ANIME EPISODE TRACKER

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report “ANIME EPISODE TRACKER” is the bonafide work of “HARINE M (220701083)” who carried out the project work for the subject OAI1903-Introduction to Robotic Process Automation under my supervision.

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ABSTRACT

The Anime Episode Tracker Bot, developed using UiPath Studio, is a powerful automation tool designed to streamline the process of tracking anime episode releases for fans and digital content platforms. This bot automates the otherwise manual task of monitoring multiple anime series by scraping popular anime websites, matching release dates with user preferences, and sending timely notifications when new episodes are available. Additionally, the bot includes a web scraping module that collects data on trending titles, viewer reviews, and popular genres. Structured into Excel for ease of analysis, this data enables the bot to generate daily reports in DOC format, summarizing top-rated series, seasonal trends, and audience favorites. This automation significantly reduces manual effort, minimizes the risk of missing updates, and provides platforms with valuable insights that can be used to enhance anime recommendations, curate content, and adapt to viewer interests. The Anime Episode Tracker Bot exemplifies how Robotic Process Automation (RPA) can improve content tracking, increase operational efficiency, and support data-driven decisions in digitalmedia.

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Initially we thank the Almighty for being with us through every walk ofour life and showering his blessings through the endeavour to put forth this report. Our sincere thanks to our Chairman Thiru. S.Meganathan, B.E., F.I.E., our Vice Chairman Mr. M.Abhay Shankar, B.E., M.S., and our respected Chairperson Dr.

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SAIKRISHNA H (220701238)

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INTRODUCTION

1.1 GENERAL

In the current digital landscape, keeping up with new anime episodes and trending titles is a challenge for both individual fans and content platforms. With hundreds of series available across various genres, manually tracking the release dates, checking updates from multiple anime websites, and staying informed about the latest releases can be a time-consuming and error-prone task. This process involves repeatedly searching for updates, navigating multiple websites, and verifying episode information, all of which can be overwhelming for anime enthusiasts, particularly those who follow multiple series or want to stay updated on the latest trends. Furthermore, missing crucial updates due to manual tracking can lead to frustration for fans who want to watch episodes as soon as they're released.

To address these challenges, the Anime Episode Tracker Bot offers a solution using Robotic Process Automation (RPA) to streamline the episode tracking process. The bot automates the retrieval of episode information from well-known anime websites, including details on release dates, series popularity, and other relevant updates. It consolidates this data based on user preferences, ensuring that they receive timely notifications when a new episode is available.

In addition to episode tracking, the bot incorporates a powerful web scraping module that goes beyond individual series updates. It gathers broader data on trending anime, user ratings, seasonal favorites, and genre analysis from popular sources. This data is neatly structured into a comprehensive Excel file, allowing for easy analysis. The bot also includes the capability to send email alerts, notifying users of key updates or new trends, making it a practical tool for both fans and content platforms that wish to keep up with the anime community.

The bot not only enhances personal viewing experiences but also enables platforms to stay ahead of trends and offer well-informed recommendations to their audience. The Anime Episode Tracker Bot demonstrates the effectiveness of RPA in digital content management, providing a scalable, reliable, and user-friendly solution that simplifies anime tracking for fans and platforms alike.

1.2 EXISTING SYSTEM

The current process of tracking anime episode releases and trending series is manual and time-consuming. Fans or content managers must visit multiple anime websites to check release dates, search for updates on ongoing series, and manually gather information on trending titles. This process often involves repeated visits to various sources, making it tedious to stay informed on new episodes or shifts in anime popularity. Additionally, manually recording this information for future reference is prone to errors, particularly for users who follow numerous series or need to stay updated on a wide range of anime content. The lack of automation in this system also means users must frequently revisit websites to check for updates, which can be inefficient and lead to missed releases or incomplete tracking.

1.3 PROPOSED SYSTEM

The Anime Episode Tracker automates the process of tracking anime episodes for users. By inputting the anime title, the bot retrieves the latest episode details, including release dates, episode numbers, and streaming platforms. It organizes the data into a convenient format, sending users timely notifications for new episodes and ensuring they never miss an update. This solution saves time, improves organization, and enhances the anime-watching experience for fans, making it easier to stay on top of their favorite shows.

CHAPTER 2

LITERATURE REVIEW

2.1 GENERAL

In recent years, automation has significantly transformed various industries, particularly in areas involving repetitive tasks, like tracking television shows. Robotic Process Automation (RPA) has gained traction as a tool to improve efficiency, reduce human error, and streamline workflows. RPA tools, like UiPath and Automation Anywhere, are used to automate manual tasks across different sectors, including customer service, healthcare, and entertainment, by mimicking human actions such as data extraction, form filling, and decision- making.

The field of automation has proven especially useful for anime enthusiasts, where keeping track of episode releases, streaming platforms, and show schedules can be cumbersome. A study by Chien et al. (2015) emphasized the efficiency of using automation in managing TV show releases, focusing on how automated systems can track episodes and provide timely notifications to users. In the context of anime, an automated solution could help users stay up-to-date on the latest episode releases, making the anime-watching experience more seamless.

Data scraping and web automation have been widely used to track and gather episode details from streaming platforms. Tsai and Lin (2018) developed a system that used web scraping to collect TV show data and create personalized schedules for viewers. While their system was effective, it did not feature integration with notification systems or customized episode tracking, a functionality that the Anime Episode Tracker aims to incorporate. By integrating RPA technology, the bot can collect episode details, such as release dates, episode numbers, and streaming platforms, and notify users when new episodes are released.

Additionally, Zhu and Zhang (2020) highlighted the importance of personalized solutions in managing entertainment content. The Anime Episode Tracker allows users to customize their preferences, ensuring that notifications and updates are tailored to the shows they are following. This personalization is an essential feature, as it allows the system to track episodes based on user preferences like anime title, episode release dates, and streaming platforms.

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.

