MEAL PLANNER BOT

A PROJECT REPORT

Submitted by

SUGANYA S(210701270)

in partial fulfillment for the course

OAI1903 - INTRODUCTION TO ROBOTIC PROCESS AUTOMATION

for the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

RAJALAKSHMI ENGINEERING COLLEGE RAJALAKSHMI NAGAR THANDALAM CHENNAI – 602 105

NOVEMBER 2023

RAJALAKSHMI ENGINEERING COLLEGE

CHENNAI – 602105

BONAFIDE CERTIFICATE

Certified that this project report **"MEAL PLANNER BOT"** is the bonafide work of **"SUGANYA S(210701270)"** who carried out the project work for the subject OAI1903-Introduction to Robotic Process Automation under my supervision.

Dr. P.Kumar
HEAD OF THE DEPARTMENT
Professor and Head
Department of
Computer Science and Engineering
Rajalakshmi Engineering College
Rajalakshmi Nagar
Thandalam
Chennai - 602105

Dr. P Revathy
SUPERVISOR
Professor
Department of
Computer Science and Engineering
Rajalakshmi Engineering College
Rajalakshmi Nagar
Thandalam
Chennai - 602105

Submitted to Project and Viva Voce Examination for the subject OAI1903-Introduction to Robotic Process Automation held on ……

INTERNAL EXAMINER **EXTERNAL EXAMINER**

ABSTRACT

In our fast-paced world, meal planning often becomes a time-consuming and challenging task for individuals. The need to balance nutrition, dietary preferences, and ingredient availability can be overwhelming, leading to unhealthy eating habits, food waste, and frustration. To address this issue, we present an innovative meal planner automation solution. This project aims to streamline the meal planning process by leveraging Robotic Process Automation (RPA) technology by calculating the calorie should be consumed by individual. Our meal planner automates the task of suggesting, customizing, and organizing Daily meal plans based on calorie calculated. Users can effortlessly generate meal plans that cater to their specific dietary needs and save valuable time. The system is designed to simplify and expedite the recipe discovery process, leveraging UiPath's capabilities in and data extraction. Users can input their height , weight, age to calculate colorie on individual preferences, dietary restrictions, empowering the automation to scour online sources for relevant recipes. The project not only enhances efficiency in the kitchen but also showcases the potential of UiPath in creating intelligent and user-friendly solutions for everyday tasks. Through advanced search algorithms, the automation sifts through vast recipe databases, considering factors such as calorie count, protein content, and other nutritional metrics.

ACKNOWLEDGEMENT

Initially we thank the Almighty for being with us through every walk of our life and showering his blessings through the endeavour to put forth this report. Our sincere thanks to our Chairman **Mr. S.Meganathan, B.E, F.I.E.,** our Vice

Chairman **Mr. Abhay Shankar Meganathan, B.E., M.S.,** and our respected Chairperson **Dr. (Mrs.) Thangam Meganathan, Ph.D.,** for providing us with the requisite infrastructure and sincere endeavouring in educating us in their premier institution.

Our sincere thanks to **Dr. S.N.Murugesan, M.E., Ph.D.,** our beloved Principal for his kind support and facilities provided to complete our work in time. We express our sincere thanks to **Dr. P.Kumar, M.E., Ph.D.,** Professor and Head of the Department of Computer Science and Engineering for his guidance and encouragement throughout the project work. We convey our sincere and deepest gratitude to our internal guides, **Dr. N.Durai Murugan, M.E., Ph.D.,** Associate Professor, **Ms. Roxanna Samuel, M.E.,** Assistant Professor (SG), **Ms. J.Jinu Sophia, M.E.,** Assistant Professor (SG), Department of Computer Science and Engineering, Rajalakshmi Engineering College for their valuable guidance throughout the course of the project. We are very glad to thank our Project

Coordinators, **Dr. P.Revathy, M.E., Ph.D.,** Professor and **Mr.B.Bhuvaneswaran, M.E.,** Assistant Professor (SG), Department of Computer Science and Engineering for his useful tips during our review to build our project.

SUGANYA S(210701270)

TABLE OF CONTENTS

LIST OF FIGURE

LIST OF ABBREVIATIONS

ABBREVIATION	ACCRONYM
RPA	Robotic Process Automation
URL	Uniform Resource Locator

CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

The Personalized Calorie-Based Meal Planner is an innovative solution designed to assist individuals in planning well-balanced and personalized meals based on their specified calorie requirements. In today's fast-paced world, maintaining a healthy diet can be challenging, and this project aims to simplify the process by leveraging UiPath RPA technology to create a user-friendly and adaptable meal planning tool. Users can input their daily calorie requirements, taking into account personal health goals, weight management, or dietary restrictions. The Meal Planner generates a variety of meal options, including breakfast, lunch, dinner, and snacks, ensuring a diverse and enjoyable culinary experience.

Beyond based on Calorie count, the system allows users to specify cuisine preferences and dietary styles (e.g., vegetarian, vegan, low-carb), tailoring the generated meal suggestions to individual tastes. The system dynamically adjusts meal plans based on user feedback and evolving dietary preferences, ensuring ongoing relevance and personalization. The project features an intuitive and accessible interface, making it easy for users to interact with it . Leveraging UiPath RPA capabilities, the Meal Planner extracts recipes from reputable online sources, providing detailed information on ingredients, preparation methods, and nutritional content

As we stand at the intersection of technology and well-being, the meal planner stands as a beacon of innovation, guiding us towards a future where technology and health coalesce to create a more vibrant and balanced life. UiPath, with its visual and user-friendly interface, enables individuals without extensive programming knowledge to design automation sequences effortlessly. This platform facilitates the creation of automated processes that interact with websites, simulate human-like actions, and efficiently extract information. Specifically tailored for industries in food and nutrition, where maintaining accurate and up-to-date databases is critical, UiPath's capabilities offer a robust solution.

The Meal Planner, built on UiPath automation, goes beyond mere functionality. It aims to elevate user experience by incorporating dynamic searching, error handling mechanisms, and a friendly interface. In the realm of health and nutrition, where information is constantly evolving, the automation must not only be accurate and scalable but also adaptable to changes in website layouts or data formats.

1.2 OBJECTIVE

The primary objective of the Meal Planner Bot is to leverage UiPath's automation capabilities to streamline and enhance the process of discovering and selecting nutritious recipes based on calories. By incorporating intelligent data scraping, data processing algorithms, and user customization features, the project aims to empower individuals in making informed and personalized dietary choices. The automation will consider individual preferences, dietary restrictions, quiscines and nutritional requirements to curate a tailored list of healthy recipes, promoting a holistic approach to well-being. Ultimately, the objective is to simplify the journey to healthier eating habits, fostering a sense of user empowerment and contributing to a more healthconscious lifestyle.

1.3 EXISTING SYSTEM

Before the implementation of the Meal Planner, the existing system for discovering nutritious recipes was characterized by manual search methods and subjective decision-making. Users struggled with navigating various online platforms, sorting through extensive information, and manually evaluating the nutritional value of each dish. The absence of an automated system resulted in a time-consuming process that lacked personalization, often overlooking individual dietary preferences and restrictions.

