TICKET MASTER BOT

A PROJECT REPORT

Submitted by

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CHENNAI - 602105

BONAFIDE CERTIFICATE

Certified that this project report "**TICKET MASTER BOT**" is the bonafide work of "**KARUMURY NAGA MADHAVA NIKHIL (220701120)**" who carried out the project work for the subject OAI1903-Introduction to Robotic Process Automation under my supervision.

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OAI1903-Introduction to Robotic Process Automation held on_____.

ABSTRACT

The "**Ticket Master Bot**" is an RPA-based automation project developed in UiPath Studio to efficiently generate seat numbers for movie tickets. This bot integrates with a structured Excel sheet containing booking details and a pre-formatted PowerPoint template for ticket design. It automates the process by reading booking data from the Excel file, dynamically assigning seat numbers, and updating the ticket template in PowerPoint with the corresponding details. The completed tickets are then exported as PDFs for distribution or printing. This solution leverages Robotic Process Automation to address the challenges of manual seat allocation, ensuring accuracy and significantly reducing the time required for the process. It is ideal for cinemas, event organizers, or online ticketing platforms that handle bulk bookings. The project also demonstrates UiPath Studio's capabilities in handling file operations, data integration, and automating repetitive tasks, making it a scalable and efficient tool for ticketing workflows.

ACKNOWLEDGEMENT

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KARUMURY NAGA MADHAVA NIKHIL (220701120)

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CHAPTER 1

INTRODUCTION

1.1 GENERAL

Managing ticketing processes for events or entertainment venues often involves generating large numbers of personalized movie tickets, which can be a tedious and error-prone task when done manually. The need for accuracy in seat allocation and professional formatting adds further complexity to the process.

The "**Ticket Master Bot**" is a cutting-edge automation solution built using UiPath Studio to revolutionize the ticket generation workflow. This bot leverages Robotic Process Automation (RPA) to seamlessly integrate participant data from an Excel sheet with a pre-designed PowerPoint movie ticket template. By iterating through each row in the Excel file, it dynamically assigns seat numbers, customizes the ticket for each participant, and exports the finalized designs as ready-to-use PDF files.

This solution transforms what was once a repetitive and time-consuming process into a streamlined and efficient workflow. The "**Ticket Master Bot**" not only eliminates human error but also ensures scalability, enabling organizations to handle high-volume ticket generation with ease. By combining precision with automation, this project demonstrates how UiPath Studio can redefine operational efficiency in ticketing and beyond.

1.2 EXISTING SYSTEM

The existing system for generating movie tickets is a manual and labor-intensive process involving several repetitive tasks. Initially, participant or booking data is collected and organized in an Excel sheet. The ticket template, typically created in PowerPoint or similar design software, is then opened, and placeholders such as seat numbers are replaced individually for each participant. Once updated, each ticket is saved as a PDF for distribution or printing. While this method works for a small number of participants, it becomes highly inefficient and prone to errors when managing large datasets. Manually updating seat numbers increases the likelihood of mistakes, such as incorrect details, inconsistent formatting, or even skipped entries. Additionally, the process consumes significant time and effort, lacks scalability, and requires substantial manual intervention.

1.3 PROPOSED SYSTEM

The proposed system, "**Ticket Master Bot**", provides an automated solution to address the inefficiencies of the existing manual ticket generation process. Developed using UiPath Studio, this bot automates the entire workflow of creating personalized movie tickets. It reads participant details from an Excel sheet, processes each row, and dynamically replaces the placeholder text in a pre-designed PowerPoint ticket template with the corresponding seat number and participant information. Once updated, the bot exports each customized ticket as a PDF file, ready for distribution or printing. This automated solution eliminates the need for manual intervention, significantly reducing the time and effort involved in ticket generation. It ensures accuracy and consistency

across all tickets, effectively removing the risk of errors such as incorrect seat numbers or formatting inconsistencies. Additionally, the system is highly scalable, capable of handling large datasets efficiently, making it an ideal choice for organizations managing bulk ticketing for events, screenings, or entertainment programs.

CHAPTER 2

LITERATURE REVIEW

2.1 GENERAL

Robotic Process Automation (RPA) has emerged as a transformative technology for automating repetitive and resource-intensive tasks. Studies have demonstrated its effectiveness in improving efficiency, accuracy, and scalability in processes involving large volumes of data and manual intervention. The application of RPA in ticketing systems, such as movie ticket generation, has gained attention in industries like entertainment, events management, and corporate operations.

Research has shown that automation significantly streamlines ticketing workflows by integrating data from sources like Excel spreadsheets and pre-designed templates. One study emphasized the impact of RPA in minimizing errors associated with manual ticket creation, such as incorrect seat assignments, formatting inconsistencies, and skipped entries. Tools like UiPath are particularly noted for their flexibility and user-friendly interfaces, allowing seamless integration with PowerPoint templates and Excel sheets to automate ticket customization.

Another study focused on the scalability of RPA in ticketing for large-scale events. It highlighted how bots can dynamically assign seat numbers, update ticket templates, and generate PDFs, ensuring both accuracy and speed in handling high volumes of participants.

The research also underlined the time savings and operational consistency achieved through automation, making it a preferred choice for industries dealing with repetitive document generation.

Additionally, literature on the broader impact of RPA in workflow automation suggests that such technologies contribute to enhanced decision-making. For instance, automated ticketing systems can generate analytical insights by tracking booking trends, seat allocation, and ticket distribution efficiency, providing valuable data for improving customer experience.

The implementation of the "**Ticket Master Bot**" aligns with these findings, leveraging RPA to automate the movie ticket generation process. By utilizing UiPath Studio to integrate Excel data with a PowerPoint ticket template, the bot addresses the inefficiencies of manual workflows while ensuring high accuracy, scalability, and consistency in ticket production. This project builds on the growing body of evidence supporting the role of RPA in revolutionizing document automation and operational workflows.

CHAPTER 3

SYSTEM DESIGN

3.1 SYSTEM FLOW DESIGN

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.