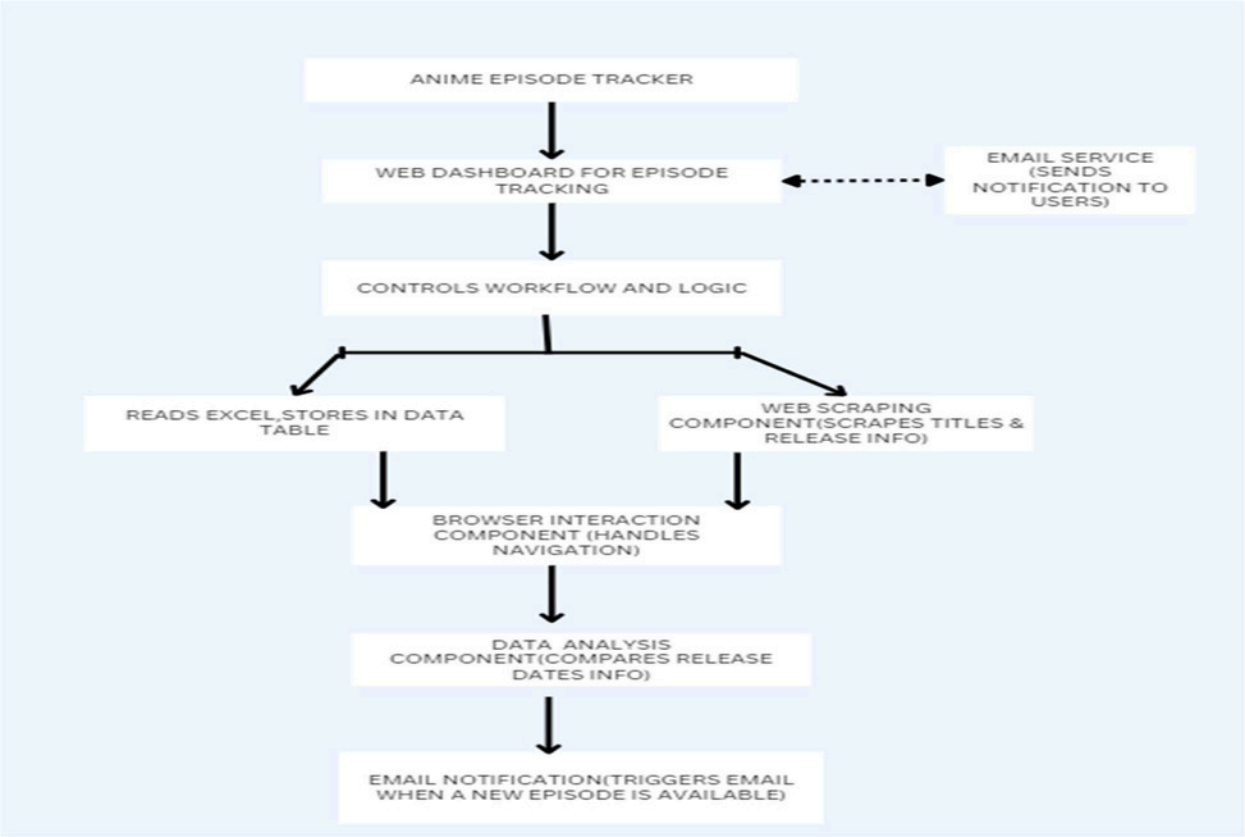


Fig 3.1 System Flow Design

3.2 ARCHITECTURE DIAGRAM

An Architecture Diagram for the Anime Episode Tracker visually represents the system's components and their interactions. It highlights the user interface, data extraction, processing, storage, and notification layers, showing how episode details are collected, organized in Excel, and sent via email. This diagram simplifies understanding the overall system design and flow, helping stakeholders grasp how each part contributes to the automation process.

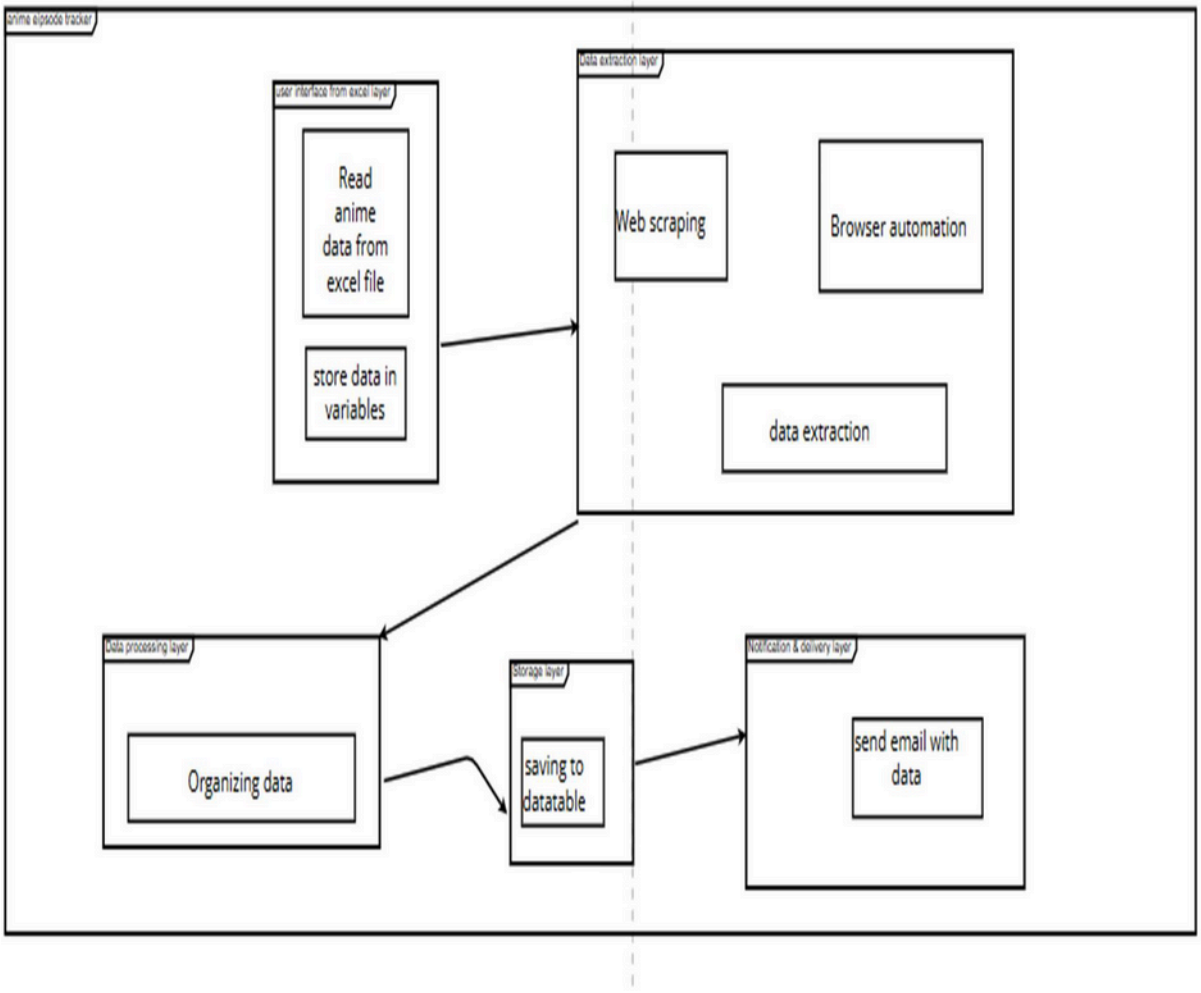


Fig 3.2 Architecture Diagram

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. A sequence diagram is a type of UML (Unified Modeling Language) diagram that illustrates the interactions and messages exchanged between different components or objects in a system over time. It provides a dynamic view of a system, focusing on the order of interactions between objects or components.

