



MODEL INSTITUTE OF ENGINEERING AND
TECHNOLOGY

Project Report

Trip mate bot

Business Process Automation with RPA lab

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Abstract

The Trip Mate Bot is an automation solution developed using UiPath that streamlines the process of generating flight details from MakeMyTrip (MMT) and organizing them into an Excel file. The bot interacts with the user to collect necessary inputs, such as departure place and destination, and then utilizes web scraping techniques to extract flight information from the MakeMyTrip website. The extracted data is then structured and formatted into an Excel file, ensuring easy readability and accessibility. Once the Excel file is created, the Trip Mate Bot utilizes the SMTP functionality to send the generated flight details to the user via email. This automated process eliminates the need for manual data entry and minimizes the risk of human error. By combining web scraping, data manipulation, and email integration, the Trip Mate Bot provides a seamless and efficient solution for obtaining and sharing flight information. The Trip Mate Bot not only saves time and effort but also enhances the accuracy and reliability of flight information retrieval. Its user-friendly interface and automated functionalities make it a valuable tool for individuals and organizations seeking to streamline their travel planning processes.

Introduction:

The Trip Mate Bot is an innovative automation solution designed to simplify and streamline the process of generating flight details from MakeMyTrip (MMT) and organizing them into a convenient format. With the increasing popularity of online travel booking platforms, such as MakeMyTrip, the Trip Mate Bot offers a time-saving and efficient way to extract flight information and create an Excel file for easy reference and sharing. Traditionally, obtaining flight details from websites like MakeMyTrip required manual data entry, which is not only time-consuming but also prone to human errors. The Trip Mate Bot addresses this challenge by automating the data retrieval process, eliminating the need for manual intervention and ensuring accurate and reliable results. By leveraging web scraping techniques, the bot interacts with the MakeMyTrip website and collects the necessary flight information based on user-defined parameters, such as travel dates and destinations. This automated data extraction significantly reduces the time and effort required to gather flight details, allowing users to focus on other aspects of their travel planning. Once the flight details are obtained, the Trip Mate Bot organizes the information into an Excel file, providing a structured and easily accessible format for users to review and manage their travel itineraries. The generated Excel file includes relevant flight information such as departure and arrival times, airlines, ticket prices, and any other details available on the MakeMyTrip website.

Objectives

The primary objective of this project is to create a UiPath bot that takes input from the user and then automate the website and create an excel list and mail it. The specific objectives include:

- Automate the process of extracting flight details from MakeMyTrip,
- To ensure accurate and reliable flight information retrieval.
- The bot aims to streamline the organization of flight details by generating a structured Excel file.
- Integration of Email to send the attachment to users automatically

Problem Statement

"Time-consuming process of retrieving, organizing, and sharing flight details from MakeMyTrip, which can be automated to improve efficiency and accuracy."

Methodology

1. **User Interaction:** The bot interacts with the user to collect input parameters such as travel dates and destinations, obtaining the necessary information to search for flights on MakeMyTrip.
2. **Web Scraping:** Using web scraping techniques, the bot navigates to the MakeMyTrip website and extracts relevant flight details based on the user-defined parameters. It retrieves information such as departure and arrival times, airlines, ticket prices, and any other available details.
3. **Data Manipulation:** The extracted flight details are processed and structured into a suitable format for further analysis and presentation. The bot organizes the data, ensuring it is accurately captured and arranged in a structured manner.
4. **Excel File Generation:** The Trip Mate Bot creates an Excel file to store the organized flight details. It populates the spreadsheet with the extracted information, making it easily readable and accessible for the user.
5. **Email Integration:** The bot utilizes the SMTP functionality to automatically send the generated Excel file containing the flight details to the user's email address.
6. **Error Handling:** The Trip Mate Bot incorporates error handling mechanisms to handle any unexpected scenarios that may occur during the automation process. It detects and manages errors to ensure smooth execution and provide a robust user experience.

UiPath Packages and Activities Used

The following Packages and Activities were used to develop the UiPath bot with AI capabilities:

- **UiPath Studio:** A platform for creating automation workflows.
- **Make my trip.com:** The website where full automation has been done

UiPath. Core. Activities Package

- Input Dialogues: To take the departure and arrival destination.
- Type Into: To write in the website.
- Open Browser: Opens a URL through web browser.
- Data scraping: To scrap the data found on the internet.
- Send Smtip mail: To send the data as attachment.