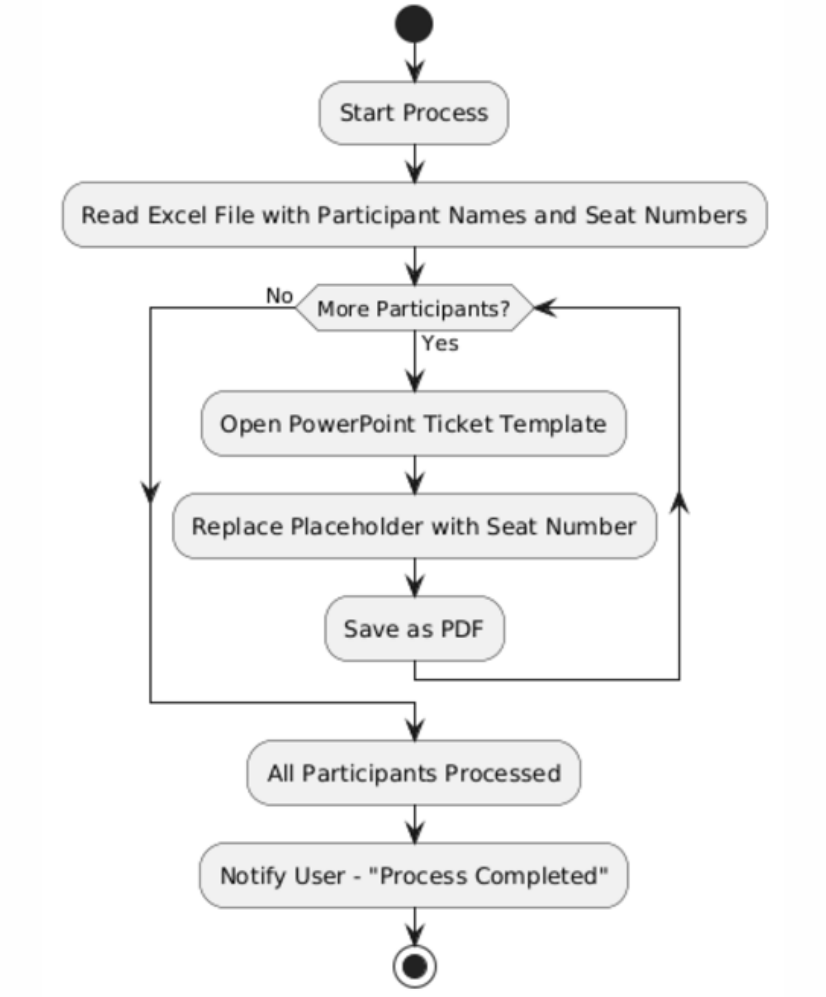


Figure 3.1 System Flow Design

3.2 ARCHITECTURE DIAGRAM

The Architecture Diagram for the Excel to Certificate Automation visually represents the system's components and their interactions. It highlights the input data layer, template processing layer, output generation layer, and notification layer, showcasing how participant names are processed, templates are updated, certificates are generated in PDF format, and success notifications are sent. This diagram provides a clear understanding of the overall system design and functionality, helping stakeholders see how each component contributes to automating certificate generation efficiently.

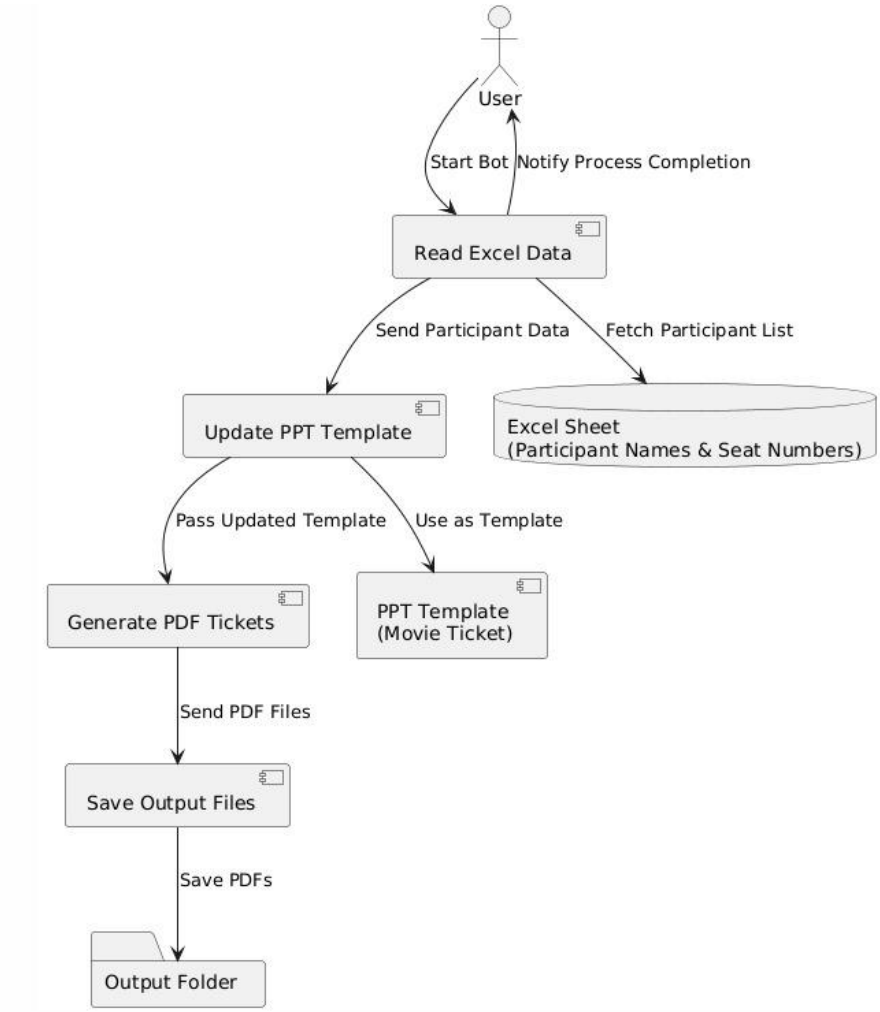


Fig 3.2 Architecture Diagram

3.3 SEQUENCE DIAGRAM

A sequence diagram is a type of interaction diagram that describes how—and in what order—a group of objects works together in the **Excel to Certificate Automation**. In this automation project, the User provides an Excel sheet with participant names. UiPath RPA reads the data from the Excel sheet, opens the PowerPoint Template, and replaces the placeholder with each participant's name. After updating the certificate, UiPath saves it as a PDF in the Output Folder. This process repeats for each participant. Once all certificates are generated and saved, UiPath notifies the User that the process is complete and the certificates are ready.