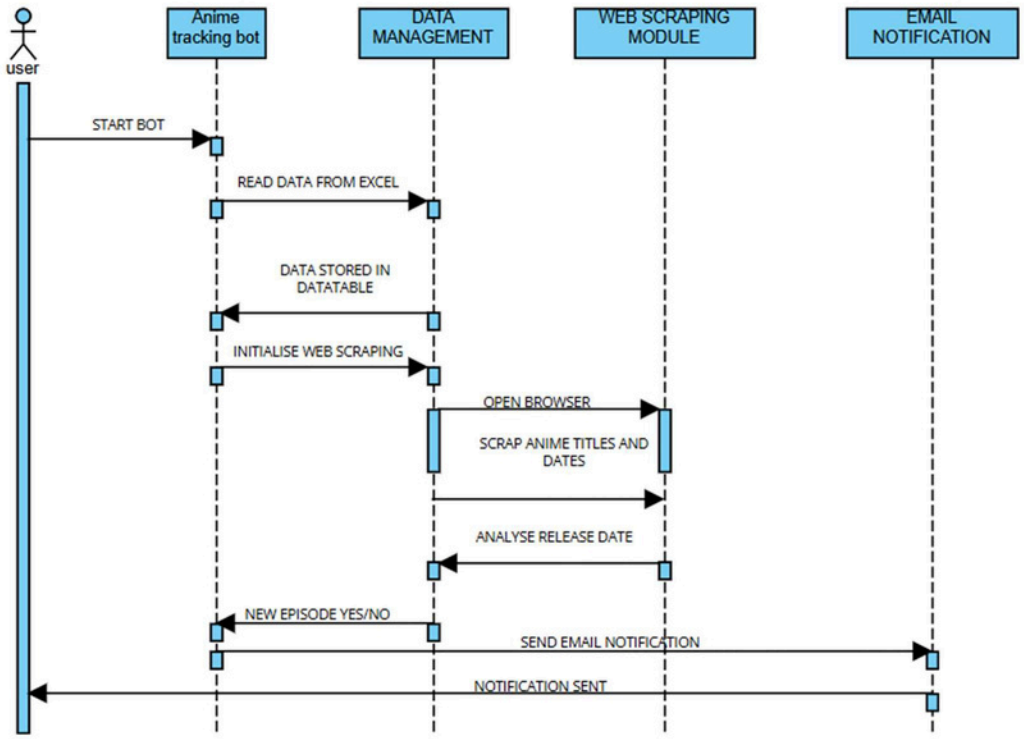


Fig 3.2 Sequence Diagram

CHAPTER 4

PROJECT DESRIPTION

4.1 CREATING PROJECT

Open UiPath Studio and verify the version of the application. While using the latest version is not mandatory, it is recommended since it might include new features or changes to existing Packages/Activities/Properties, which can enhance the functionality of your project. Once UiPath Studio is open, create a new process, name the project (for example, "Anime Episode Tracker"), and choose the directory where the UiPath project files will be stored. After completing these steps, you are ready to proceed with the next steps in creating the project.

4.2 PACKAGES REQUIRED

For the successful completion of the Anime Episode Tracker, it's crucial to download the necessary packages to enable the required activities. The following packages should be installed:

UiPath.WebAPI.Activities: For web scraping and data extraction.

UiPath.Excel.Activities: To work with Excel files and organize flight data.

UiPath.Mail.Activities: For sending the data via email.

UiPath.UIAutomation.Activities : For interacting with web pages.

UiPath.System.Activities: For basic workflow automation .

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 application Scope
2. Read range
3. Assign
4. Open Browser
5. Data Scraping
6. Type into
7. Send SMTP Mail Messages
8. For each row
9. If activity
10. Message

4.3.2 EXPLAINING SEQUENCE

Here's the sequence of the Anime Episode Tracker project, detailing each step in the workflow from start to finish:

1. User Input Collection :

   The bot prompts the user to enter essential anime details (anime name, season, and episode number) using an Input Dialog activity. This step ensures the bot has the necessary parameters to track episodes accurately.

2. Open Browser and Navigate to Anime Website :

   Using the Open Browser activity, the bot opens a predefined anime website (e.g., MyAnimeList). The bot navigates to the page where episode details can be found based on the user's input.

3. Data Scraping :

   The bot uses Data Scraping activities to extract relevant episode details from the website, including episode title, release date, and episode number. If the bot encounters issues in scraping data (such as slow page loading), retry mechanisms may be implemented to reattempt the scraping.

4. Organize and Store Data in DataTable:

   The scraped episode data is formatted and organized using Datables and other activities. This data is saved into an Datatable to create a structured and easily readable record of the tracked episodes.

5. Send Email with Anime Details :

   The bot uses the Send SMTP Mail Messages activity (or another email activity, depending on the email service) to attach the Excel file and send it to the user's email address. A message confirming successful email delivery may also be displayed to the user using a Message Box. Display Success Notification : Once
6. the email is sent successfully, a final Message Box or notification confirms that theentire process has been completed. This sequence mirrors your original format and word count adapted to your Anime Episode tracker.