1.4 PROPOSED SYSTEM

The proposed Meal Planner project envisions a transformative system that harnesses the power of UiPath's automation technology to revolutionize the way users discover and providing recipes. By seamlessly integrating advanced web scraping techniques, sophisticated data processing algorithms, and user customization features, the proposed system is set to revolutionize and streamline the entire process of discovering healthy recipes.

Users will have the ability to input specific dietary preferences, enabling the automation to calculate individual calorie needs and generate a tailored list of nutritious recipes from diverse online sources. This innovative system not only overcomes the limitations of the existing manual approach but introduces an efficient, personalized, and user-centric solution that empowers individuals to make well-informed and health-conscious dietary choices.

Leveraging UiPath's robust automation capabilities, the system will navigate through relevant websites, extract various meals, and organize it systematically. A dynamic search mechanism ensures adaptability to variations in data sources, making the system resilient to changes in website layouts or dish information formats. Incorporating error-handling mechanisms, scalability features, and clear documentation further enhances usability and reliability. The automation not only optimizes the process but also encourages users to actively engage in their health journey, fostering a sense of control and awareness in making healthier lifestyle choices

.

CHAPTER 2
LITERATURE REVIEW

Dish Finding Android applications from runtime behavior

The Research article titled "**Dish Finding Android applications from runtime behavior**" by **M Lindsay** mainly focuses on the integration of nutrition and automation has become a burgeoning field, driven by the increasing awareness of the impact of diet on overall health. Literature highlights the need for innovative solutions that streamline the process of accessing nutritional information, encouraging individuals to make informed dietary choices. The Dish Finder project responds to this need, aligning with the broader trend of leveraging technology to promote well-being. Existing literature sheds light on the challenges individuals face in managing their nutrition effectively. Manual methods of searching for nutritious recipes are time-consuming, often resulting in a lack of personalization and adherence to specific dietary needs. The proposed RPA project aims to address these challenges by automating the recipe discovery process, providing a more efficient and tailored solution. The application of web scraping and data processing in nutritional automation is a key focus in existing literature. Scholars highlight the significance of extracting relevant data from online sources to provide users with accurate and up-to-date nutritional information. The Nutritional Dish Finder's utilization of UiPath's web scraping capabilities aligns with these recommendations, ensuring the extraction of comprehensive data from various recipe databases. Literature emphasizes the importance of user-centric approaches in nutrition technology. The proposed Nutritional Dish Finder places a strong emphasis on user customization, allowing individuals to input specific preferences and restrictions, aligning with the principles outlined in existing research. Research literature explores the applications of UiPath RPA technology in various industries, including healthcare. The flexibility and scalability of UiPath's automation tools make them well-suited for projects focused on health and well-being.

Reciepe Management process

The Research paper titled "**Reciepe Management process**" by **A. Kirkness** says about the Existing literature often concludes with discussions on the future directions and

implications of technology-driven solutions. The Nutritional Dish Finder, by addressing current challenges and incorporating user-centric, automated approaches, sets the stage for a future where technology plays a pivotal role in promoting healthier living and fostering a deeper understanding of the nutritional impact of dietary choices. Researchers and practitioners have explored the application of RPA tools like UiPath to automate tasks traditionally performed manually, with a particular focus on the food and nutrition domain. Several studies highlight the significance of automating data retrieval from diverse sources, emphasizing the potential of RPA in improving efficiency and reducing errors associated with manual data entry. Research in this field emphasizes the need for a dynamic and adaptable system, capable of handling variations in website layouts and data formats. Scholars have explored the challenges of maintaining accuracy in automated data extraction and proposed methods for error detection and correction within RPA workflows. The integration of error-handling mechanisms in UiPath is identified as a crucial aspect to ensure the reliability of the Nutritional Dish Finder.

Finding System from Food Behavioural manner

The Research paper titled "**Finding System from Behavioural manner**" by F. **Utaminingrum et al.,** foucses on the scalability, which is the another key theme in the literature, with researchers recognizing the importance of developing RPA solutions that can handle large datasets efficiently. Studies discuss the potential impact of scalability on the overall effectiveness of the Nutritional Dish Finder, especially in scenarios where a comprehensive database of nutritional information needs to be updated regularly.The user interface and experience aspects have also been a focus of investigation, with researchers exploring ways to make RPA solutions more userfriendly. Some studies propose the integration of intuitive interfaces for input and result visualization, aiming to enhance the usability of the Nutritional Dish Finder developed using UiPath. Literature in this area emphasizes the need for continuous monitoring and improvement of RPA systems. Researchers have investigated strategies for ongoing maintenance, updates, and adaptation to changes in external data sources. Documentation practices are highlighted as essential for ensuring the long-term usability of the Nutritional Dish Finder, with recommendations for clear and comprehensive user guides.

Healthy daily meal planner

The Research paper titled “The Research paper titled “**Healthy daily meal planner**” by" A Kahraman’. The purpose of this project is to develop a program that solves a bi-objective diet problem to propose the user a "healthy" daily meal according to some parameters specified by the user. The program will interact with the user via a graphical interface to receive information such as age and gender that is necessary to determine daily nutritional and energy requirements and also information on the preferences of the user among the dishes available. The user will be presented all the dishes and is expected to rate some of them on a scale from 1 to 10. The main goal is to present the user a combination of dishes that satisfies the daily nutritional requirements, minimizes the cost of the daily meal and maximizes the total rating of the meal. In this paper, first the diet problem is going to be introduced, then a genetic algorithm to solve the problem will be presented.

Analysis of integration dietducate and automated meal planner for nutritional purposes

Dietducate is considered necessary to develop a meal planning feature in order to minimize Nutrition Care Process (NCP) manually since manual work may carry high risk of human error and it takes a long time so as causing malnutrition to patients. The purpose of this research was to develop and evaluate the feature of Automated Meal Planner (AMP) in Dietducate android app. This type of research is Research and Development with ADDIE model. After developing the app, a survey was conducted to respondents (nutritionists) who have used the AMP feature. Respondents were collected by means of purposive sampling technique, and then given questionnaires containing how much they agree with various aspects. Data analysis was done by descriptive statistics. Based on the need analysis, there were 14 functions needed in developing this AMP feature.

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. The below Figure 3.1 illustrates a solution model to a given problem.