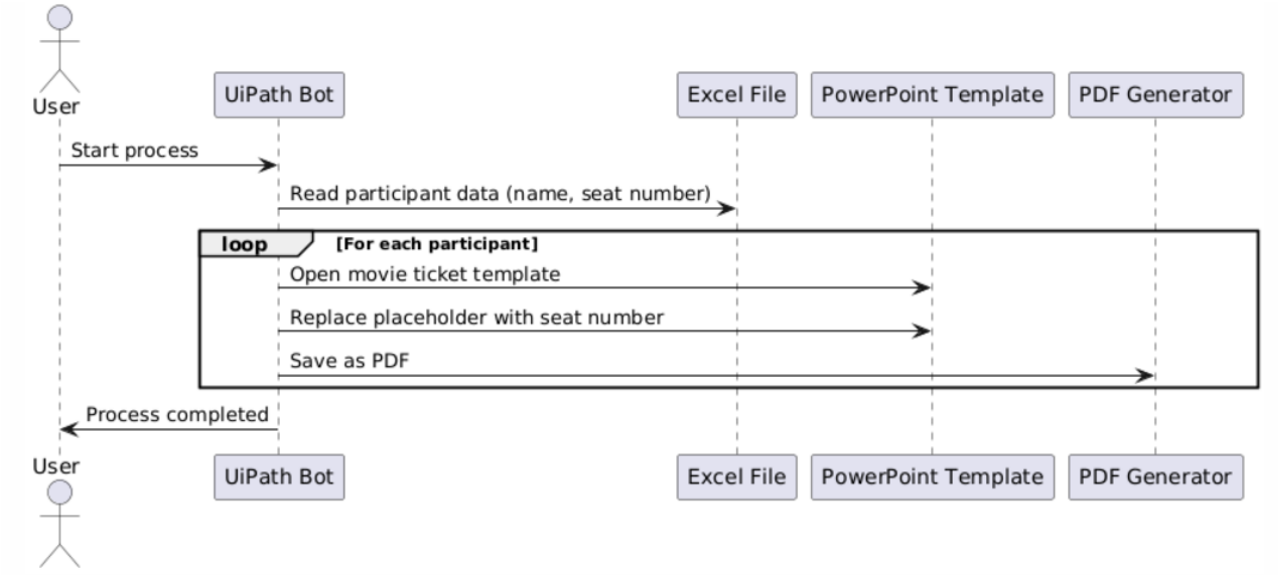


Fig 3.2 Sequence Diagram

CHAPTER 4

PROJECT DESRIPTION

4.1 CREATING PROJECT

The **Ticket Master Bot** automates the generation of personalized movie tickets using UiPath Studio. The process begins by extracting participant names and other details from an Excel sheet. It then opens a pre-designed PowerPoint ticket template, replaces placeholders with seat numbers and participant information, and saves the customized tickets as PDF files. This process is repeated for every row in the Excel sheet, resulting in a batch of personalized movie tickets. The automation ensures efficiency, accuracy, and scalability, making it an ideal solution for bulk ticket generation in events or entertainment settings.

4.2 PACKAGES REQUIRED

For the successful implementation of the **Ticket Master Bot**, the following UiPath packages must be installed to enable the required activities:

- UiPath.Excel.Activities:

To interact with Excel files, such as reading participant data and seat details from the Excel sheet.

- UiPath.Presentation.Activities:

To manipulate PowerPoint files, including opening the movie ticket template and dynamically replacing placeholders with relevant details.

- UiPath.PDF.Activities:

To save the updated tickets as PDF files after editing the PowerPoint template, ensuring they are ready for distribution or printing.

- UiPath.System.Activities:

Contains essential activities required for workflow creation, including file management, loops, and conditional logic for efficient ticket generation.

4.3 PROJECT WORKFLOW

Now, as we know the objective of the project it is time to create the workflow that actually makes up the project. The workflow for this project is simple.

4.3.1 ACTIVITES USED

To create the project the following activities are required:

1. Excel Activities:

    - Excel Application Scope: Opens the Excel file containing the participant name.
    - Read Range: Reads the data from the Excel sheet (containing participant names) into a DataTable.
    - For Each Row: Loops through each row in the DataTable to process participant names.

2. PowerPoint Activities:

- PowerPoint Application Scope: Opens the PowerPoint template file.
- Get Slides: Retrieves slides from the PowerPoint template.
- Replace Text: Replaces the placeholder text in the PowerPoint slide with the participant's name (using the data from the Excel sheet).
- Save Presentation As: Saves the updated PowerPoint slide as a PDF.

3. PDF Activities:

- Save As PDF: Converts the modified PowerPoint presentation into a PDF and saves it in the specified output folder.

4.3.2. EXPLAINING SEQUENCE

Here's the sequence for the Ticket Master Bot project, detailing each step in the workflow from start to finish:

1. Start the Workflow:

The process begins when the user triggers the workflow in UiPath Studio. The bot starts executing the steps for generating personalized movie tickets.

2. Open Excel File:

Excel Application Scope: This activity is used to open the Excel sheet containing the list of participants' names and seat numbers. The Excel file is passed as an input to this activity, enabling the workflow to access and read the data.

3. Read Data from Excel:

Read Range: This activity reads all the participant data (i.e., names and seat numbers) from the Excel sheet and stores it in a DataTable. The Excel sheet typically contains columns for participant names and their respective seat numbers, which will be processed individually.