Future Enhancements

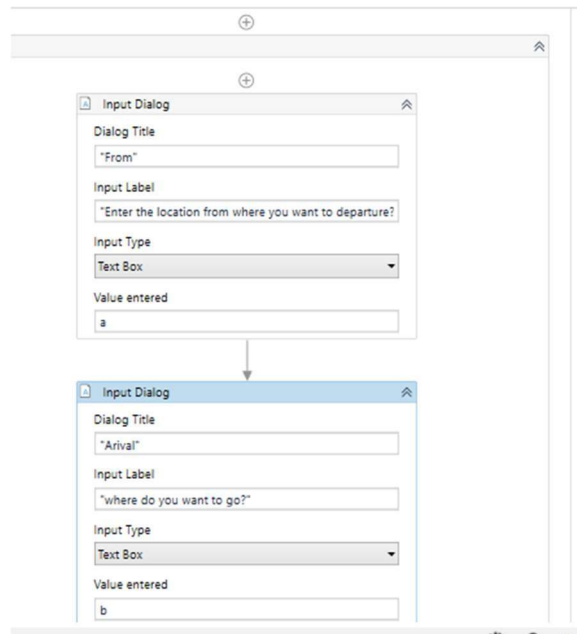
1. **Integration with Additional Travel Booking Platforms:** The Trip Mate Bot can be enhanced to integrate with other popular travel booking platforms, such as Expedia or Booking.com. This expansion would allow users to retrieve flight details from multiple sources, providing a broader range of options and increasing flexibility in travel planning.
2. **Advanced Data Analysis:** The bot can be enhanced with advanced data analysis capabilities. By incorporating machine learning and data mining techniques, the Trip Mate Bot can analyze historical flight data, predict price trends, and provide recommendations to users for selecting the most cost-effective and convenient flights.
3. **Customized Itinerary Generation:** Future enhancements can include the ability to generate customized itineraries based on user preferences. The bot can consider factors such as layover durations, preferred airlines, and specific requirements (e.g., wheelchair accessibility) to tailor the generated itineraries to individual user needs.
4. **Multi-Platform Support:** Currently, the Trip Mate Bot is developed using UiPath, but future enhancements can focus on making it compatible with other automation platforms, allowing users to deploy and run the bot on different automation frameworks as per their preference and organizational requirements.
5. **Additional Communication Channels:** In addition to email integration, future enhancements can incorporate support for other communication channels, such as instant messaging platforms or SMS. This would provide users with more flexibility in receiving and accessing their flight details.

Detailed Process to Develop This Bot

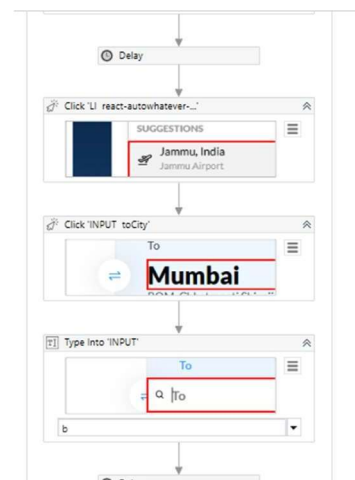
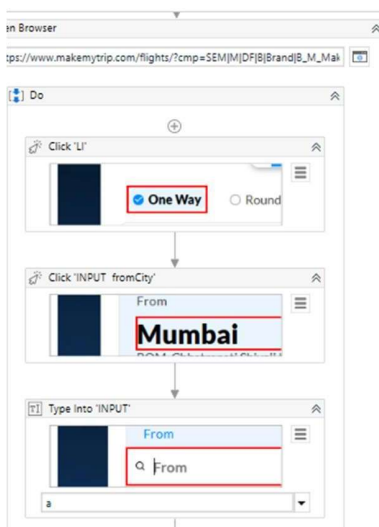
1. Start the automation project and set up the necessary variables and configurations.
2. Use the "Input Dialogue" activity to interact with the user and collect input parameters such as travel dates and destinations.
3. Use the "Open Browser" activity to navigate to the MakeMyTrip website.
4. Use the "Click" activity to interact with the relevant elements on the website, such as selecting the flight search option or entering the travel parameters.
5. Use the "Type Into" activity to input the collected user parameters into the appropriate fields on the MakeMyTrip website.
6. Use the "Data Scraping" activity to extract the flight details from the website. Set up the scraping wizard to identify and extract the required flight information, such as departure and arrival times, airlines, and ticket prices.
7. Use the "Write Range" activity to save the extracted flight details into an Excel file. Specify the destination path and the appropriate range in the Excel sheet.
8. Use the "Excel Integration Scope" activity to read the saved Excel file and access the flight details for further processing.
9. Implement any necessary data manipulation or formatting steps to structure the flight details as required.
10. Use the "Send SMTP Mail" activity to send an email with the generated flight details. Set up the email parameters, including the recipient's email address, subject, and body content.
11. Configure the email settings within the "SMTP Mail" activity, including the SMTP server, port, and authentication details.
12. Test the bot by running the automation and verifying that it successfully collects the user inputs, navigates to MakeMyTrip, extracts the flight details, saves them to an Excel file, and sends the email.
13. Implement error handling and exception handling mechanisms to handle any unexpected scenarios during the automation process.
14. Fine-tune and optimize the bot based on user feedback and further testing to ensure its reliability, efficiency, and accuracy.