CHAPTER 5

OUTPUT SCREENSHOTS

AnimeName	EpisodesWatched
One Piece	770

Fig 5.1 Reading data from excel file

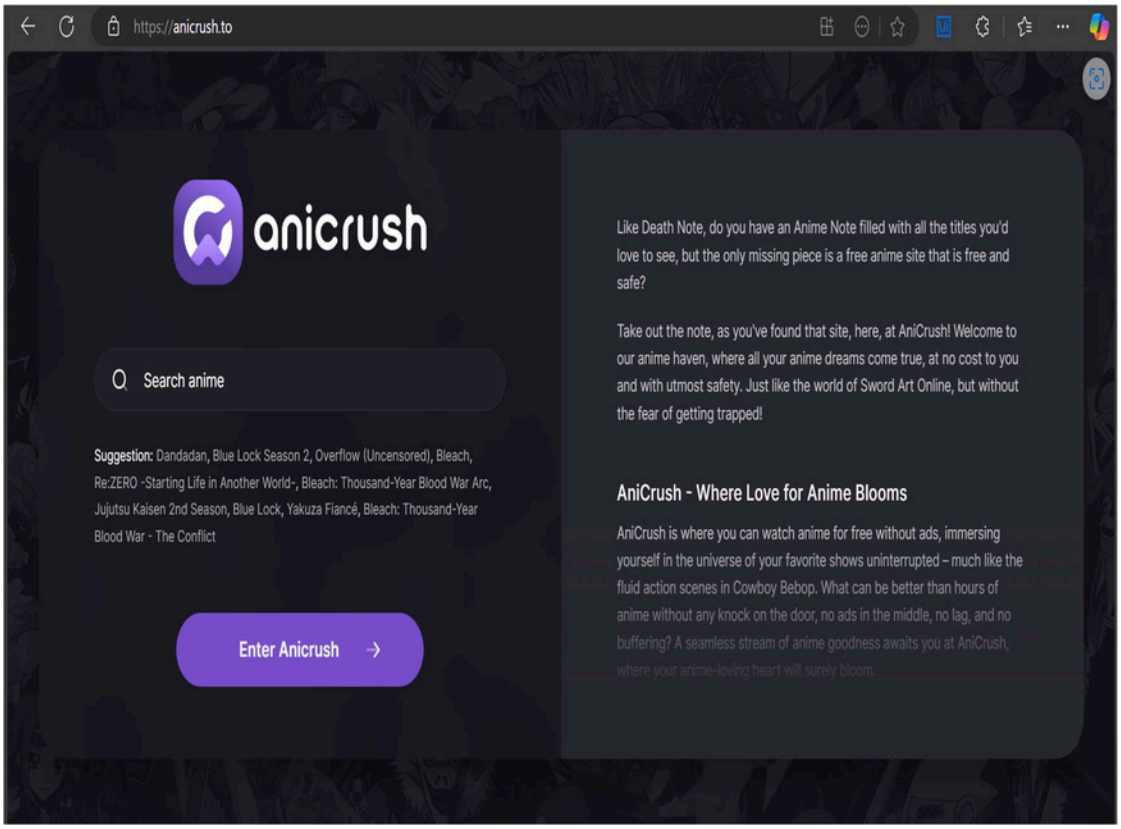


Fig 5.2 Opening the browser

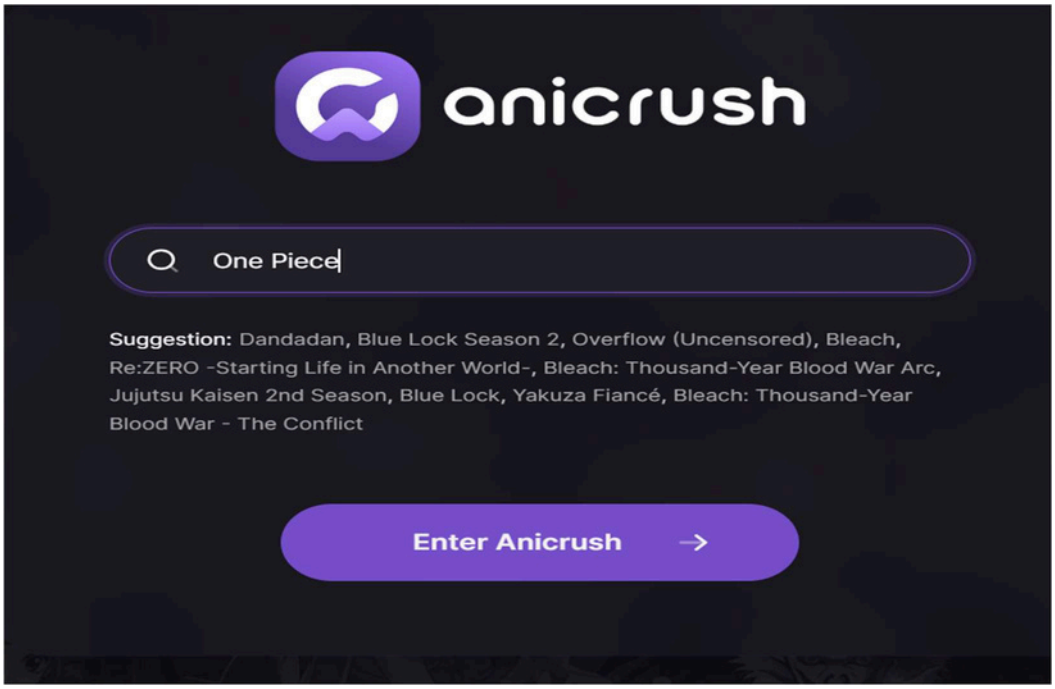


Fig 5.3 Searching for the anime

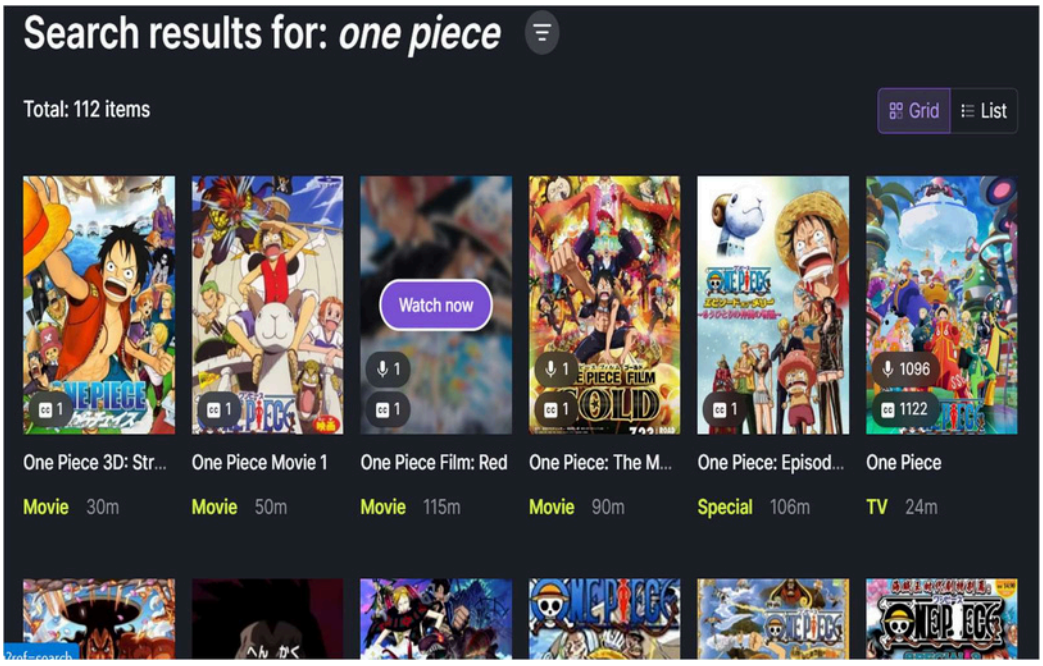


Fig 5.4 Scraping the anime titles

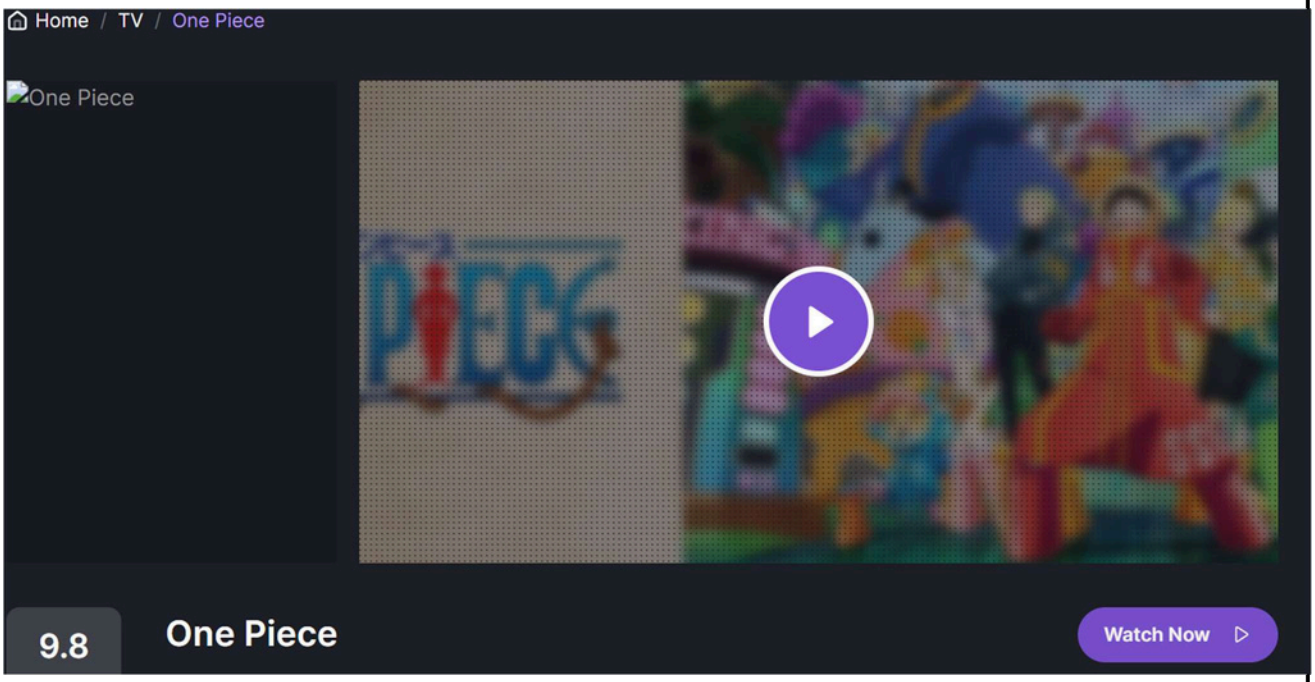


Fig 5.5 Selecting the particular anime