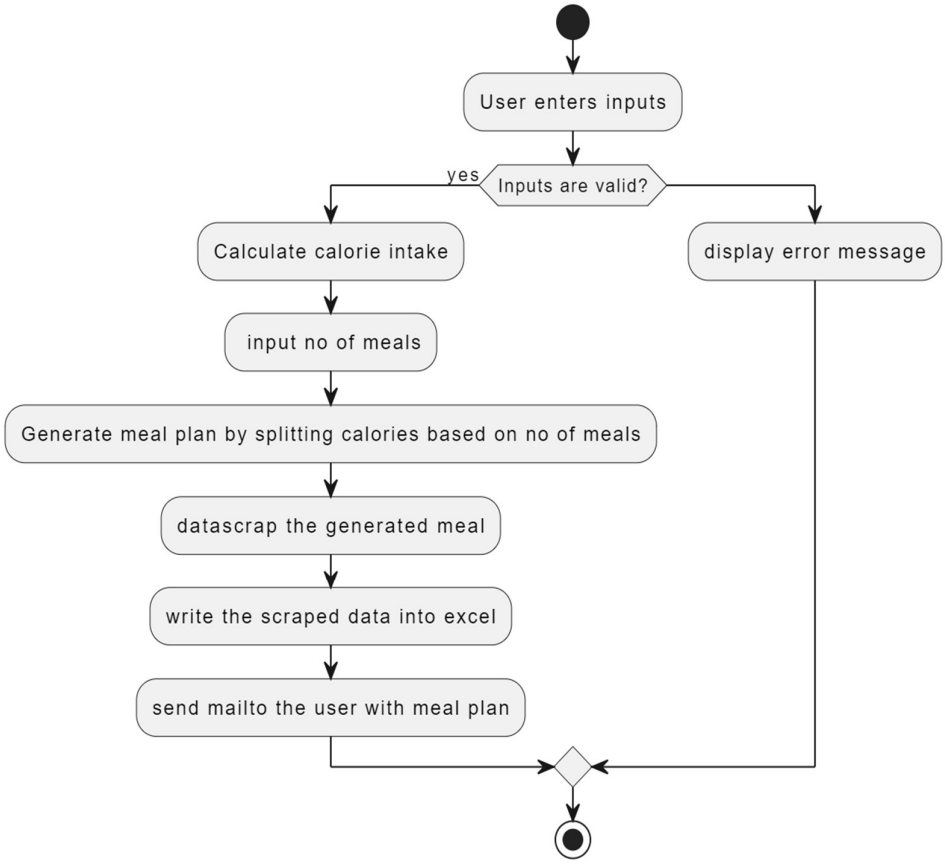


Fig 3.1 System Flow Diagram

3.2 ARCHITECTURE DIAGRAM

The Meal Planner System architecture is designed to Users interact with the system by inputting their dietary preferences, enabling the Meal Planner to validate and calculate the necessary calorie intake. Upon validation, the Meal Planner generates a customized meal plan by leveraging data from Online Recipe Sources through the Data Scraper. The Excel Writer then organizes and stores this data systematically in an Excel file. Simultaneously, an email containing the personalized meal plan is sent to the user by the Email Sender. This comprehensive approach not only streamlines the meal planning process but also enhances user engagement by incorporating error handling for invalid inputs. The system's integration with external recipe sources ensures a diverse range of meal options, contributing to a user-centric and adaptable solution. The architecture underscores the system's capability to automate tasks such as scraping, organizing, and distributing meal data efficiently.

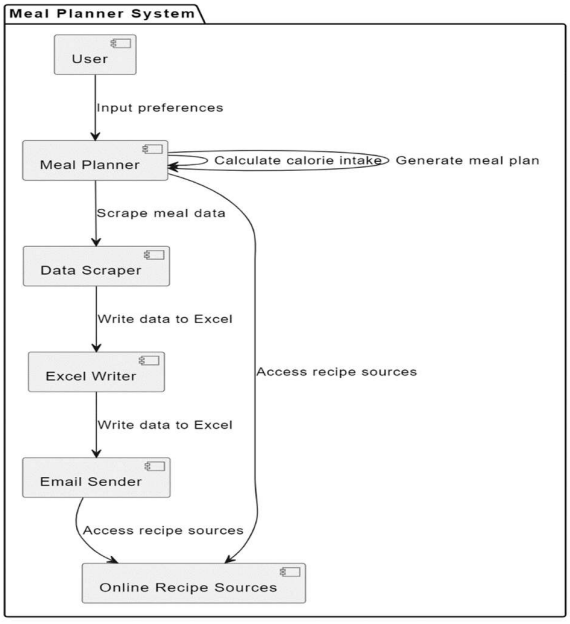


Fig 3.2 Architecture Diagram

3.3 SEQUENCE DIAGRAM

The Meal Planner System sequence diagram outlines the dynamic interaction between key components. Users initiate the sequence by providing preferences to the Meal Planner, which validates and processes inputs. Upon successful validation, the Meal Planner calculates calorie intake, generates a meal plan, and triggers data scraping from Online Recipe Sources through the Data Scraper. The Excel Writer then organizes and stores the scraped data. Simultaneously, the Email Sender dispatches a personalized meal plan via email. The diagram illustrates a seamless flow, emphasizing efficient automation and error handling in response to invalid inputs, ensuring a user-friendly and streamlined meal planning process.

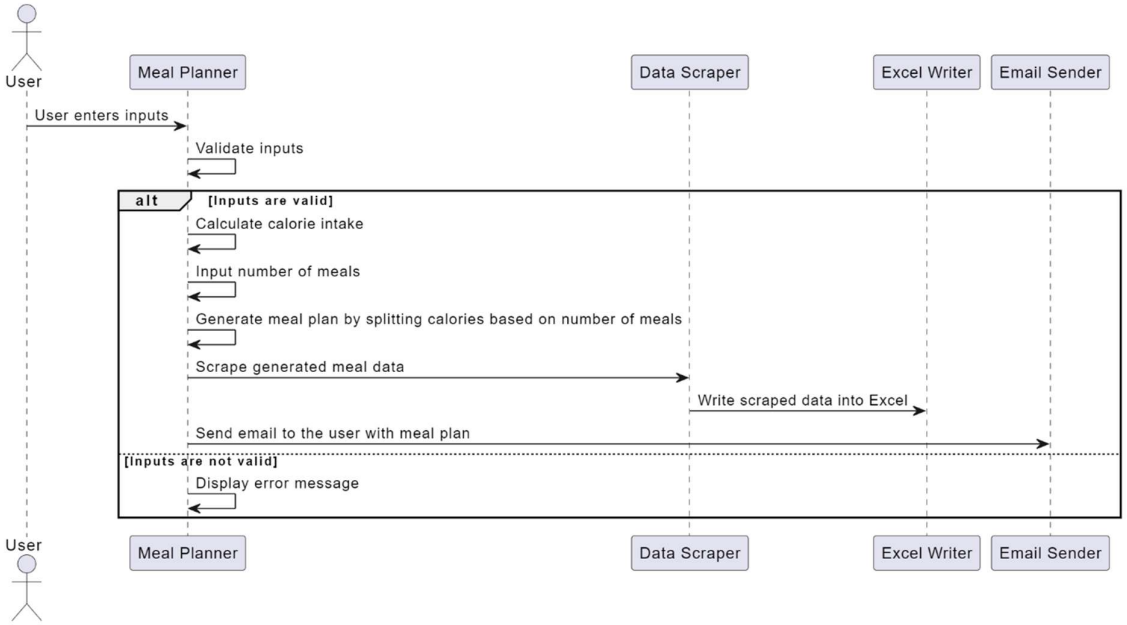


Fig 3.3 Sequence Diagram

CHAPTER 4
PROJECT DESCRIPTION

4.1 MODULES

4.1.1 BOT USER

The Meal Planner Bot UiPath to create a streamlined solution for discovering and retrieving recipes based on Calories. With a user-friendly interface, this automation simplifies the process of searching for recipes based on cuisine. This module captures user details, such as height, weight, age, sex, Bodyfat and Activity level. It validates and sanitizes user input to ensure accurate search queries.