COMPLETE WORKFLOW OF THE BOT

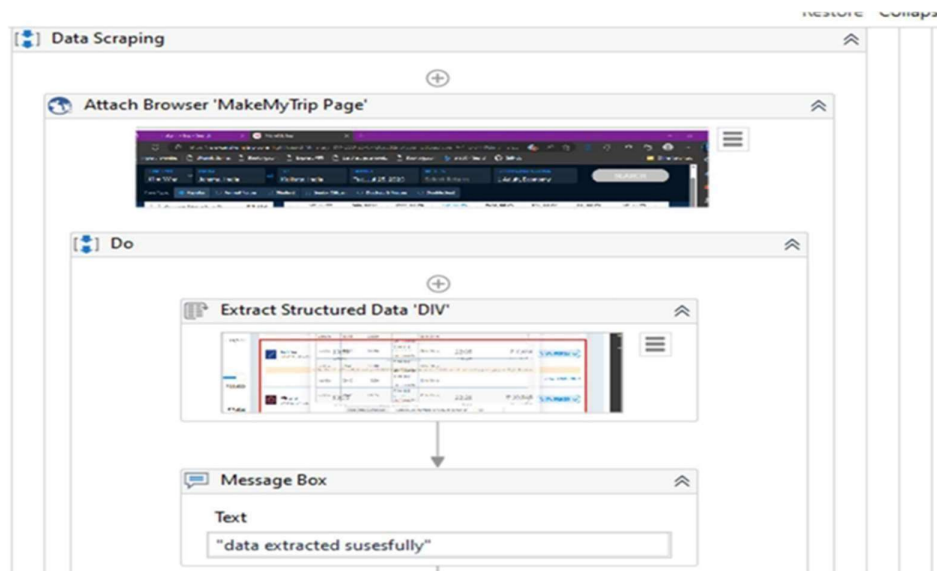
INPUT GATHERING



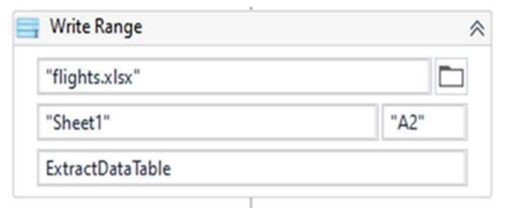
WEB AUTOMATION



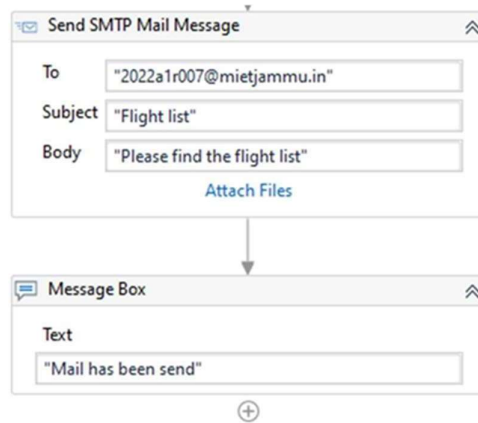
Data scraping



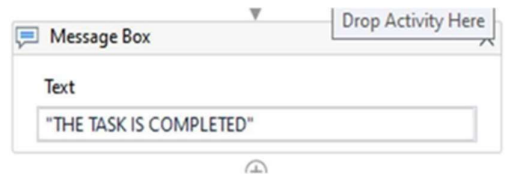
Excel integration



Email



Project completion



Results

INPUT GATHERING

From

Enter the location from where you want to departure?

Jammu

Ok

Arrival

where do you want to go?