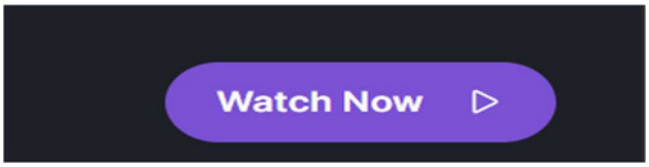


Fig 5.6 Selecting the watch button

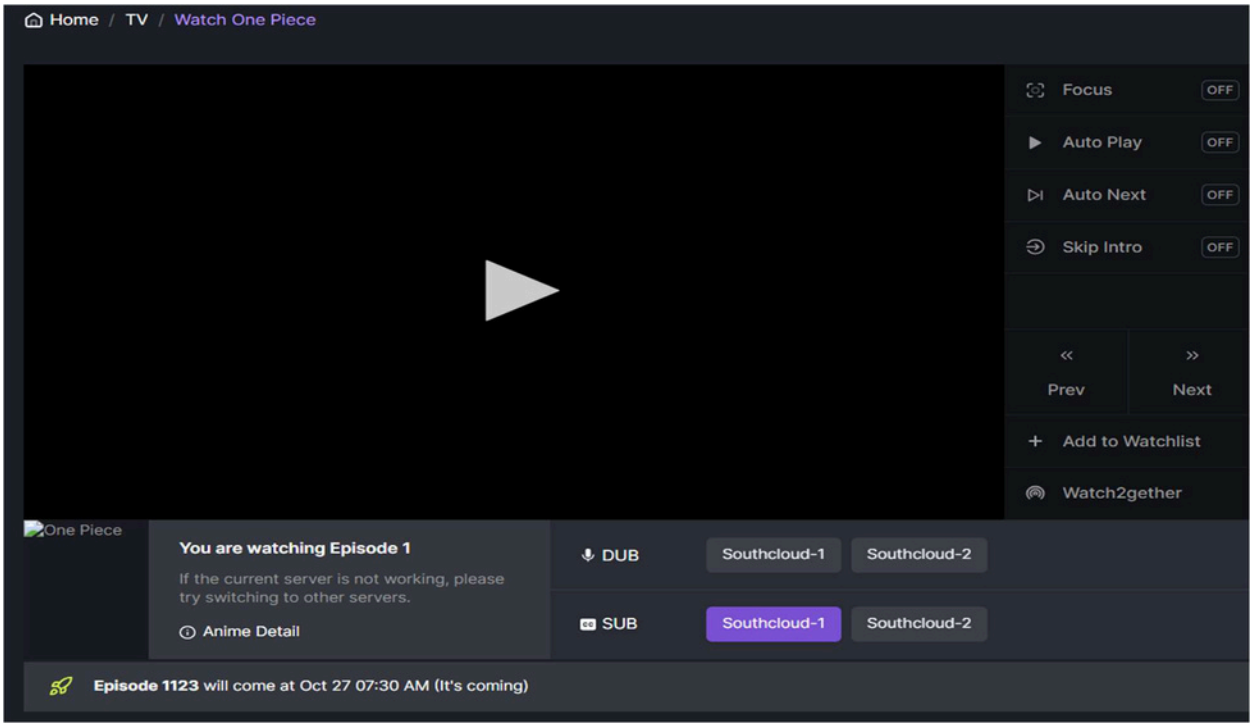


Fig 5.7 Leads to the information page

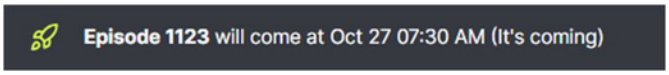


Fig 5.8 Data Scraping of release info

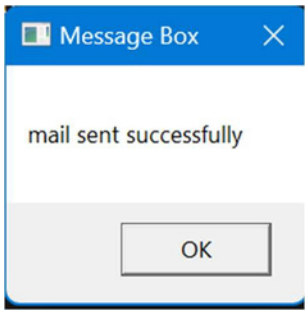


Fig 5.9 Successful message

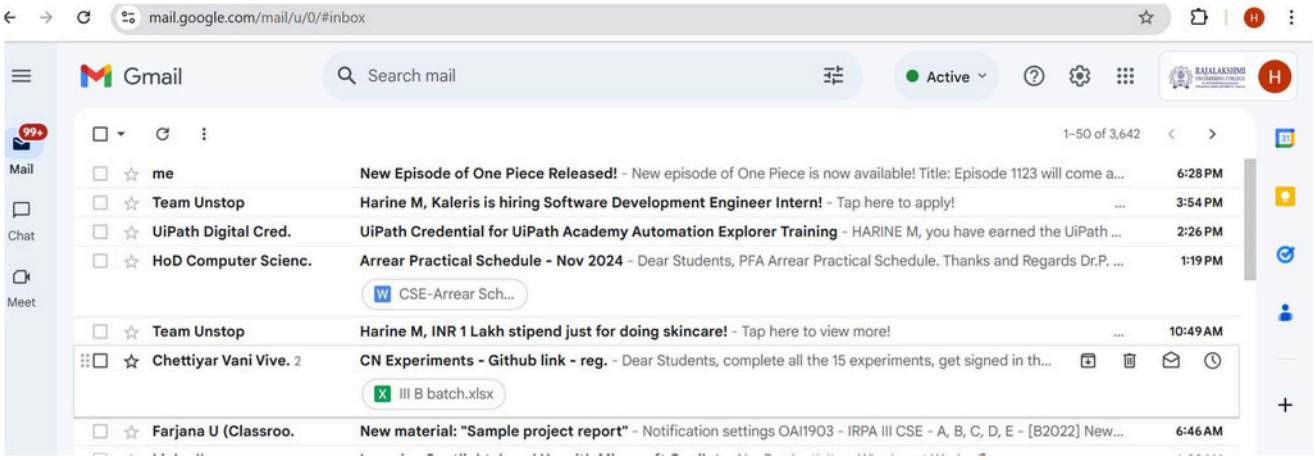


Fig 5.10 Successfully received mail

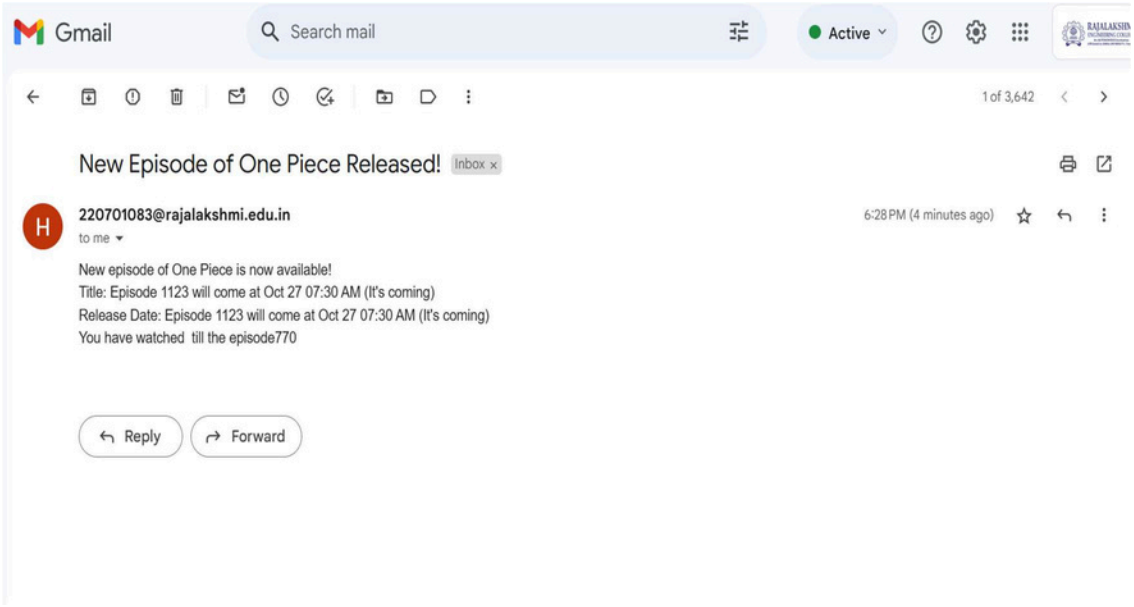