4.1 .2. OPEN BROWSER INTERFACE

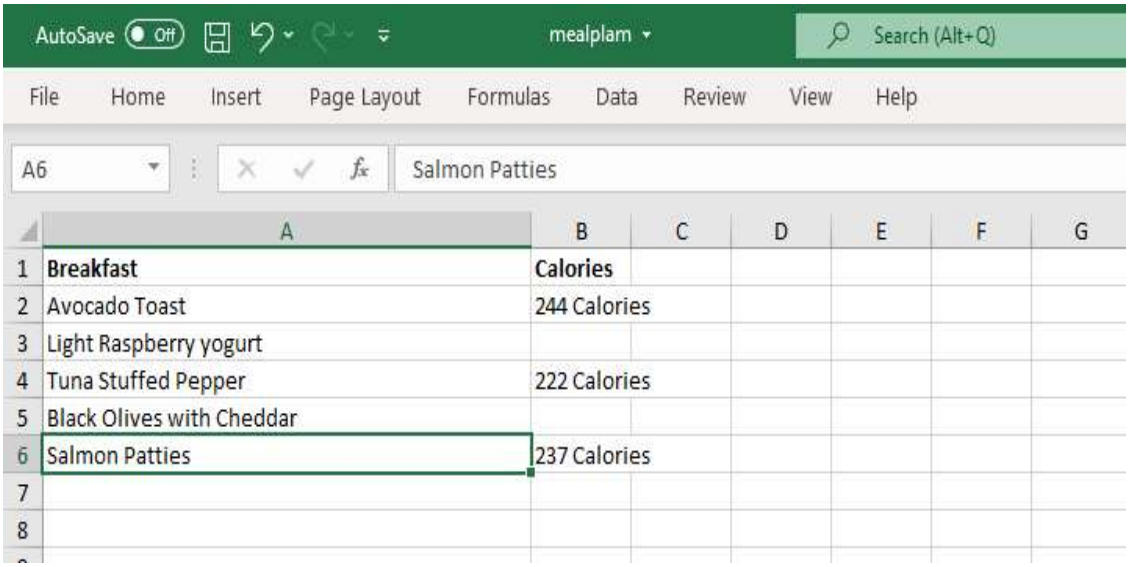
Initiates the automation by opening a web browser to navigate to the specified websites. Configures browser settings, including handling cookies and ensuring compatibility with the chosen web browser. Navigates through the recipe websites to reach the search page. Designs a user-friendly interface for users to input preferences and initiate the search. Utilizes the browser interface to display search results based on calorie and provide a seamless user experience. The proposed Meal Planner bot project envisions a transformative system that harnesses the power of UiPath's automation technology to revolutionize the way users discover and select nutritious recipes. By integrating advanced web scraping techniques, data processing algorithms, and user customization features, the proposed system aims to automate and optimize the entire process. Users will be able to input specific dietary preferences allowing the automation to curate a tailored list of healthy recipes from various online sources.

4.1.3 SCRAPPING AND STORAGE DATA

The "Data Scraping " module in the Meal planner project encompasses several key components. Firstly, the web scraping module is responsible for extracting essential recipe information, including calories from various online sources. Once the data is collected, the storage module is activated, converting the extracted information into a structured text format. The module also includes error-handling mechanisms to ensure the reliability of the scraped data.

4.1.4 EXCEL APPLICATION

The "Excel Application Integration" module within the Meal Planner Bot UiPath project comprises several essential functionalities. In this Excel , it writes the generated meal plan of user . The information about the meal are stored in the excel for sending mail As shown in the below figure



	A	B	C	D	E	F	G
1	**Breakfast**	**Calories**					
2	Avocado Toast	244 Calories					
3	Light Raspberry yogurt						
4	Tuna Stuffed Pepper	222 Calories					
5	Black Olives with Cheddar						
6	Salmon Patties	237 Calories					
7							
8							

4.1.5 DATA MANIPULATION:

The “Data Manipulation" module in the Meal Planner Bot UiPath project encompasses several key components. Firstly, the web scraping module is responsible for extracting essential information, including dish name. Once the data is collected, the storage module is activated, converting the extracted information into a structured data table format. This module curate the data based on healthy rating . This excel file serves as a convenient and easily accessible repository of courses allowing users to review. The module also includes error-handling mechanisms to ensure the reliability of the scraped data, and detailed documentation guides users on accessing and managing the stored excel files effectively within the UiPath project..

4.1.6 SENDING MAIL TO USERS

The "Sending Email to users" module in the project encompasses crucial components to facilitate effective communication. Initially, the data extraction module collects and Stores meal plan in excel .. The email sending module then utilizes email automation activities to dispatch these messages to the user mail id.. Additionally, the module incorporates error-handling mechanisms to manage potential issues during the email sending process.. Comprehensive documentation guides users on configuring and utilizing the email sending functionality within the UiPath automation for the Meal Plan

CHAPTER 5

OUTPUT SCREENSHOTS

In the below Fig.5.1 shows that the user selects need for planning meal

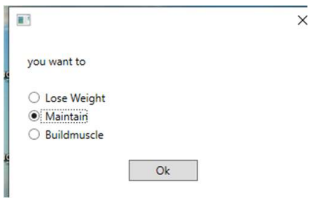


Fig 5.1

In the below Figures shows that the user inputs to the requirements to calculate calories

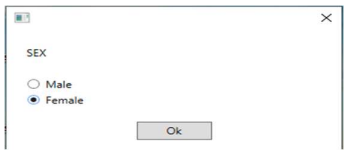


Fig 5.2

Fig 5.3

The bot open the browser and clicks the calorie calculator to calculate calorie based on user requirements is show in below Fig 5.4

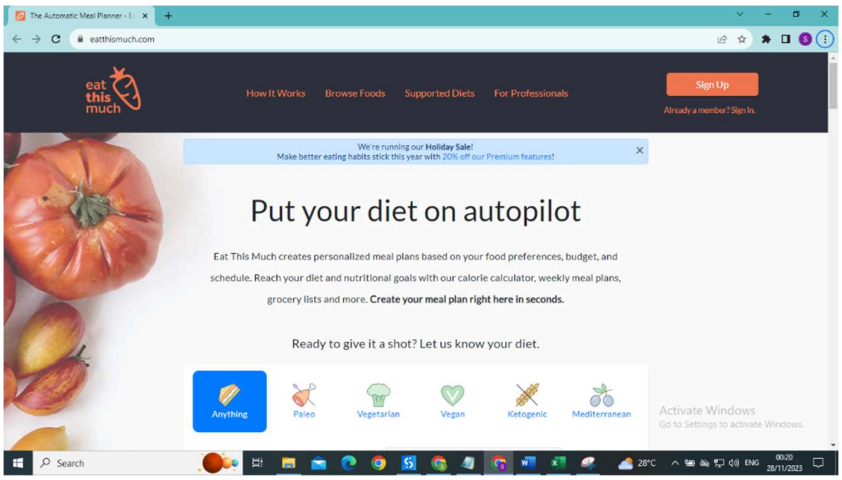


Fig 5.4

It automates to select and type inputs to the calorie calculator to calculate calorie based on user requirements is show in below Fig 5.5.