4. Iterate Through Each Participant:

For Each Row: This activity loops through each row in the DataTable to extract the participant's name and seat number. During each iteration, the participant's details (name and seat number) are extracted from the current row.

5. Open PowerPoint Template:

PowerPoint Application Scope: This activity opens the pre-designed PowerPoint movie ticket template. The template contains placeholders that will be replaced with the participant's name and seat number.

6. Replace Participant’s Details in Template:

Replace Text For each participant, the placeholders in the PowerPoint slide (e.g., "Name" and "Seat Number") are replaced with the participant's details extracted from the Excel file. This ensures that each movie ticket has the correct name and seat number.

7. Save the Updated Ticket as PDF:

Save Presentation As: After replacing the placeholders with the participant’s details, the PowerPoint ticket is saved as a PDF. The PDF is saved in a designated output folder, with a unique name (e.g., the participant's name or seat number) to avoid overwriting files.

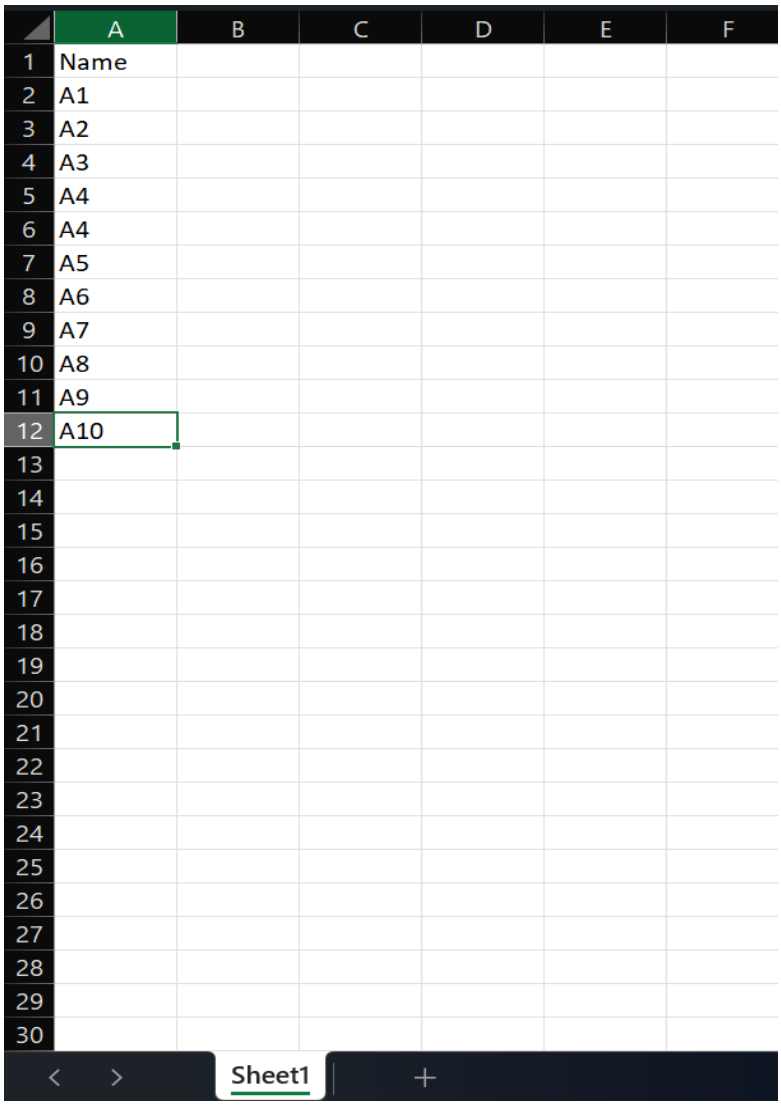
8. Repeat for All Participants:

The workflow loops through each row in the Excel sheet, performing steps 5 to 7 for every participant listed. This ensures that a personalized movie ticket is generated for each participant in the dataset.

By following these steps, the Ticket Master Bot generates and exports personalized movie tickets for all participants listed in the Excel sheet, streamlining the ticketing process and ensuring accuracy and efficiency.

CHAPTER 5

OUTPUT SCREENSHOTS



	A	B	C	D	E	F
1	Name					
2	A1					
3	A2					
4	A3					
5	A4					
6	A4					
7	A5					
8	A6					
9	A7					
10	A8					
11	A9					
12	A10					
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Sheet1

Fig 5.1 Library Data Excel File (Input)

Fig 5.2 Ticket Template(Output)