Fig 5.11 Received mail

CHAPTER 6

CONCLUSION

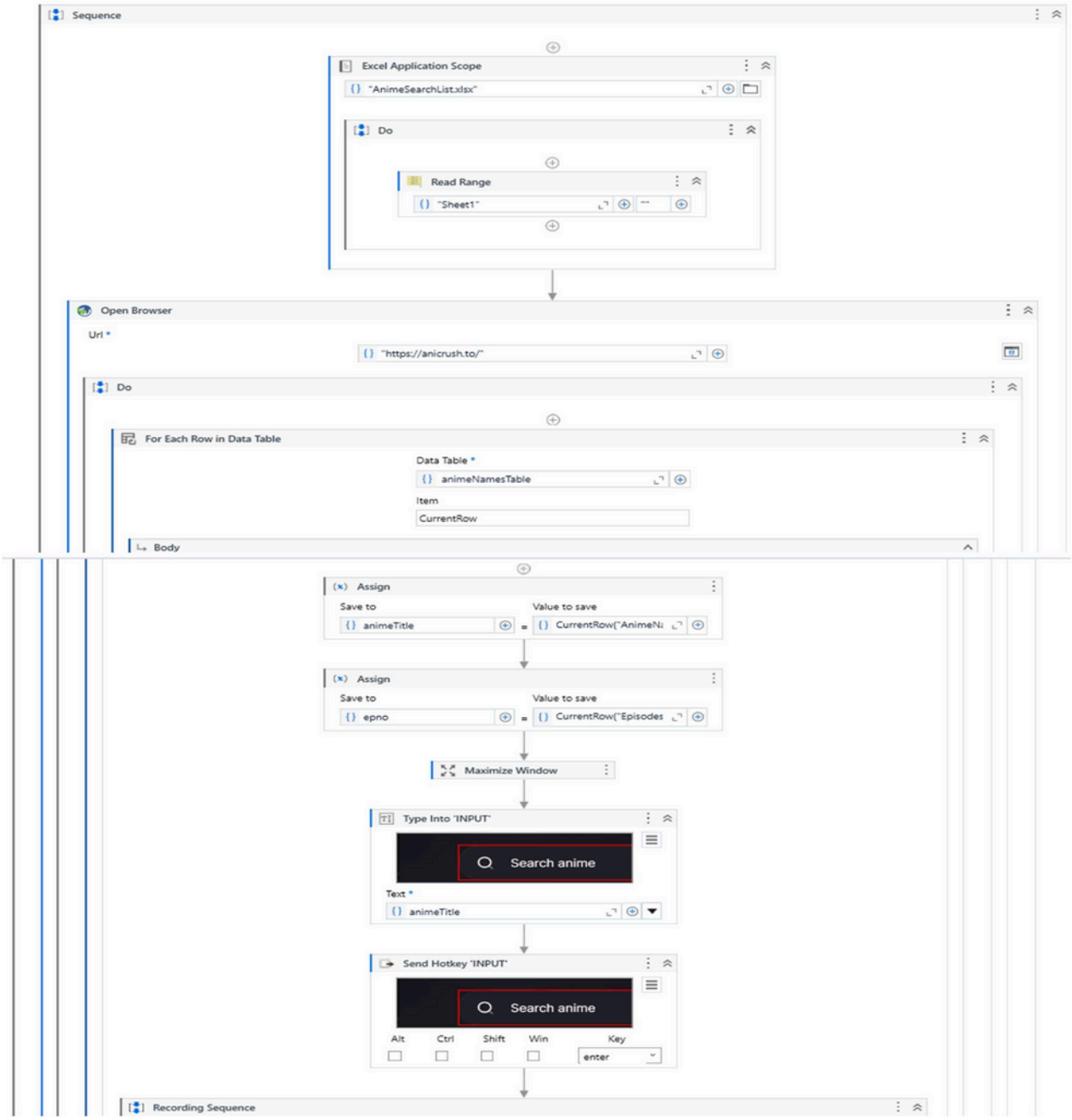
The Anime Episode Tracker streamlines the process of tracking and organizing anime episodes. Using UiPath RPA tools, the bot automates data scraping, stores episode details in an Excel file, and sends the information via email. This reduces manual effort, saves time, and ensures accurate data delivery, making anime episode tracking more efficient.

