling organizations to make data-driven decisions faster and more effectively.

1.2 OBJECTIVE

The main objective of the **Automated Sales Performance Tracker** is to automate and optimize the process of creating, formatting, and distributing sales reports within an organization. By removing the need for manual intervention, the system aims to significantly enhance operational efficiency, allowing employees to focus on higher-value tasks.

The system ensures that reports are generated with accuracy and consistency, reducing the risk of human error. It also guarantees that reports are distributed on time, providing decision-makers with up-to-date information when they need it most. Designed with scalability in mind, the system can handle increasing volumes of data and additional report types as the business grows.

Furthermore, by automating manual tasks, the system helps reduce operational costs, such as labor and resources spent on report generation, printing, and distribution. Ultimately, the system improves decision-making by providing accurate, timely, and accessible sales data, enabling stakeholders to make informed, data-driven decisions faster and more efficiently.

1.3 EXISTING SYSTEM

The existing system for generating and distributing sales reports is largely manual, requiring significant human effort at each stage. Sales data is manually extracted from sources like Excel or CRM systems, then compiled and formatted into reports. This process is time-consuming and prone to errors, particularly with large datasets or tight deadlines.

Once reports are generated, they must be manually emailed to recipients, which can lead to delays or missed distributions. The manual nature of the system increases the risk of mistakes and consumes valuable time, hindering timely decision-making and reducing productivity.

Despite attempts to automate some tasks, the current system lacks scalability and flexibility, making it inefficient for handling growing data volumes or adapting to changing business needs. This highlights the need for an automated solution to improve efficiency, accuracy, and overall productivity.

1.4 PROPOSED SYSTEM

The **Proposed System** is an automated solution designed to streamline the process of generating and distributing sales reports. By leveraging **Intelligent Robotic Process Automation (IRPA)** technologies, the system eliminates manual intervention, ensuring efficiency, accuracy, and consistency throughout the entire workflow.

In this system, sales data is automatically extracted from sources such as Excel or CRM systems, processed, and formatted into personalized reports. These reports are then automatically converted into a standardized **PDF** format for easy sharing and distribution. Once generated, the system automatically emails the reports to the designated recipients, ensuring timely delivery without manual effort.

The proposed system is scalable, capable of handling increasing volumes of data and adapting to future business needs, such as generating different types of reports. It reduces human error by ensuring consistent data formatting and report accuracy, leading to more reliable decision-making.

By automating these tasks, the proposed system significantly reduces operational costs and saves valuable time, allowing employees to focus on higher-value tasks. It ensures faster, more accurate reporting, providing stakeholders with up-to-date information to make informed, data-driven decisions. The system offers a comprehensive solution that improves business productivity, enhances decision-making, and supports scalable growth.

CHAPTER 2

LITERATURE REVIEW

The concept of automating sales report generation and distribution has been explored widely in research, particularly with the rise of **Robotic Process Automation (RPA)** technologies. RPA is increasingly recognized as a tool that significantly enhances efficiency in business operations by automating repetitive and manual tasks, including sales reporting. Technologies like **UiPath**, **Automation Anywhere**, and **Blue Prism** have proven to be transformative in many industries by reducing manual errors, saving time, and streamlining workflows. According to studies, such as those by **Westerman et al. (2015)**, RPA has the potential to greatly improve operational efficiency, especially in tasks that involve large volumes of data, such as generating and distributing sales reports.

Sales reporting, traditionally a manual and labor-intensive task, often suffers from inefficiencies and errors, particularly when data is compiled from various sources like Excel spreadsheets, CRM systems, and internal databases. In their study, **Davenport (2018)** discusses how the manual handling of data in sales reports often results in inconsistent reporting, delayed decisions, and an overall lack of real-time insights, which hinders business agility. The adoption of automation helps overcome these challenges, ensuring that reports are both accurate and timely, which is crucial for effective decision-making.

Several studies, including those by **Chung and Lee (2019)**, highlight how automating the sales reporting process with tools such as RPA not only improves speed but also reduces the likelihood of errors. By automating data extraction, report generation, and even the formatting of reports, organizations can ensure greater consistency and reliability in the reports being distributed. RPA tools are also designed to integrate easily with existing data systems like **Customer Relationship Management (CRM)** software or **Enterprise Resource Planning (ERP)** platforms,

which enables a more seamless flow of information. This integration reduces the need for manual data entry, ensuring that the most current data is always used in reports, further enhancing accuracy.

The benefits of automation in sales reporting are widely recognized. For example, **Frost & Sullivan (2017)** emphasizes that automated systems not only speed up the process of report generation but also improve compliance, reduce operational costs, and allow for better scalability. With automated systems, businesses can handle larger datasets and adapt to increasing demands without adding significant overhead. Additionally, automation removes the burden from employees, enabling them to focus on higher-value tasks, such as analyzing data and making strategic decisions.

However, despite these advancements, many organizations still rely on outdated or fragmented systems for sales report generation, which limits the overall effectiveness of automation. As **Singh et al. (2020)** note, many existing systems lack the necessary integration capabilities to fully optimize sales reporting. This fragmentation leads to inefficiencies, as businesses struggle to consolidate data from different sources or formats, making it harder to generate reports that provide a complete and accurate picture of sales performance.

Looking ahead, the future of sales report automation is likely to be influenced by emerging technologies such as **Artificial Intelligence (AI)** and **Machine Learning (ML)**. **Li et al. (2020)** suggest that AI could play a significant role in enhancing sales reporting systems by not just automating the generation of reports but also providing deeper insights through predictive analytics. By integrating AI with RPA, businesses can move beyond simple report generation to forecasting trends and making more informed decisions based on historical data.

In conclusion, the literature highlights the significant advantages of automating sales report generation, including improved efficiency, accuracy, and scalability. However, it also reveals the limitations of existing systems, particularly with regard to data

integration and handling complex reporting requirements. These challenges demonstrate the need for a more robust and integrated solution, which is what the **Automated Sales Report Generation and Distribution System** seeks to address. By leveraging advanced RPA tools, this system will enhance the process of sales reporting, making it faster, more accurate, and better suited to the evolving needs of businesses.

CHAPTER 3
SYSTEM DESIGN

3.1 SYSTEM FLOW DIAGRAM

A flowchart is a type of diagram that represents an algorithm, workflow or process. The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows. This diagrammatic representation illustrates a solution model to a given problem.