Srinagar

Ok

Automation

Flights

Hotels

Homestays

Holiday Packages

Trains

Buses

Cabs

Forex

Charter Flights

One Way

Round Trip

Multi City

Book International and Domestic Flights

From

To

Departure

Return

Travellers & Class

Jammu

Mumbai

12 Jun'23

1 Traveller

SUGGESTIONS

Jammu, India

Srinagar, India

Vadodara, India

Bhavnagar, India

Cuddapah, India

IXJ

SXR

BDQ

BHU

CDP

Senior Citizen Fares

Doctors & Nurses Fares

Double Seat Fares

Recent Searches:

Jammu → New Delhi

Jammu → Chennai

SEARCH

Explore More

Money

Explore International Flights

MICE

Gift Cards

Flights

Hotels

Homestays

Holiday Packages

Trains

Buses

Cabs

Forex

Charter Flights

One Way

Round Trip

Multi City

Book International and Domestic Flights

From

To

Departure

Return

Travellers & Class

Jammu

Srinagar

12 Jun'23

1 Traveller

SUGGESTIONS

Srinagar, India

Dehradun, India

Amritsar, India

Jammu, India

Leh, India

IXJ

DED

ATQ

IXJ

IXL

Regular Fares

Armed Forces Fares

Student Fares

Recent Searches:

Jammu → New Delhi

Jammu → Chennai

Where2Go

Tri Lo

NEW

Plannine an international holiday?

Data extraction and email integration

The screenshot shows the MakeMyTrip website interface. The search criteria are: Trip Type: One Way; From: Jammu, India; To: Srinagar, India; Depart: Thu, Jun 15, 2023; Return: Select Return; Passengers & Class: 1 Adult, Economy. The search results show a list of flights with prices for various dates. A message box overlay indicates 'data extracted successfully'.

Popular Filters

- ☐ Non Stop (5) ₹ 8,158
- ☐ Preno Departure (1) ₹ 11,270
- ☐ IndiGo (2) ₹ 8,158
- ☐ Vistara (1) ₹ 9,722
- + 4 more

One Way Price

₹8,158 to ₹12,400

Flights from Jammu to Srinagar

Sorted By: Departure | Duration | Arrival | Price

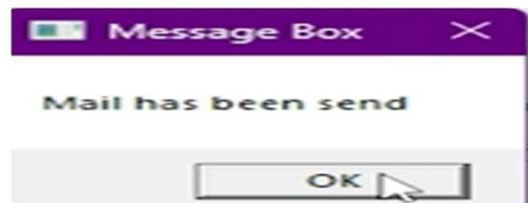
Cheaper Non-stop Flights available on 16 Jun & 17 Jun

IndiGo 18:40 Jammu to 19:25 Srinagar, ₹ 8,158 per traveller. Duration: 45 m.

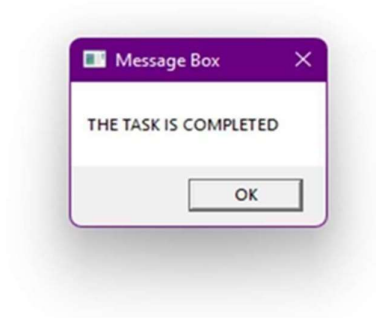
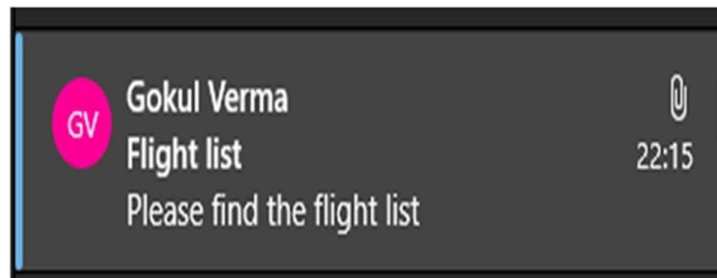
Get Rs 161 off on flight using MMTCOMPLET + incremental 5% discount on holiday package post flight booking.

The screenshot shows an Excel spreadsheet titled 'Flights - Excel'. The data is organized into columns: NAME, DEPART, ARIVAL, PRICE, and DURATION. The data is sorted by departure time.