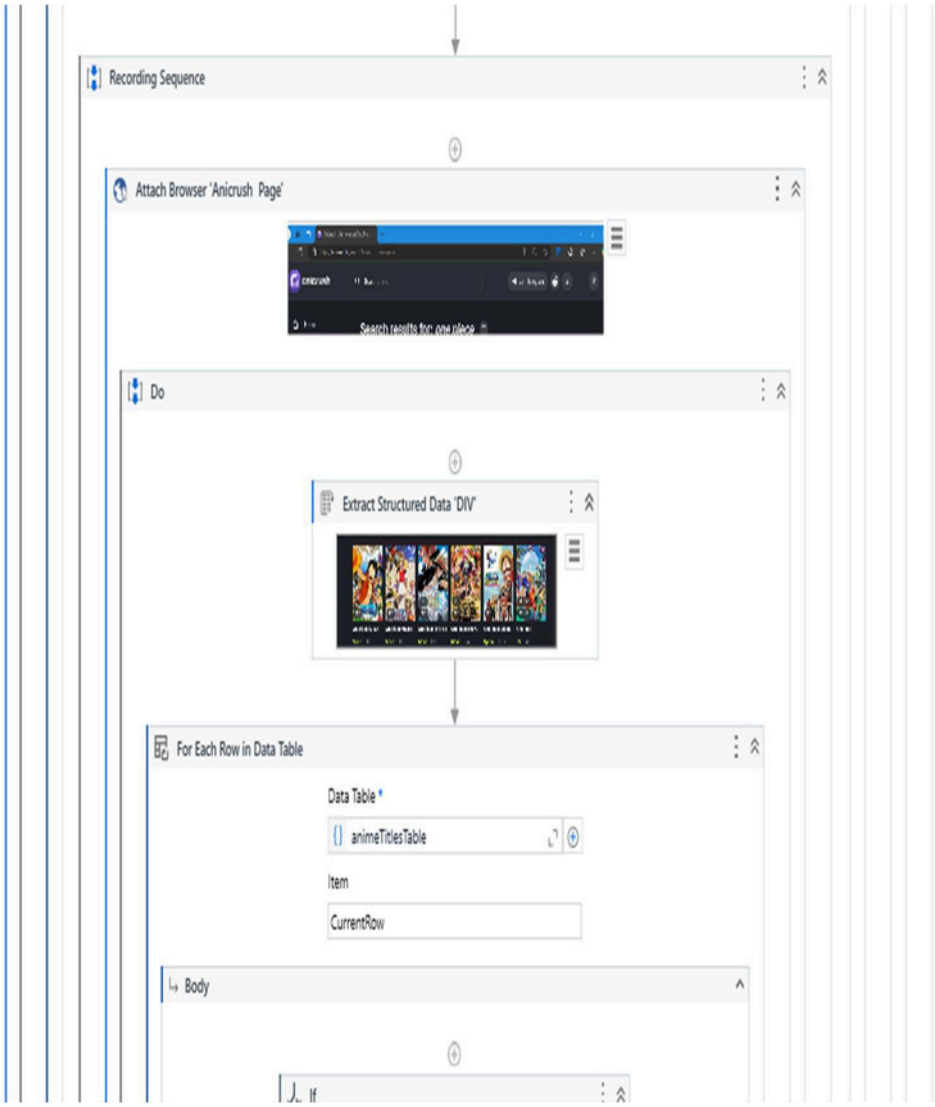
The bot also incorporates error-handling and retry mechanisms, ensuring reliability even in case of slow website loads or other issues. By providing structured episode details in Excel, the bot allows users to easily keep track of their favorite anime shows and never miss a new release.