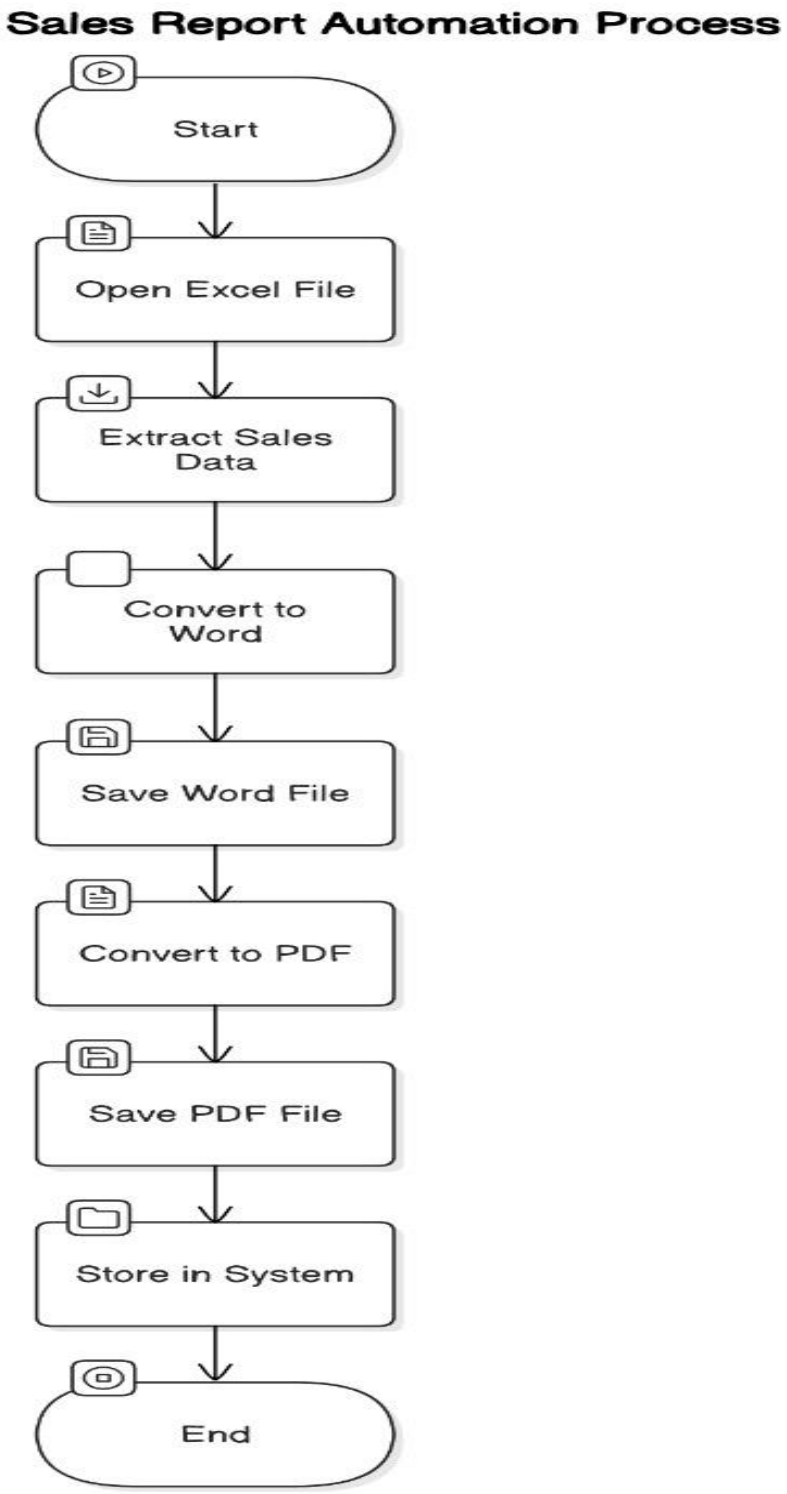


Fig 3.1 System Flow Diagram

3.2 ARCHITECTURE DIAGRAM

An architecture diagram is a graphical representation of a set of concepts, that are part of an architecture, including their principles, elements and components.