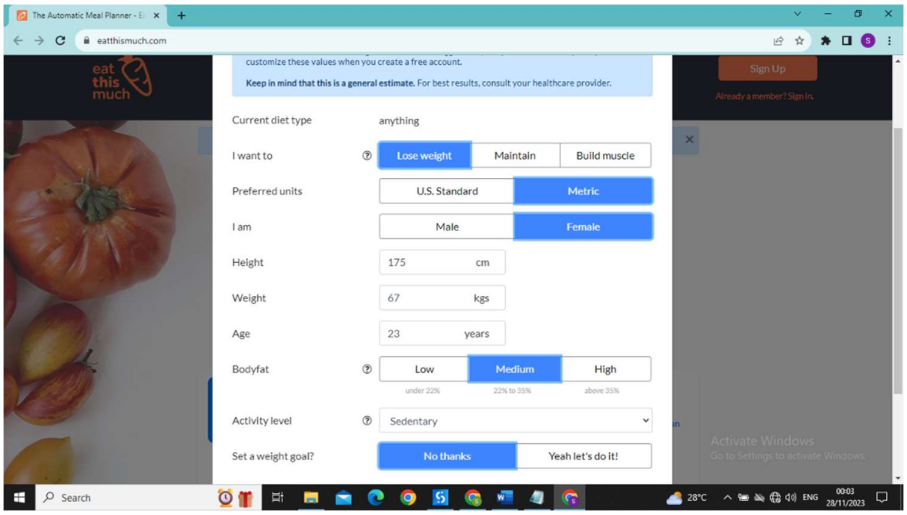


Fig5.5

After calculating the required calories to be consumed by individual the meal generated by dividing calculated calories based on no of meals shown in the Fig5.6

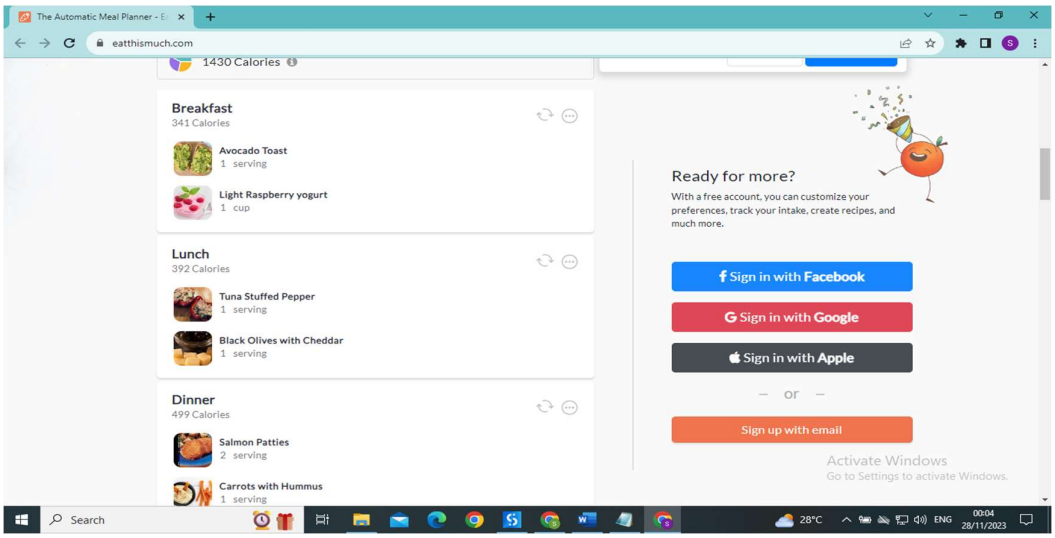


Fig5.6

The datascraped meals are written in excel file which is ready for sending shown in Fig5.7

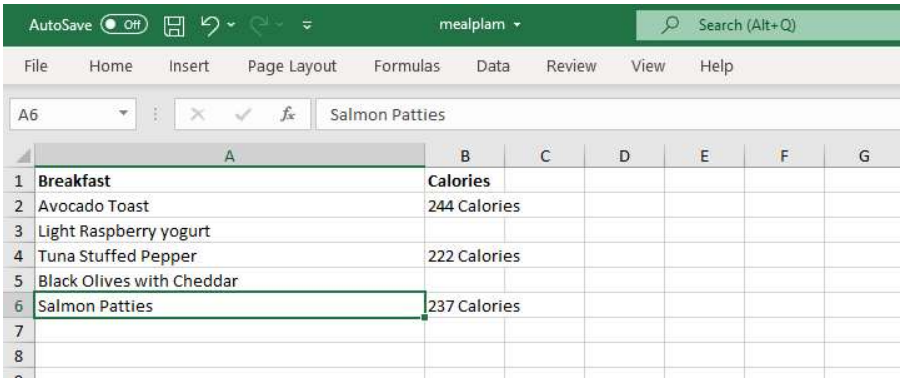
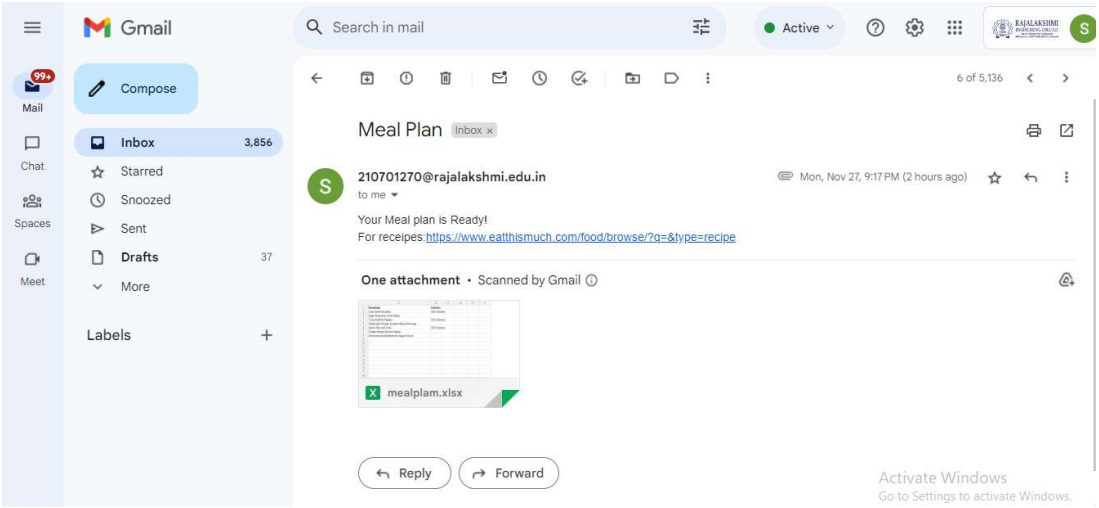


Fig5.7

The email automation activity send the mail to the recipients with the attached excel file and recipes link



CHAPTER 6
CONCLUSION AND FUTURE ENHANCEMENT

6.1 CONCLUSION

The meal planner bot developed using UiPath offers a seamless and efficient solution for users seeking culinary inspiration. With its intuitive user interface, robust search functionality, and automation capabilities, it simplifies the process of calculating calories and preparing diverse recipes. The UiPath automation ensures that the bot can swiftly gather, organize, and present relevant recipes, saving users time and effort. Overall, the mealFinder Bot not only enhances the cooking experience but also showcases the power of automation in streamlining everyday tasks.