	NAME	DEPART	ARIVAL	PRICE	DURATION
1	IndiGo	18:40	19:25	₹ 8,158	45 m
2	IndiGo	14:15	14:55	₹ 9,733	40 m
3	SpiceJet	11:20	12:15	₹ 11,270	55 m
4	IndiGo	09:40	11:10	₹ 5,863	01 h 30 m
5	IndiGo	14:15	17:10	₹ 6,441	02 h 55 m
6	IndiGo	19:30	20:55	₹ 7,071	01 h 25 m
7	Alliance A	17:20	20:25	₹ 9,538	03 h 05 m
8	IndiGo, Vi	11:55	17:35	₹ 12,868	05 h 40 m
9	IndiGo	09:40	16:30	₹ 13,108	06 h 50 m
10	IndiGo	19:30	01:20	₹ 13,339	05 h 50 m
11	Alliance A	17:20	01:20	₹ 16,121	08 h
12	IndiGo	16:20	00:05	₹ 17,098	07 h 45 m
13	Vistara	13:55	19:55	₹ 17,229	06 h
14	IndiGo	16:20	21:50	₹ 18,358	05 h 30 m
15	SpiceJet	11:20	21:45	₹ 22,190	10 h 25 m
16	IndiGo	16:20	02:40	₹ 14,708	16 h 25 m
17	Alliance A	17:20	02:40	₹ 15,682	17 h 25 m
18	IndiGo	16:20	23:25	₹ 15,736	18 h 25 m



PROJECT COMPLETION



CONCLUSION

The Trip mate automation project aims to simplify the process of searching for flights, scraping relevant data, and storing it in an Excel sheet. By utilizing activities such as Click, Type Into, Data Scraping, Write Range, and Input Dialog Box, the automation enhances efficiency, accuracy, and saves time for users. The project report provides an overview of the aim, activities used, and the overall procedure followed in implementing the Travel Buddy automation solution. In conclusion, Trip Mate Bot is a powerful automation tool that streamlines the process of retrieving, organizing, and sharing flight details from MakeMyTrip. By automating these tasks, it saves time, improves accuracy, and enhances the overall travel planning experience. With its user-friendly interface, seamless integration, and efficient functionalities, Trip Mate simplifies travel arrangements and empowers users to focus on enjoying their journeys. Whether it's for personal or organizational use, Trip Mate Bot is a valuable asset that optimizes travel planning processes and makes travel management more efficient and convenient.

References

1. Input Dialogue: UiPath.Core.Activities.InputDialog - Collects user input through a dialogue box. <https://docs.uipath.com/activities/docs/input-dialog>
2. Open Browser: UiPath.Core.Activities.OpenBrowser - Opens a web browser to navigate to a specific URL. <https://docs.uipath.com/activities/docs/open-browser>
3. Click: UiPath.Core.Activities.Click - Performs a mouse click on a specified UI element. <https://docs.uipath.com/activities/docs/click>
4. Type Into: UiPath.Core.Activities.TypeInto - Simulates typing into a text field or UI element. <https://docs.uipath.com/activities/docs/type-into>
5. Data Scraping: UiPath.Core.Activities.DataScraping - Extracts structured data from a web page. <https://docs.uipath.com/activities/docs/data-scraping>
6. Write Range: UiPath.Excel.Activities.WriteRange - Writes data to a specified range in an Excel file. <https://docs.uipath.com/activities/docs/write-range>
7. Excel Integration Scope: UiPath.Excel.Activities.ExcelApplicationScope - Enables interaction with excel . <https://docs.uipath.com/activities/docs/excel-application-scope>
8. Read Range: UiPath.Excel.Activities.ReadRange - Reads data from a specified range in an Excel file. <https://docs.uipath.com/activities/docs/read-range>
9. Send SMTP Mail: UiPath.Mail.Activities.SendSMTPMail - Sends an email using the SMTP protocol. <https://docs.uipath.com/activities/docs/for-each-row>
10. For Each Row: UiPath.Excel.Activities.EachRow - Iterates through each row in an Excel table or range. <https://docs.uipath.com/activities/docs/if>
11. If: UiPath.Core.Activities.If - Performs conditional actions based on specified conditions. <https://docs.uipath.com/activities/docs/assign>
12. Assign: UiPath.Core.Activities.Assign - Assigns a value to a variable or expression. <https://docs.uipath.com/activities/docs/assign>
13. Get Text: UiPath.Core.Activities.GetText - Retrieves the text content of a specified UI element. <https://docs.uipath.com/activities/docs/get-text>
14. Delay: UiPath.Core.Activities.Delay - Adds a delay or pause in the automation process. <https://docs.uipath.com/activities/docs/delay>
15. Click Text: UiPath.Core.Activities <https://docs.uipath.com/activities/docs/click-text>