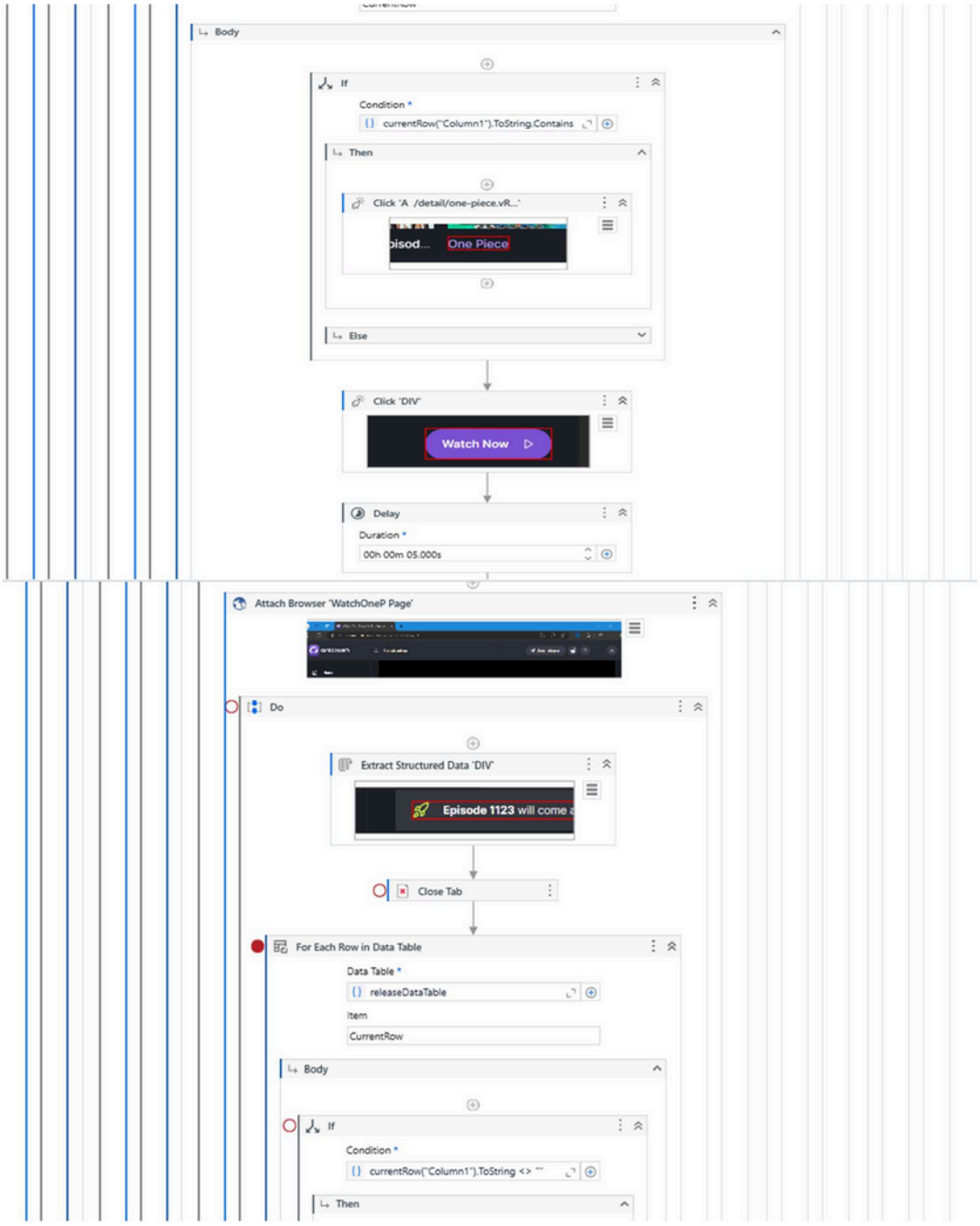
In conclusion, the Anime Episode Tracker demonstrates the power of RPA to automate time-consuming tasks, improving workflow efficiency and user experience. It offers a practical solution for anime enthusiasts, simplifying the process of staying updated with episode releases through accurate and timely data delivery.

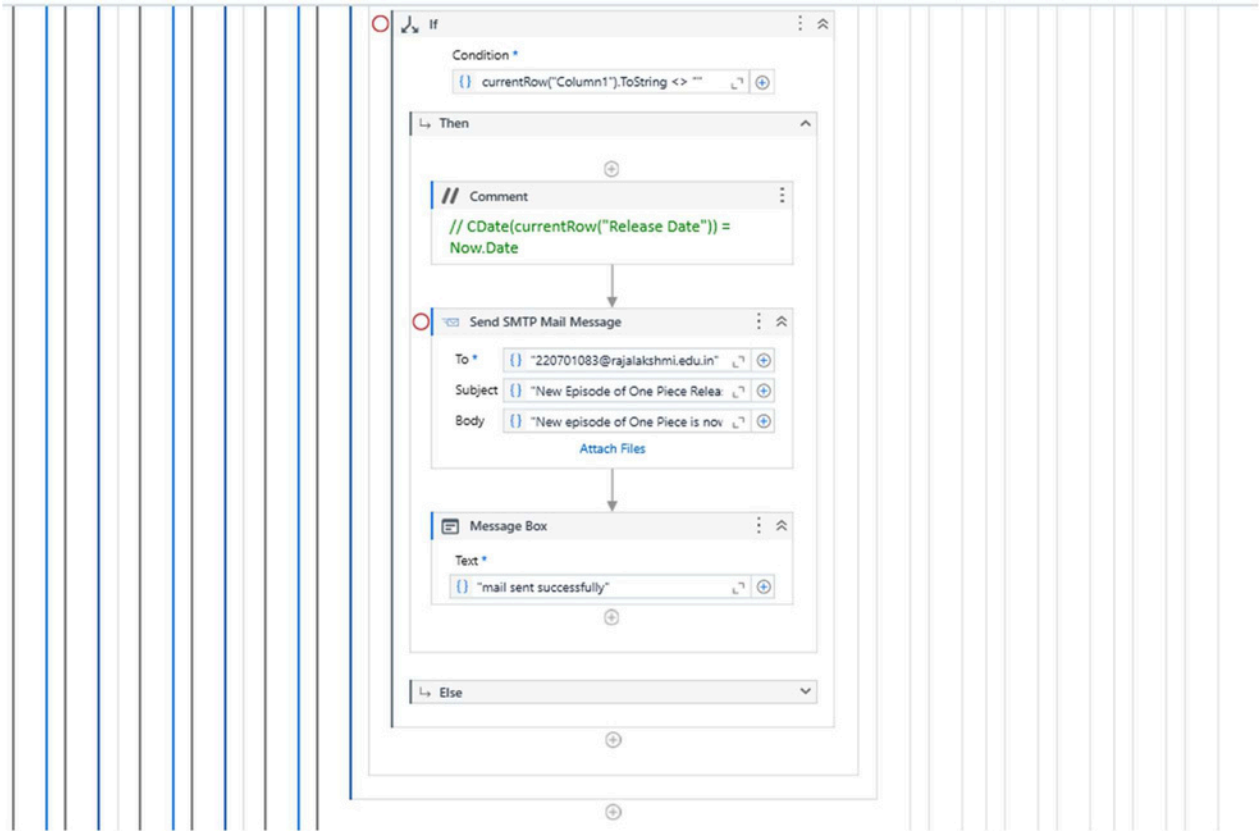
APPENDIX

SAMPLE PROCESS




Recording Sequence
Attach Browser 'Anicrush Page'
Search results for: one piece
Do
Extract Structured Data 'DIV'
For Each Row in Data Table
Data Table *
animeTitlesTable
Item
CurrentRow
Body
If


Body
If
Condition *
currentRow("Column1").ToString.Contains
Then
Click 'A /detail/one-piece.vR...'
One Piece
Else
Click 'DIV'
Watch Now
Delay
Duration *
00h 00m 05.000s
Attach Browser 'WatchOneP Page'
Do
Extract Structured Data 'DIV'
Episode 1123 will come
Close Tab
For Each Row in Data Table
Data Table *
releaseDataTable
Item
CurrentRow
Body
If
Condition *
currentRow("Column1").ToString <> ""
Then


If
Condition *
currentRow("Column1").ToString <> ""
Then
Comment
// CDate(currentRow("Release Date")) =
Now.Date
Send SMTP Mail Message
To *
"220701083@rajalakshmi.edu.in"
Subject
"New Episode of One Piece Relea
Body
"New episode of One Piece is nov
Attach Files
Message Box
Text *
"mail sent successfully"
Else

REFERENCES

1. UiPath Forum: The UiPath Forum community where users share their experiences and solutions. https://forum.uipath.com/
2. UiPath Documentation: The official documentation of UiPath features and functionalities https://docs.uipath.com/