More features that can be introduced in the coming future are :

- Enable integration with smart kitchen appliances for automated cooking instructions.
- Connect with IoT devices to monitor and control cooking processes remotely.
- Integrate a voice recognition system for hands-free operation in the kitchen.
- Allow users to verbally request recipes, cooking tips, and ingredient substitutions.
- Provide detailed nutritional information for each recipe.

6.2 FUTURE ENHANCEMENT

1. **Real-Time Updates:**

   Integrate APIs for fetching the latest nutritional information. Ensure users always have the most accurate and up-to-date data.

2. **Gamification:**

   Implement a gamified experience. Allow users to set health goals within the platform. The bot can suggest dishes that align with their nutritional targets.

3. **Social Component:**

   Introduce a social platform within the project. Enable users to share their favorite healthy recipes with a community. Foster a collaborative and supportive environment for health-conscious users. You could integrate APIs that fetch the latest nutritional information, ensuring your users always have the most accurate data. Gamifying the experience might be fun too—users could set health goals, and the bot helps them find dishes that align with their nutritional targets.ocially connected.

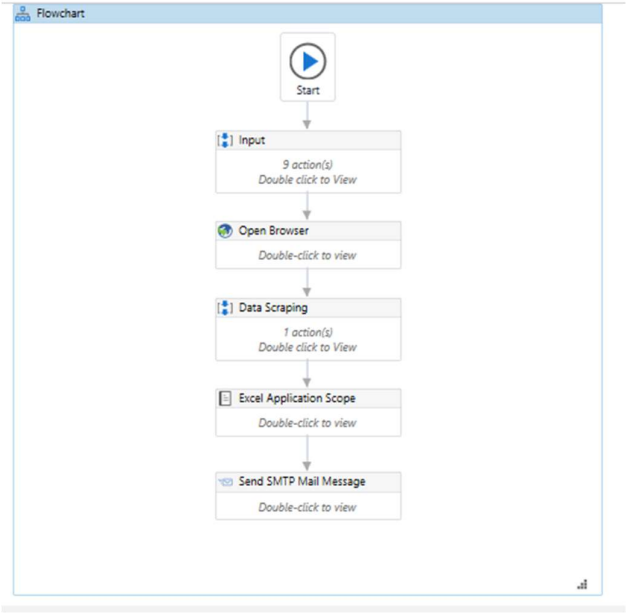
4. **User Experience Refinement**: Continuous improvement in the user interface and experience to simplify interactions and reduce the learning curve for users.

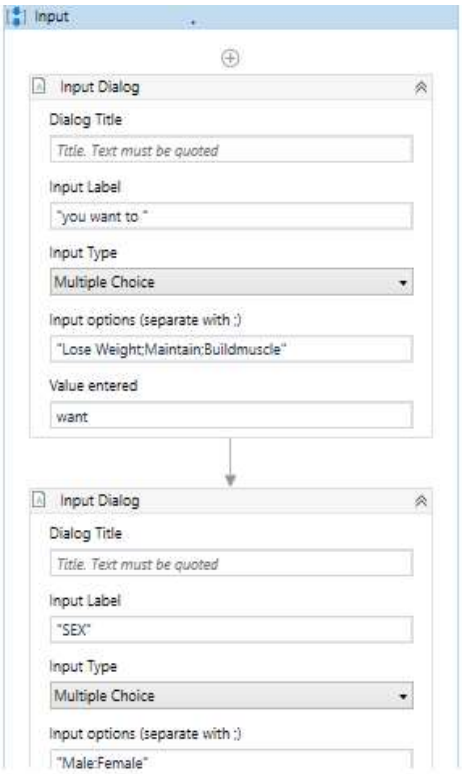
5. **Expand Automation:** Identifying additional areas for automation, such as predictive maintenance, demand forecasting, or automatic reorder triggers based on consumption patterns.

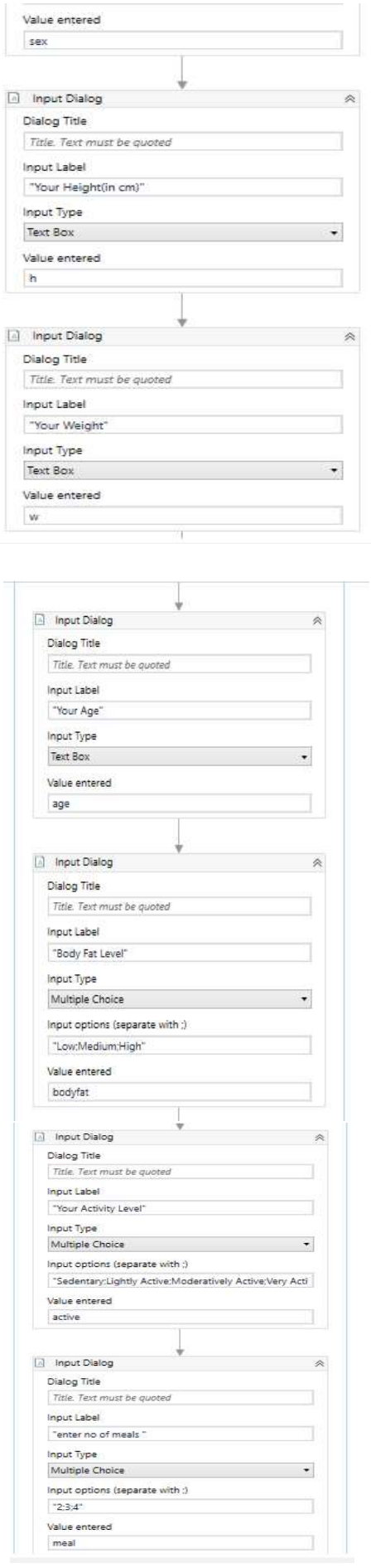
These enhancements can make your nutritional dish scraping project more dynamic, engaging, and socially connected.