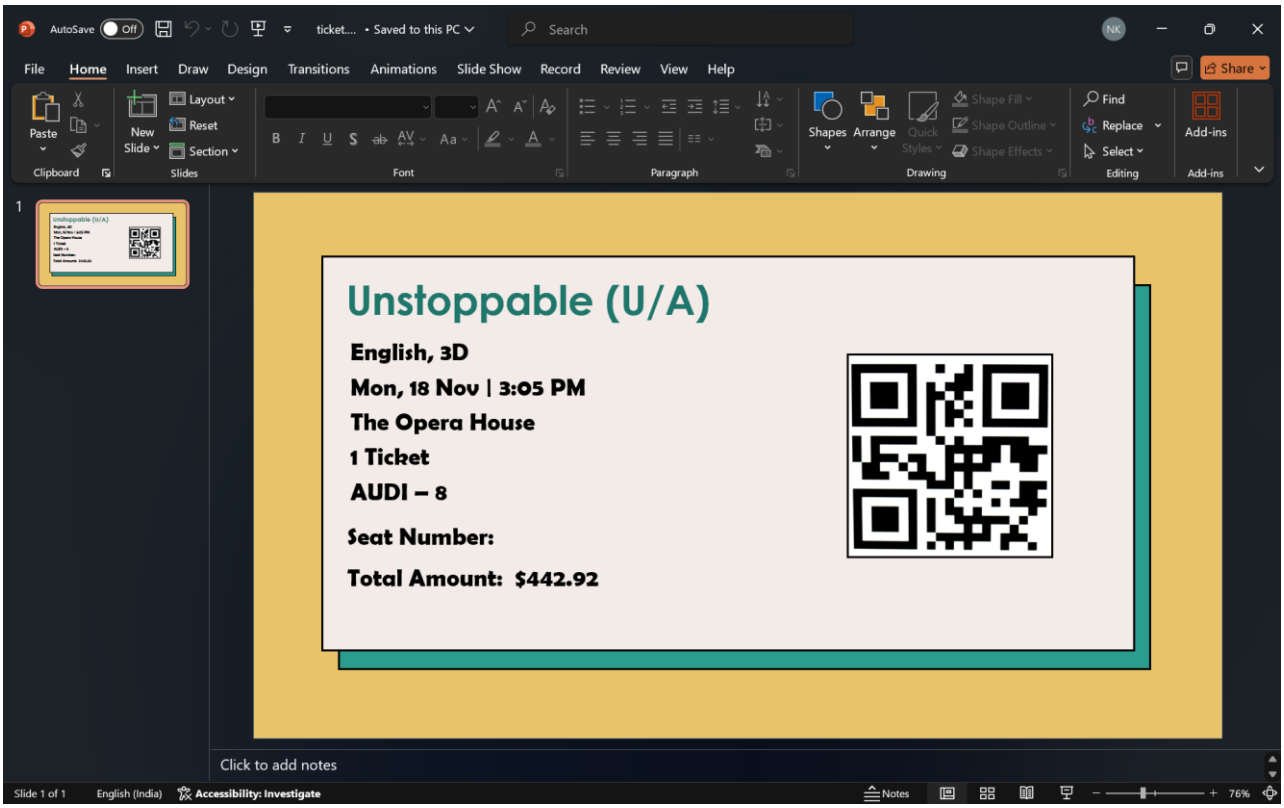
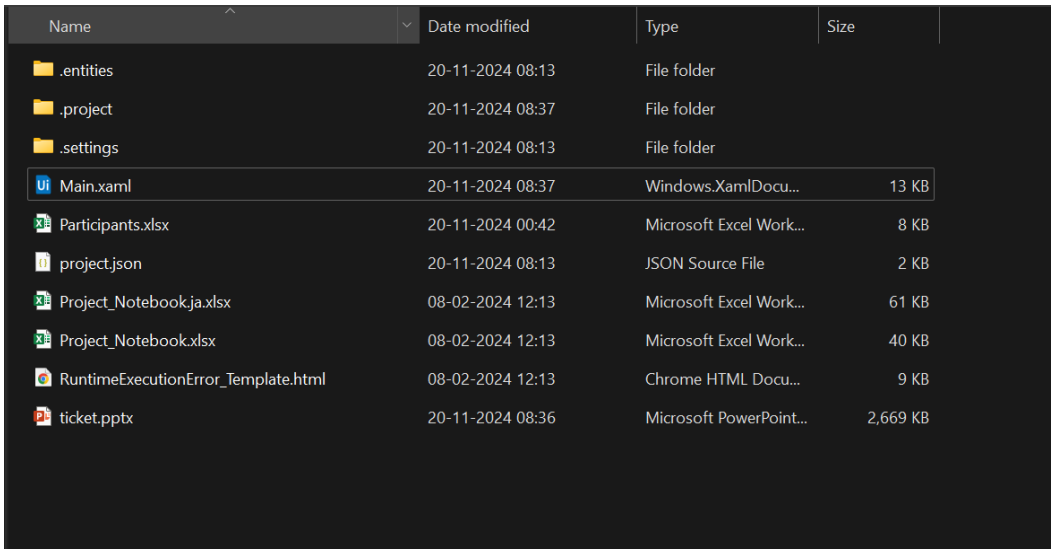
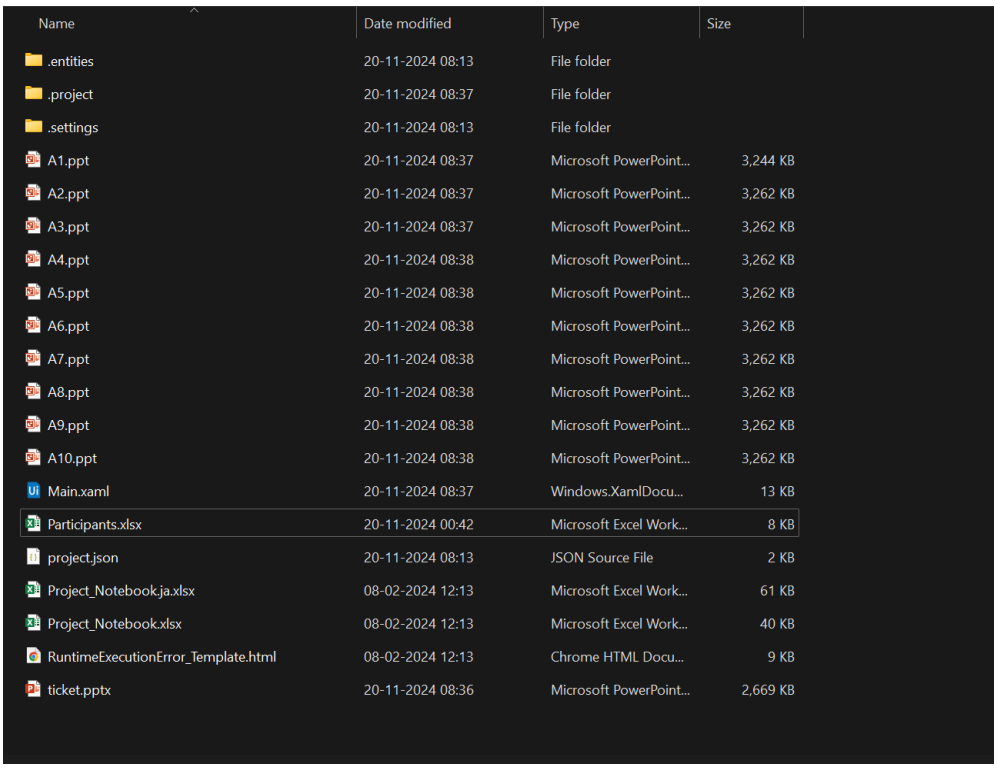