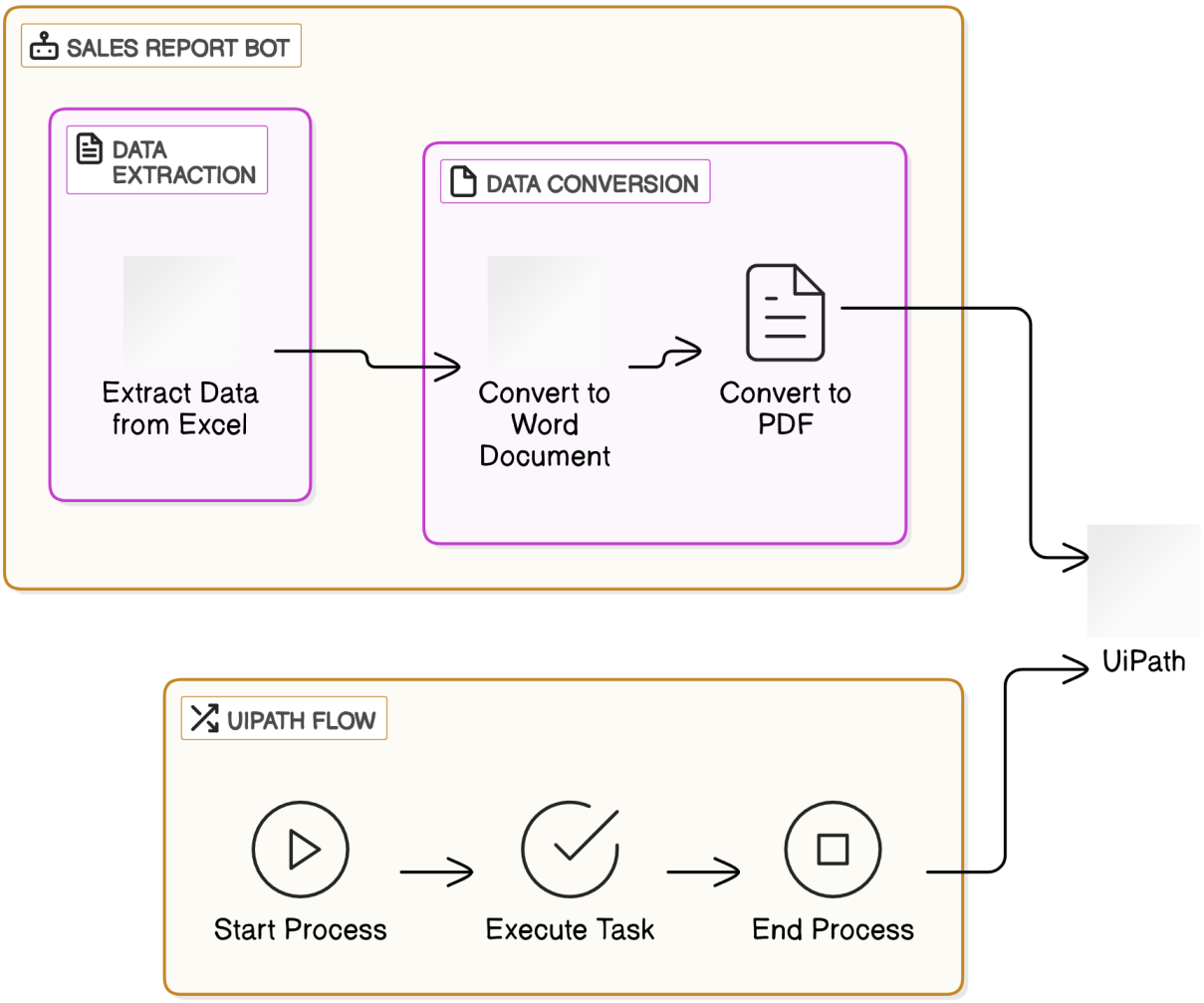


Fig 3.2 Architecture Diagram

3.3 SEQUENCE DIAGRAM

A sequence diagram is a type of interaction diagram because it describes how—and in what order—a group of objects works together.

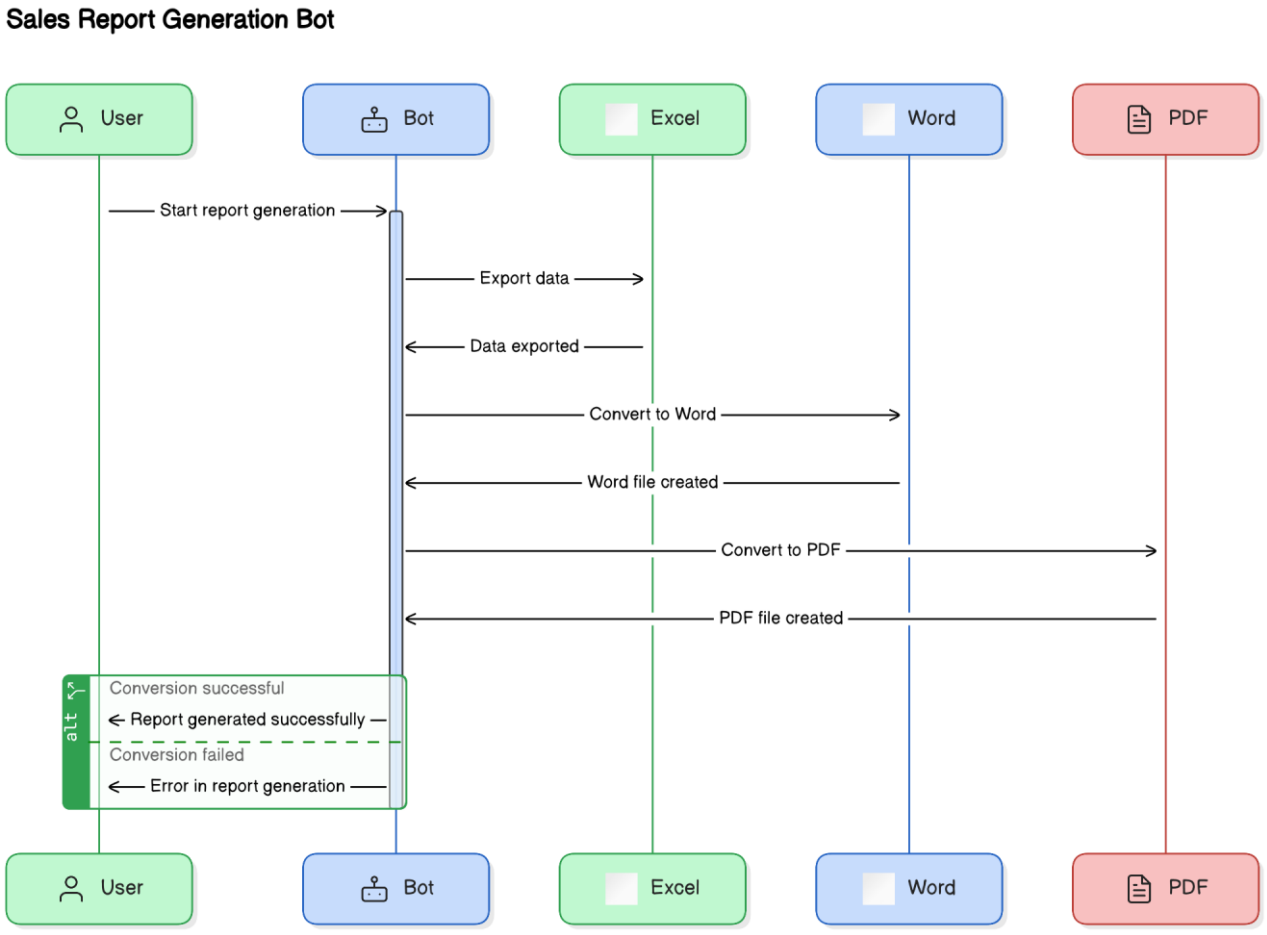


Fig 3.3 Sequence Diagram

CHAPTER4
PROJECT DESCRIPTION

4.1 MODULES

4.1.1 CREATING PROJECT

The **Automated Sales Report Generation Bot** is created by defining project requirements, setting up **UiPath Studio**, and configuring the **RE Framework**. The workflow automates tasks like extracting data, generating reports, converting them to PDFs, and emailing them. After designing the workflow, it is tested through unit and end-to-end tests. Once validated, the bot is deployed, scheduled, and monitored to ensure smooth operation and adaptability to new requirements.

4.1.2 CREATING AN APP

Creating an app for the **Automated Sales Report Generation Bot** involves designing a user-friendly interface that allows users to interact with the automation process effectively. The goal is to provide an easy way for users to trigger, monitor, and manage the bot without needing in-depth technical knowledge. The app is built to integrate seamlessly with the UiPath automation workflows, providing a centralized platform for the sales report generation process.

The first step in creating the app is to define the requirements, such as the types of user interactions needed (e.g., report generation triggers, report status checks, or data input). A suitable app development platform is then chosen, such as **UiPath Apps** or another application platform that integrates with UiPath. Using UiPath Apps, a simple and intuitive interface is created where users can input necessary parameters (such as the report type or date range), view the status of the reports, and receive notifications.

The app's design focuses on user experience, ensuring that it is easy to use and navigate. It might include features like dropdown menus for selecting report criteria, buttons to trigger the report generation process, and a dashboard displaying the status of ongoing or completed tasks. The app also communicates with UiPath robots to trigger the automation process and monitor its execution.

After the app is developed, it is tested to ensure it interacts correctly with the automation workflows and provides the intended functionality. Testing also involves verifying that the app handles user inputs correctly and updates the status in real-time. Once testing is complete, the app is deployed to users and integrated into the organization’s workflow.

By creating an app, the system allows users to manage the sales report generation process easily and efficiently, with minimal technical intervention. This enhances the user experience and ensures that stakeholders can focus on analyzing the reports rather than managing the automation process.

4.1.3 UPDATING APIS

Updating APIs for the **Automated Sales Report Generation Bot** involves ensuring that the system remains compatible with external data sources and services, while also enhancing functionality and performance. This process begins by identifying the existing APIs that interact with the bot, such as those used for data extraction, report generation, and email distribution.

The first step is to review the current API integrations to identify any outdated or inefficient endpoints. This may include ensuring that APIs are up-to-date with the latest versions or adding new features to support enhanced functionality, such as integrating new data sources or optimizing the performance of report generation. Once

improvements are identified, the APIs are updated, and the system is tested to ensure that all components interact seamlessly.

When updating APIs, it's essential to consider factors like authentication methods, error handling, and compatibility with the existing UiPath workflows. If necessary, API documentation is updated to reflect the changes made. After the updates are implemented and tested, the system is deployed, ensuring that the automated sales report process continues to run smoothly with the enhanced API integrations.

By keeping APIs updated, the system maintains its ability to interact with external services effectively, improving performance, scalability, and reliability in generating and distributing sales reports.

4.1.1 ROUTING

Routing in the context of the **Automated Sales Report Generation Bot** involves directing the flow of data and tasks through various steps of the automation process, ensuring that each operation is executed in the correct order. The routing process starts with identifying and extracting the relevant sales data, followed by determining the appropriate actions to take based on that data, and finally directing the reports to the right recipients.

The routing process is designed to efficiently handle different scenarios, such as varying report formats, user inputs, or exceptions that might arise during automation. It helps manage data flow from one stage to another, for example, directing the extracted sales data to the report generation step or routing the generated reports to the conversion and email distribution stages.

In UiPath, this is typically handled through decision-making activities, such as **if-else statements** or **switch activities**, which route the process based on conditions like sales team, report type, or data validation results. For instance, if a particular report requires additional data validation, the system can route the process to a validation step before proceeding further.

Routing also ensures that any errors or exceptions are handled efficiently. If an issue occurs at any point (e.g., missing data, failed report generation), the bot can route the process to an error-handling workflow to resolve the issue before continuing.

By effectively managing routing, the bot ensures that sales reports are generated, formatted, and distributed to the correct recipients on time, without manual intervention, enhancing overall efficiency and accuracy in the report generation process.