Fig 5.3 ticket.ppt



Name	Date modified	Type	Size
.entities	20-11-2024 08:13	File folder	
.project	20-11-2024 08:37	File folder	
.settings	20-11-2024 08:13	File folder	
Main.xaml	20-11-2024 08:37	Windows.XamlDocu...	13 KB
Participants.xlsx	20-11-2024 00:42	Microsoft Excel Work...	8 KB
project.json	20-11-2024 08:13	JSON Source File	2 KB
Project_Notebook.ja.xlsx	08-02-2024 12:13	Microsoft Excel Work...	61 KB
Project_Notebook.xlsx	08-02-2024 12:13	Microsoft Excel Work...	40 KB
RuntimeExecutionError_Template.html	08-02-2024 12:13	Chrome HTML Docu...	9 KB
ticket.pptx	20-11-2024 08:36	Microsoft PowerPoint...	2,669 KB

Fig 5.4 Before Debugging



Name	Date modified	Type	Size
.entities	20-11-2024 08:13	File folder	
.project	20-11-2024 08:37	File folder	
.settings	20-11-2024 08:13	File folder	
A1.ppt	20-11-2024 08:37	Microsoft PowerPoint...	3,244 KB
A2.ppt	20-11-2024 08:37	Microsoft PowerPoint...	3,262 KB
A3.ppt	20-11-2024 08:37	Microsoft PowerPoint...	3,262 KB
A4.ppt	20-11-2024 08:38	Microsoft PowerPoint...	3,262 KB
A5.ppt	20-11-2024 08:38	Microsoft PowerPoint...	3,262 KB
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Project_Notebook.xlsx	08-02-2024 12:13	Microsoft Excel Work...	40 KB
RuntimeExecutionError_Template.html	08-02-2024 12:13	Chrome HTML Docu...	9 KB
ticket.pptx	20-11-2024 08:36	Microsoft PowerPoint...	2,669 KB

Fig 5.5 After Debugging

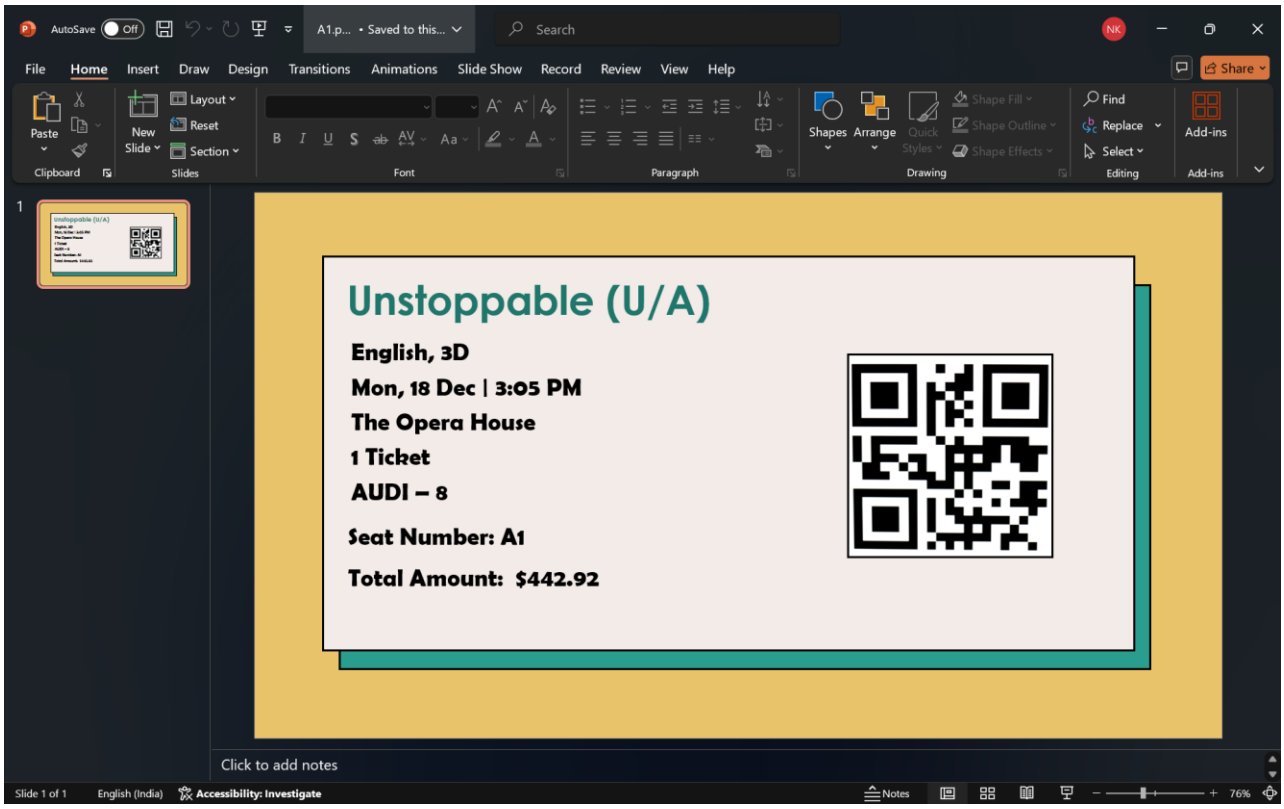

Fig 5.6 Movie Ticket Generated Successfully

CHAPTER 6

CONCLUSION

The Ticket Master Bot project using UiPath Studio effectively automates the entire movie ticket generation process, from reading participant details to creating personalized PDF tickets. By utilizing Excel for storing participant data and PowerPoint as the ticket template, this solution minimizes manual effort, ensuring both accuracy and consistency across all tickets.