CHAPTER 5

OUTPUT SCREENSHOTS

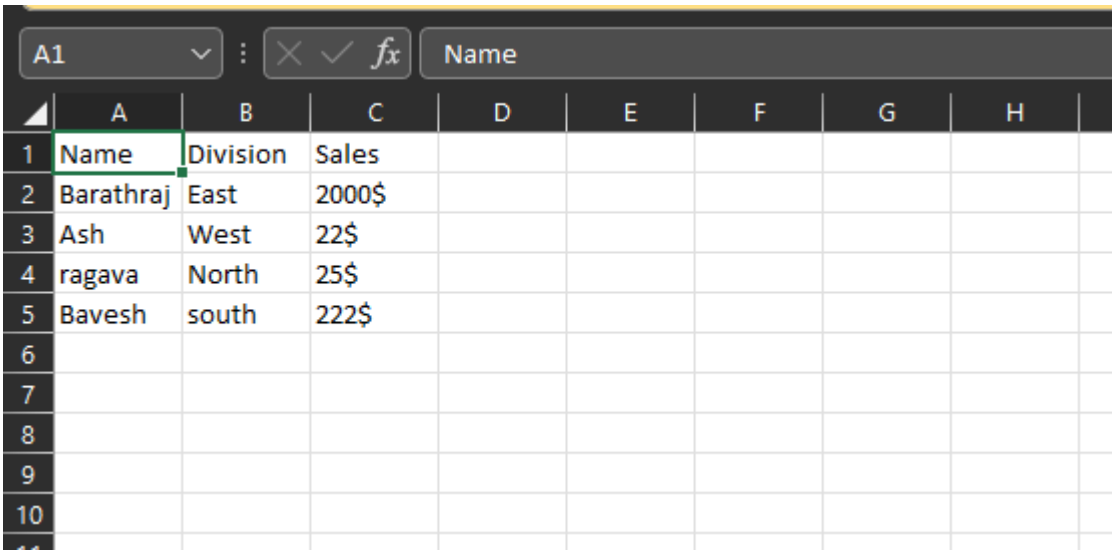


Fig 5.1 Creating a data in excel sheet1

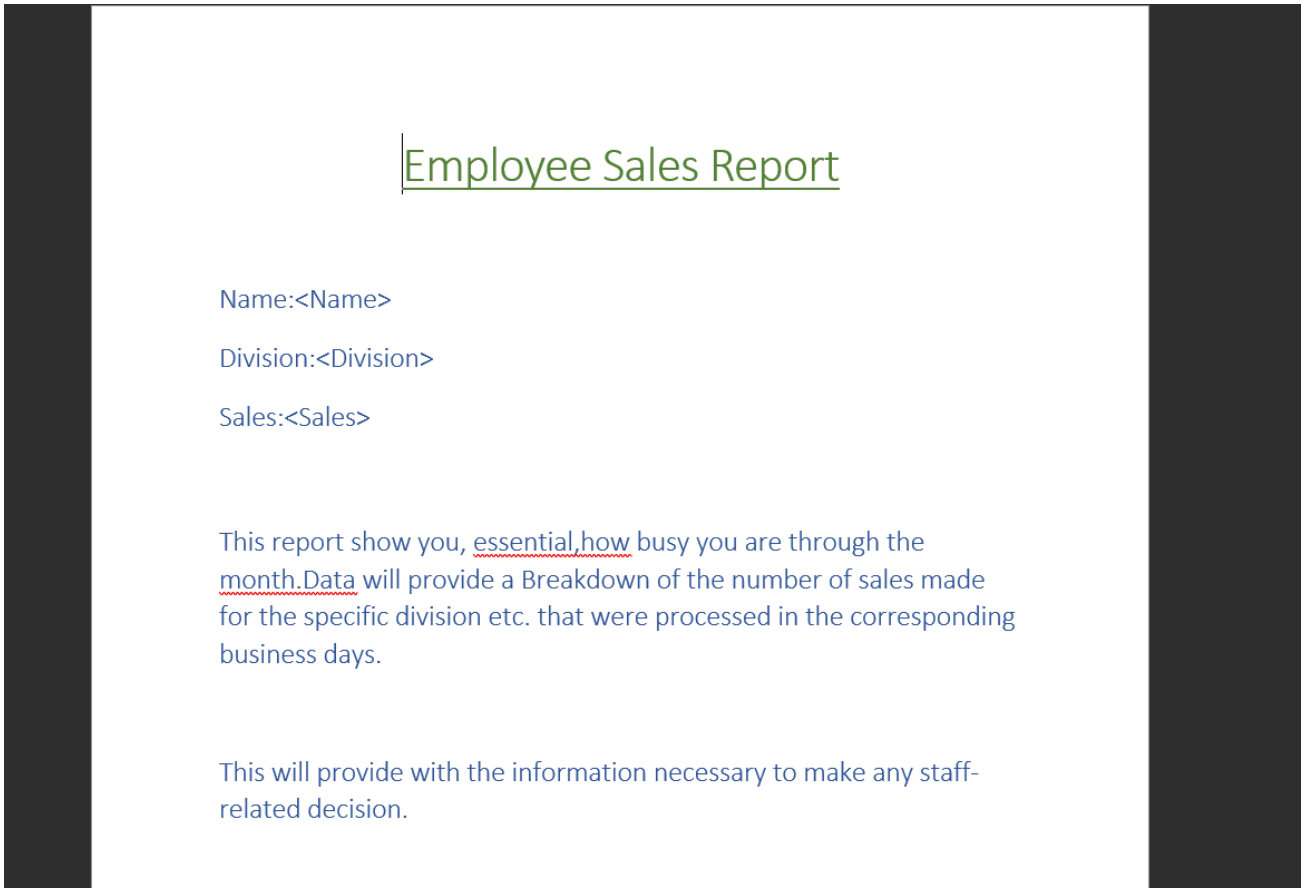


Fig 5.2 Master Template

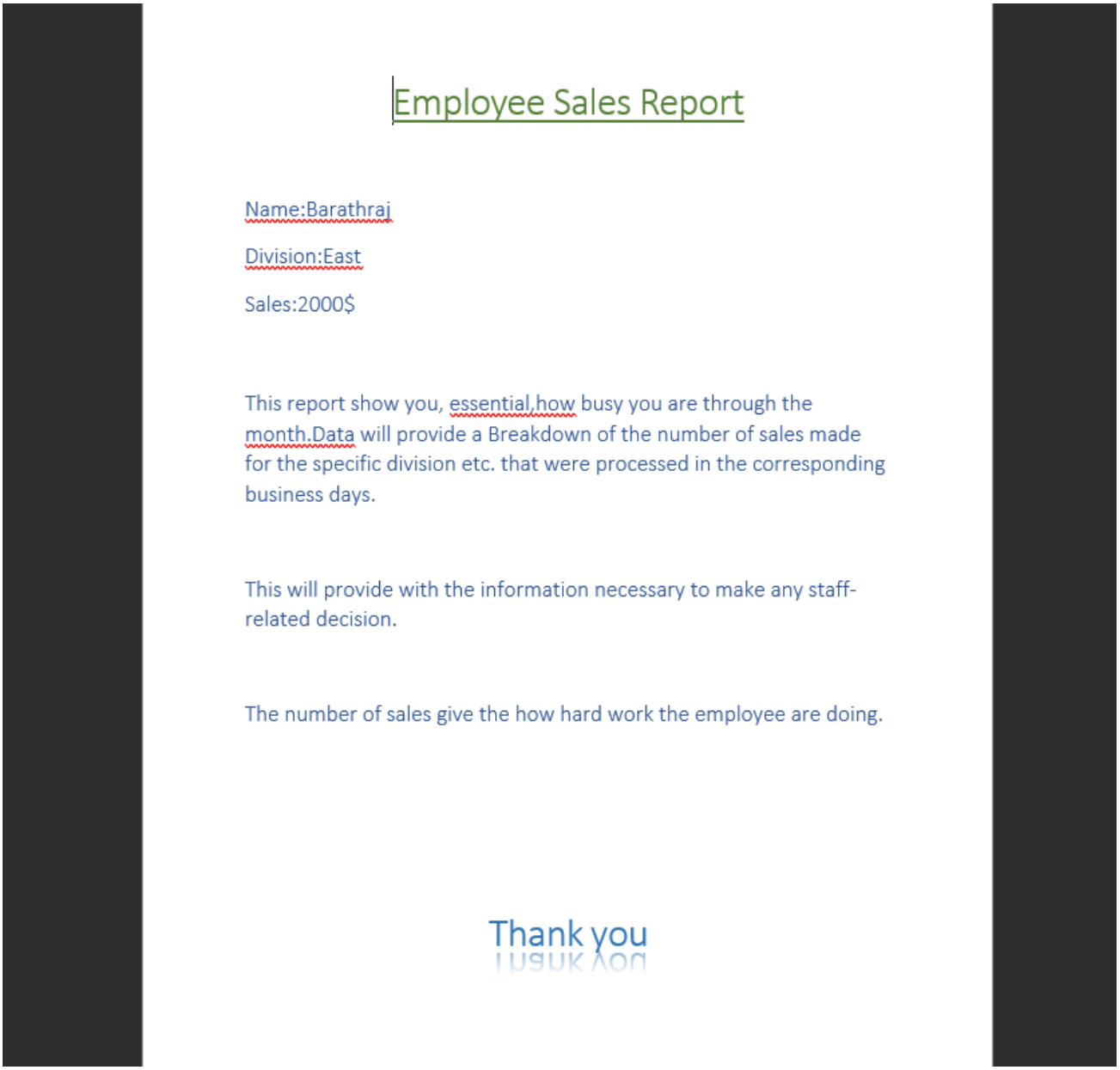


Fig 5.3 The data are converted into Word document

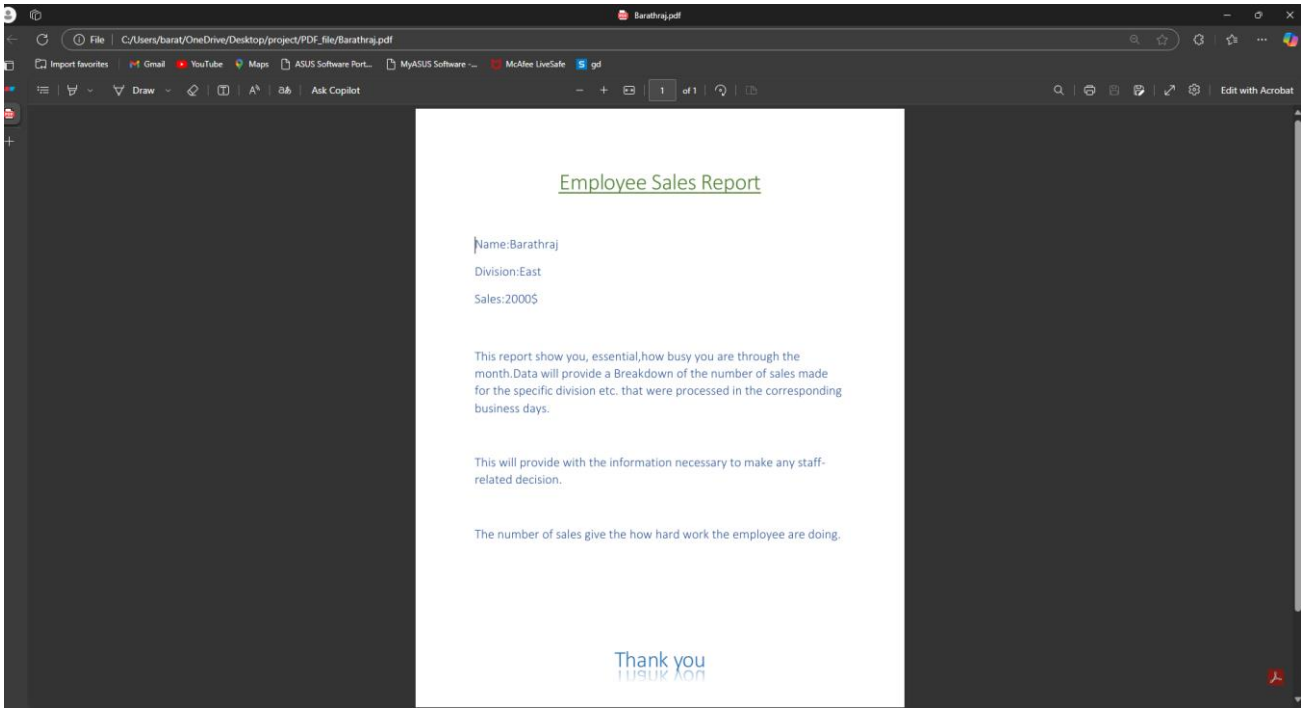


Fig 5.4 Word file converted into PDF

CHAPTER 6

CONCLUSION

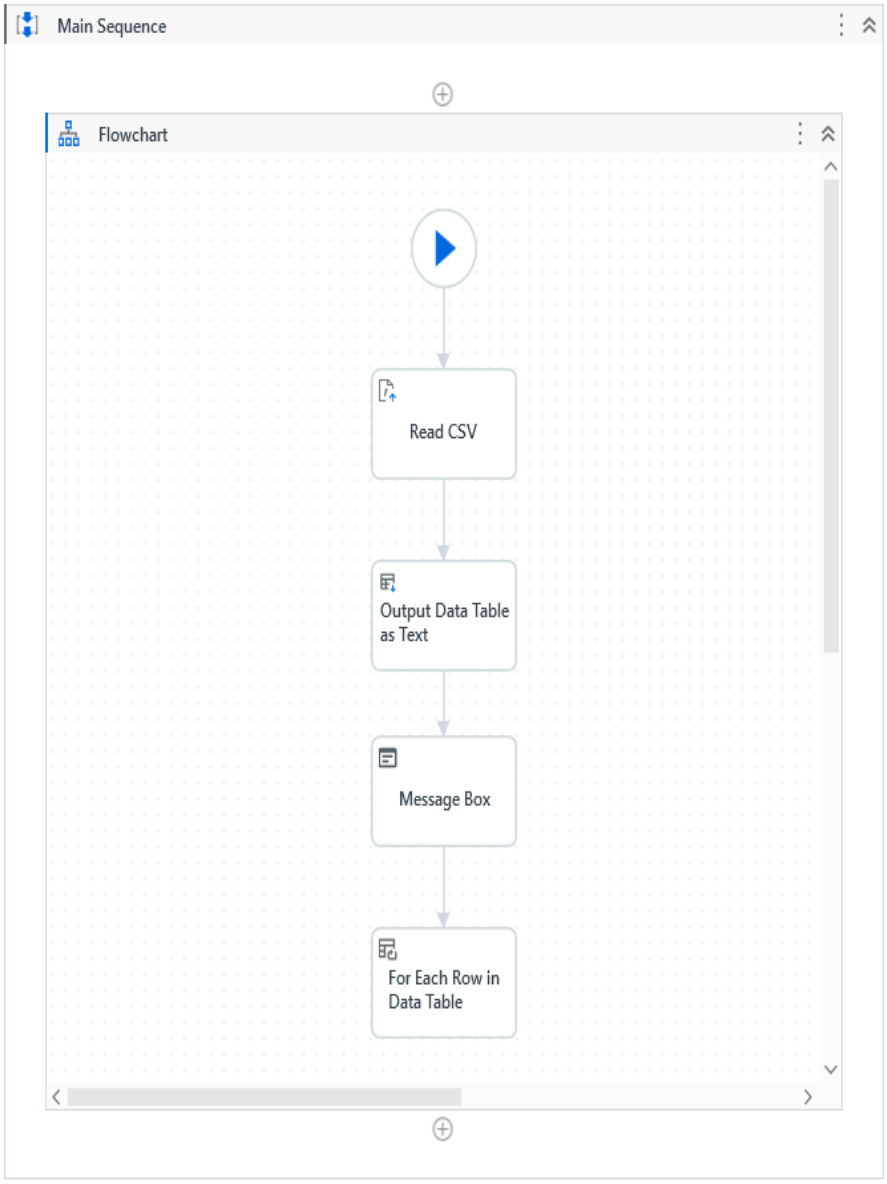
The **Automated Sales Report Generation and Distribution System** streamlines a traditionally time-consuming and error-prone process by automating the extraction, generation, conversion, and distribution of sales reports. This system not only reduces manual effort but also ensures greater accuracy and consistency in report generation. By utilizing UiPath's automation capabilities, including data extraction from Excel, document generation in Word, PDF conversion, and automated email distribution, the entire workflow is made seamless and efficient.

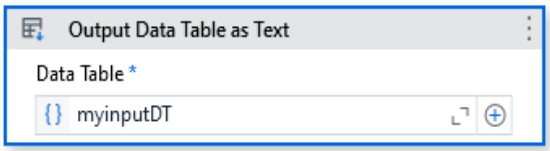
The abstraction of the system’s operations allows users to focus on the business value rather than the technical complexities behind the process. Additionally, the system’s scalability ensures that it can handle growing data volumes and evolving business needs. The automated process reduces operational costs, saves time, and helps decision-makers access up-to-date reports quickly, ultimately improving business outcomes and supporting data-driven decision-making.

By eliminating the need for manual intervention, the system enables employees to concentrate on higher-value tasks, enhancing overall productivity. The deployment of this solution marks a significant step toward operational efficiency, and its continued development can further optimize other repetitive tasks, providing a framework for broader business process automation.

Appendix

Sample Process

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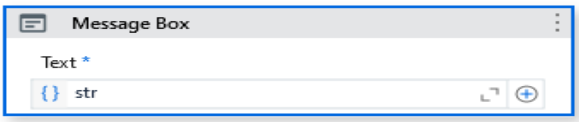
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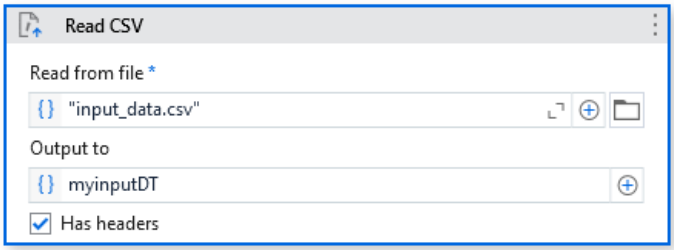
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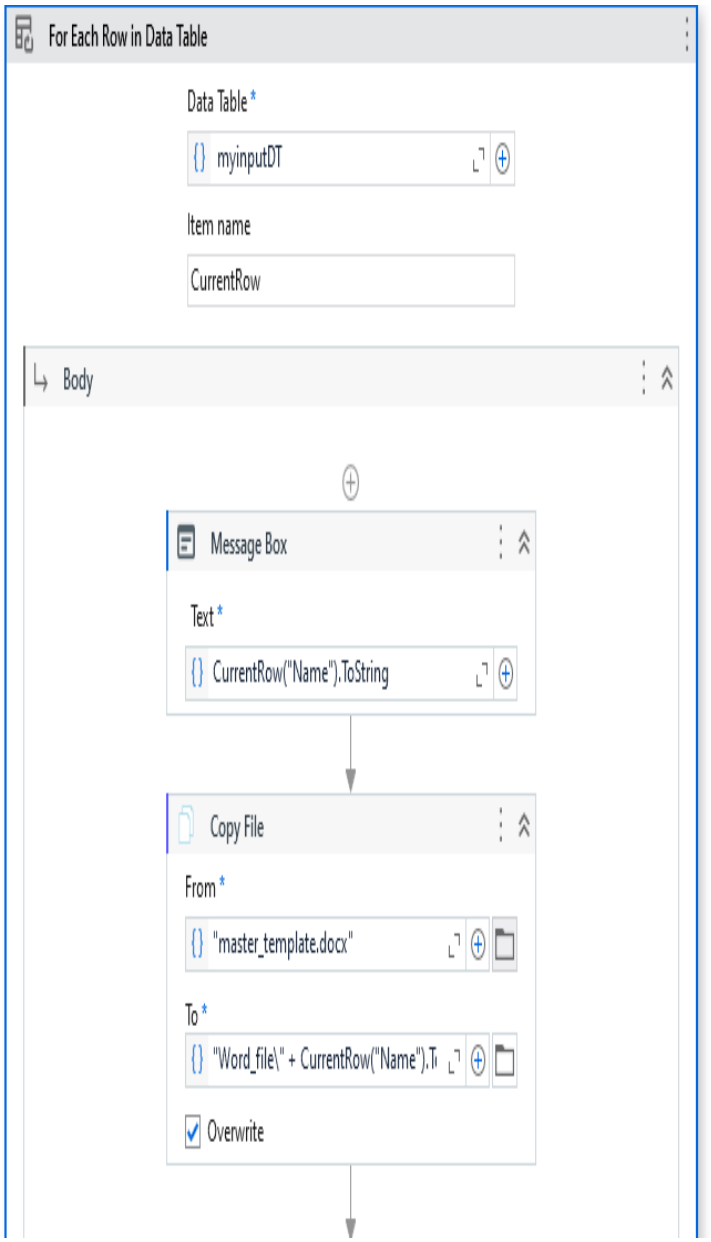
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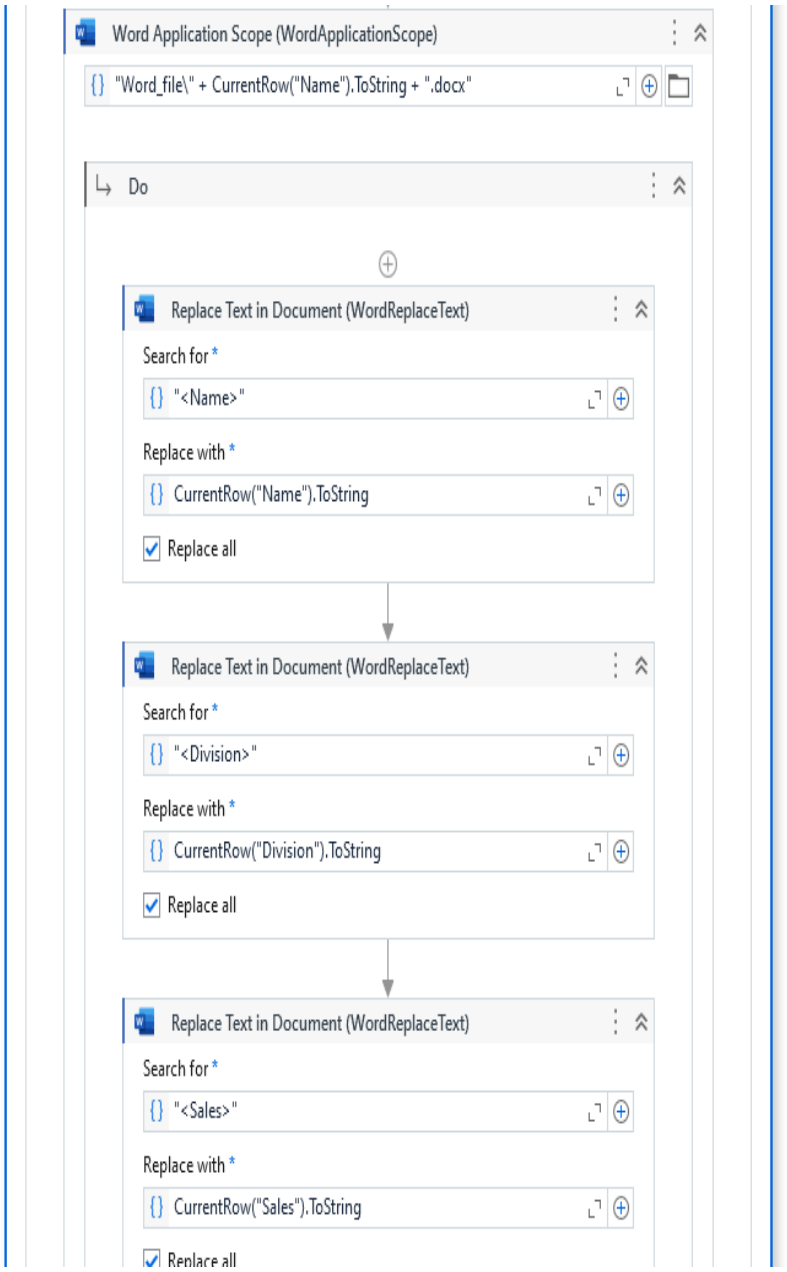
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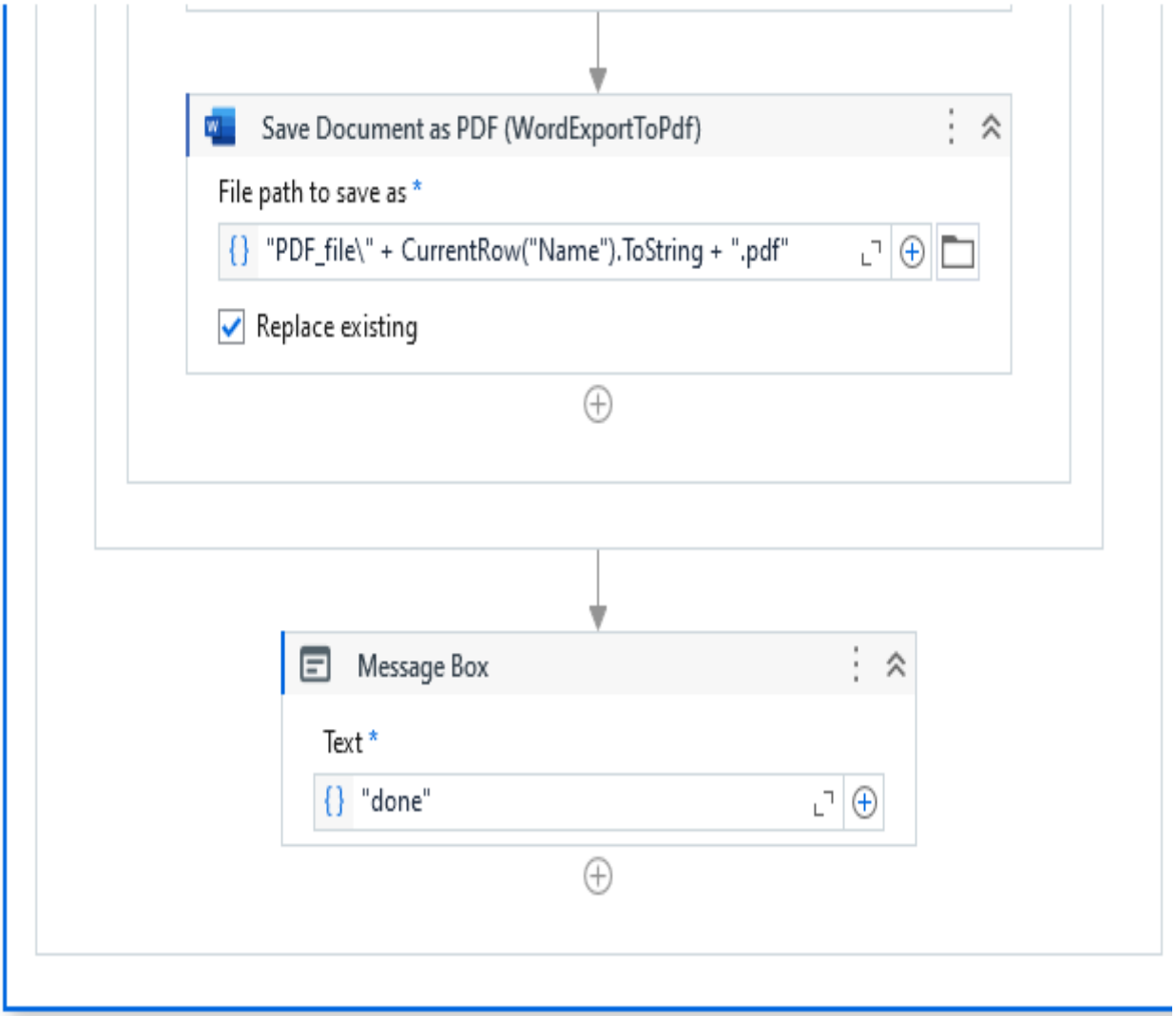
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Replace existing
Message Box
Text *
{} "done"

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4. Mastering UiPath: A complete guide to mastering the UiPath platform by Martin Vayu.