The workflow starts by reading participant names and seat numbers from the Excel sheet, which are then used to update the placeholders in the PowerPoint template. UiPath's robust automation capabilities enable seamless replacement of details on the ticket template, followed by saving the finalized tickets as PDF files. This process is repeated for every participant, generating individual movie tickets automatically. The PDFs are stored in an organized Output Folder, making them easily accessible for distribution or printing.

Additionally, this automation can be extended to include advanced features such as automated ticket emailing to participants or generating detailed logs to track the workflow's progress. The system is highly scalable, capable of efficiently handling large datasets without compromising on performance or accuracy.

In conclusion, the Ticket Master Bot enhances productivity by eliminating the need for manual ticket creation, ensuring error-free results, and significantly reducing the time required for generating personalized tickets in bulk. Whether for movie events, entertainment shows, or corporate functions, this UiPath-powered solution delivers a reliable, efficient, and scalable ticketing automation system.

APPENDIX

SAMPLE PROCESS

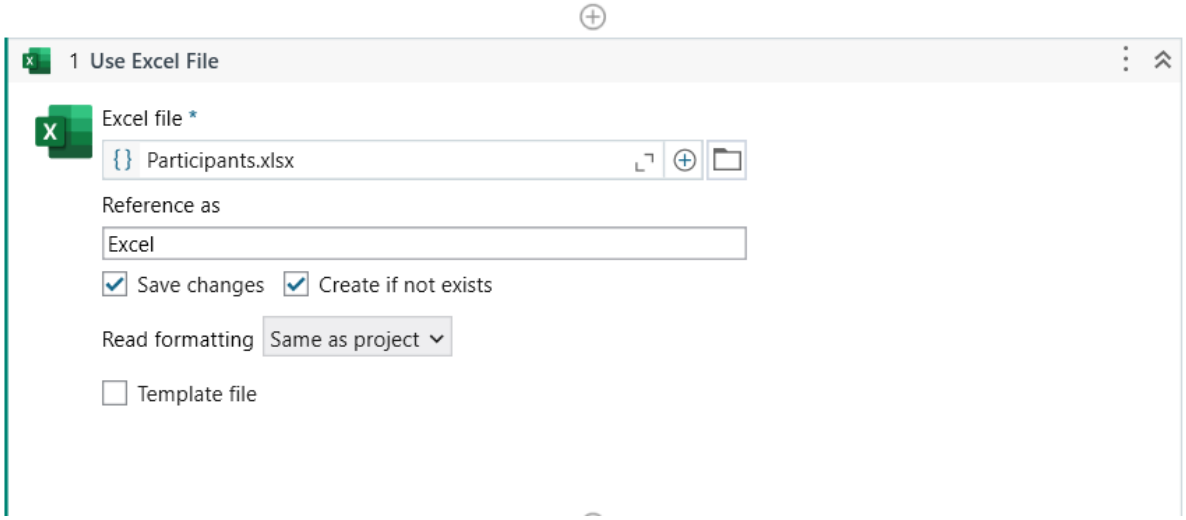

Fig 6.1 Use Excel File

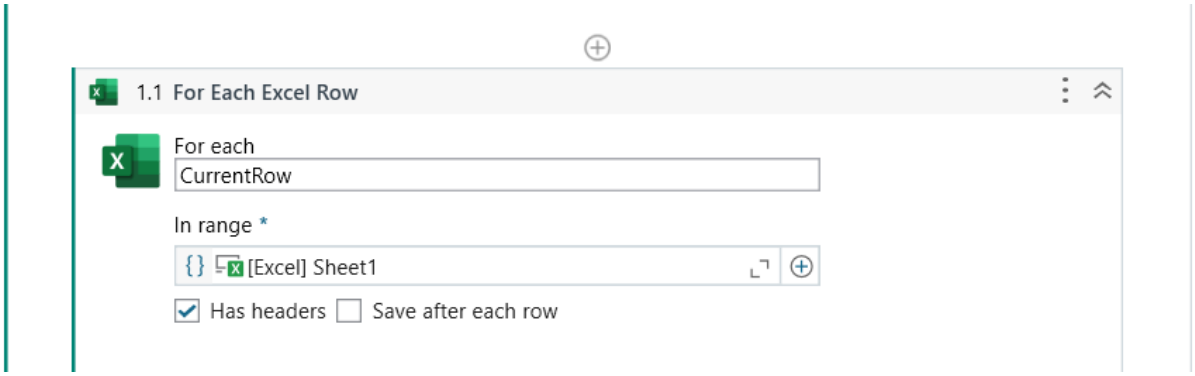

Fig 6.2 For Each Excel Row

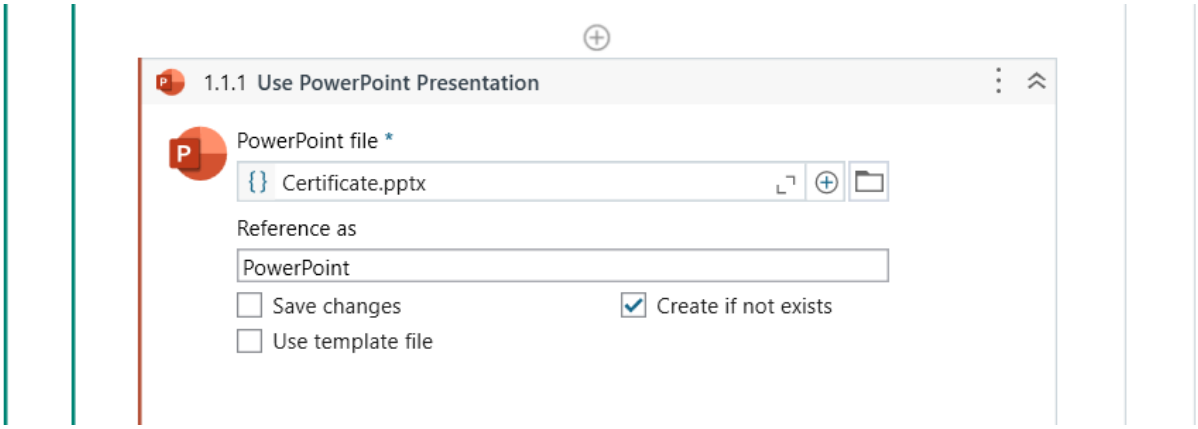

Fig 6.3 Use PowerPoint Presentation

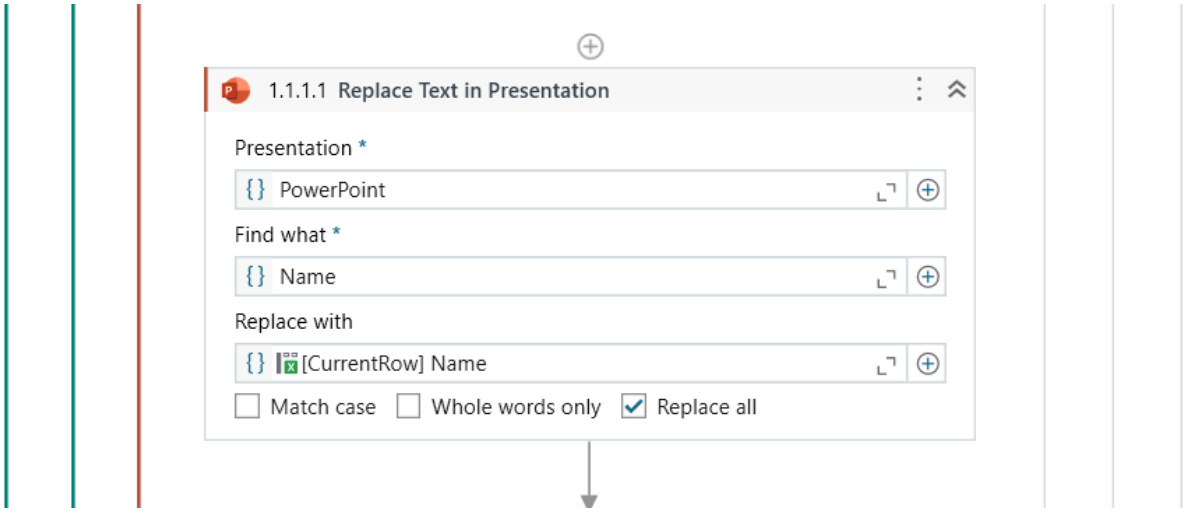

Fig 6.4 Replace Text in Presentation

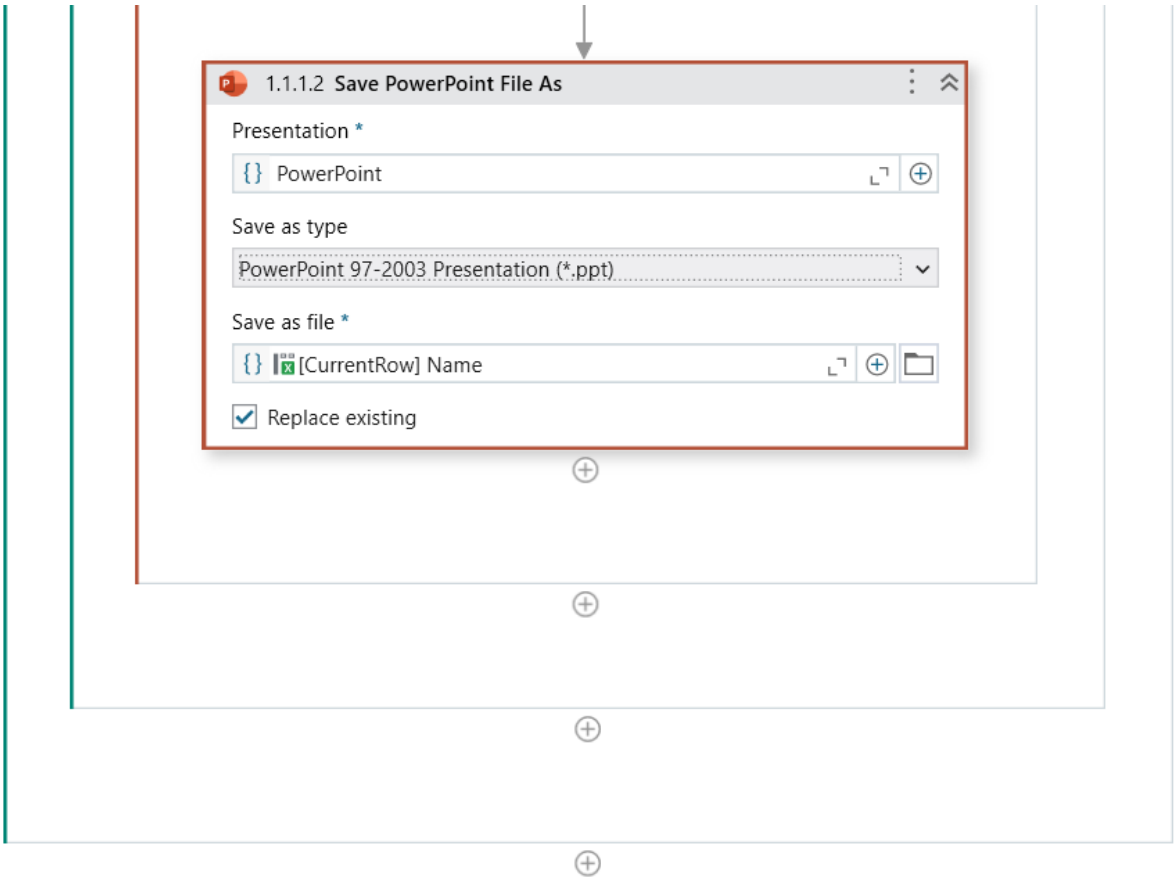

Fig 6.5 Save PowerPoint as File

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2. UiPath Documentation: The official documentation of UiPath features and functionalities https://docs.uipath.com/