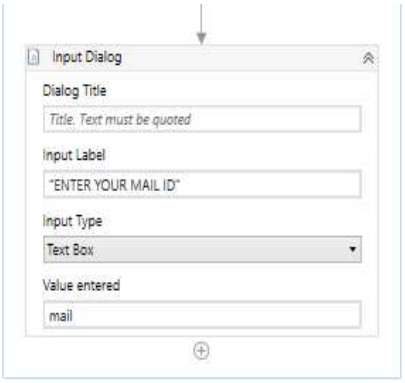
APPENDIX

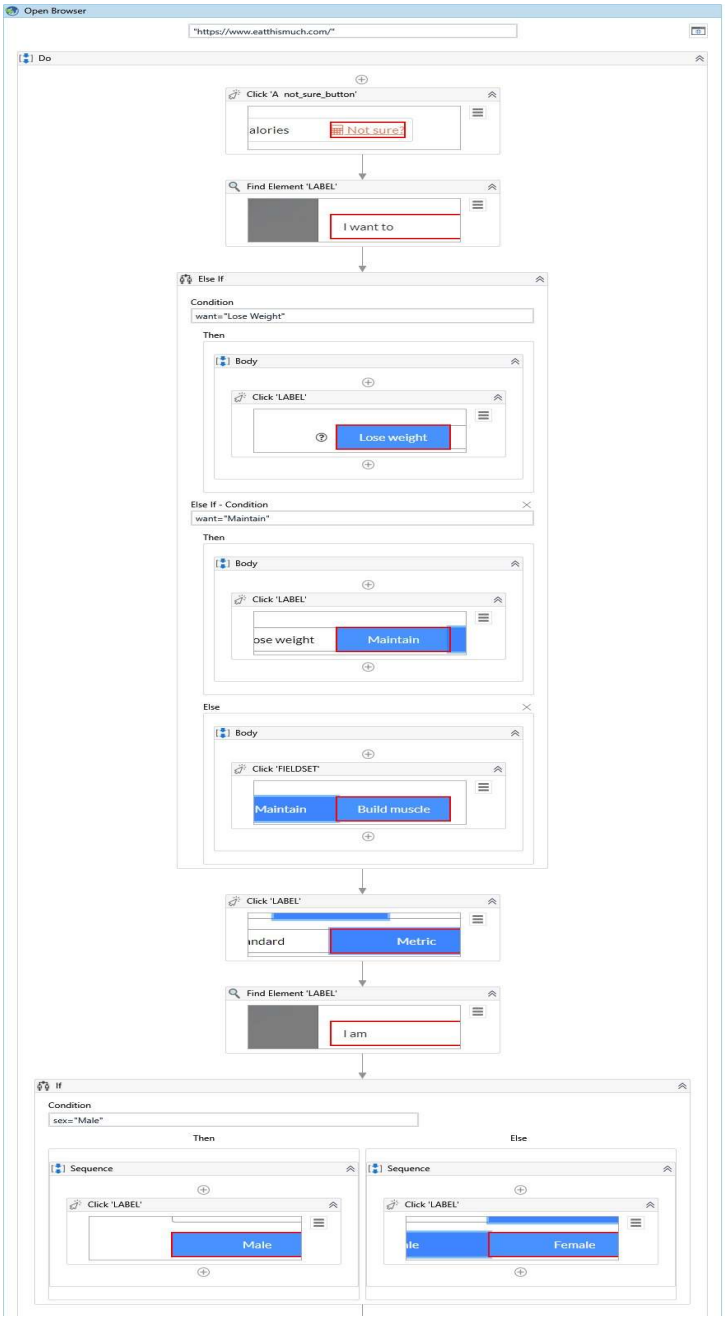
SAMPLE PROCESS

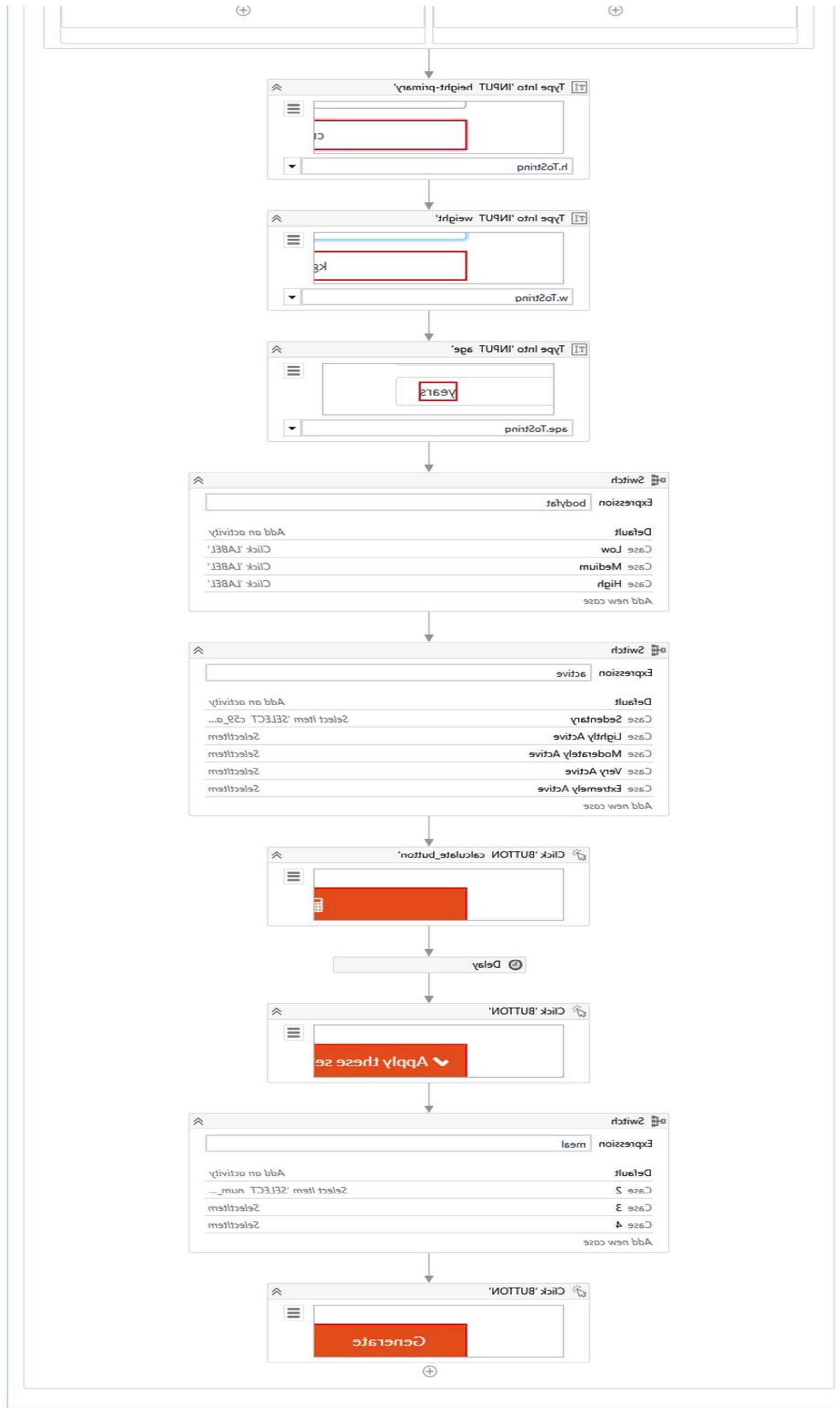


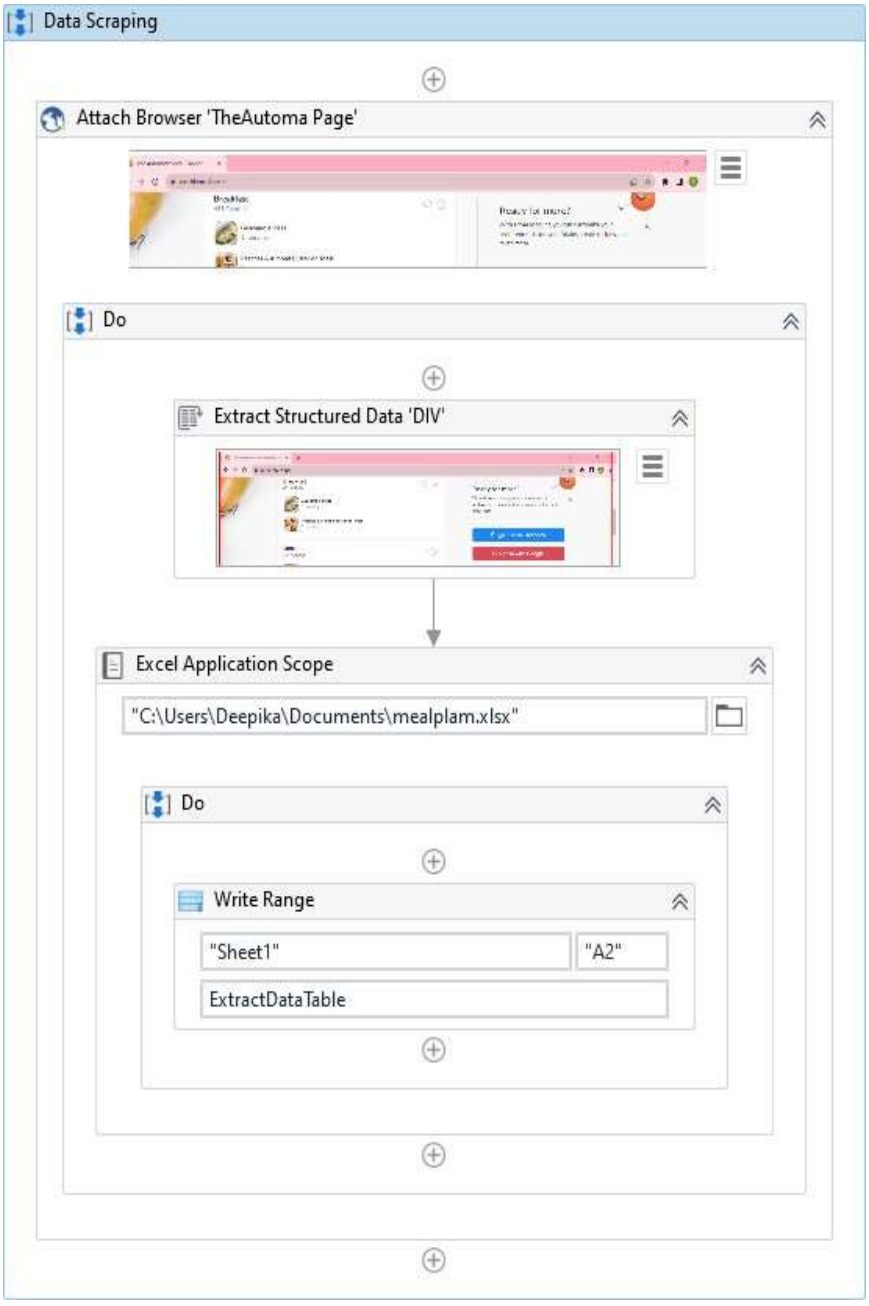


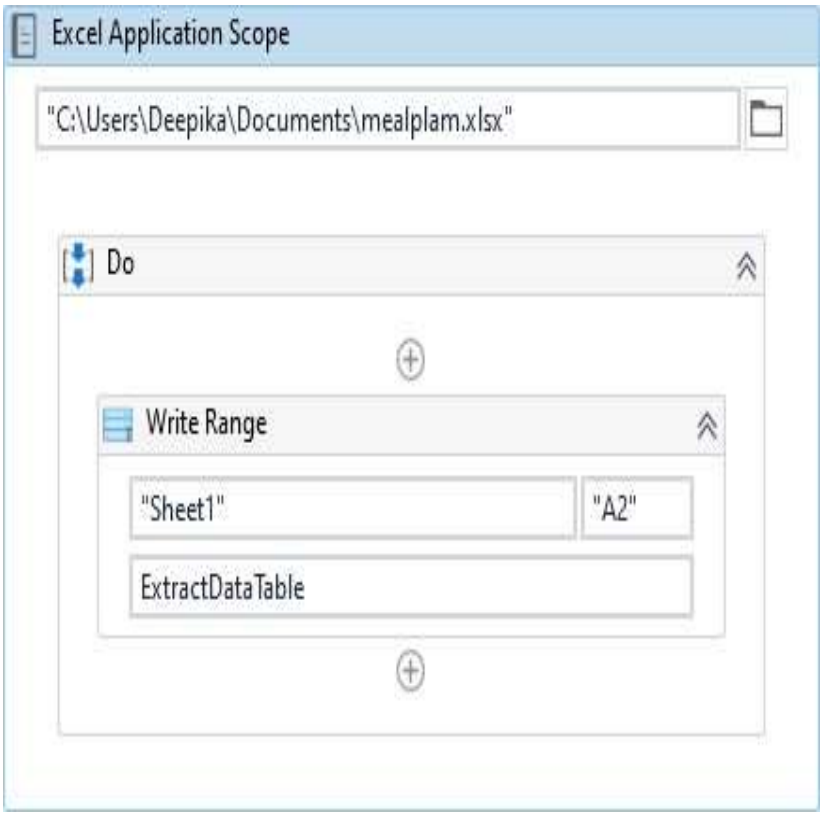

Value entered
sex
Input Dialog
Dialog Title
Title. Text must be quoted
Input Label
"Your Height(in cm)"
Input Type
Text Box
Value entered
h
Input Dialog
Dialog Title
Title. Text must be quoted
Input Label
"Your Weight"
Input Type
Text Box
Value entered
w
Input Dialog
Dialog Title
Title. Text must be quoted
Input Label
"Your Age"
Input Type
Text Box
Value entered
age
Input Dialog
Dialog Title
Title. Text must be quoted
Input Label
"Body Fat Level"
Input Type
Multiple Choice
Input options (separate with ;)
"Low;Medium;High"
Value entered
bodyfat
Input Dialog
Dialog Title
Title. Text must be quoted
Input Label
"Your Activity Level"
Input Type
Multiple Choice
Input options (separate with ;)
"Sedentary;Lightly Active;Moderatively Active;Very Acti
Value entered
active
Input Dialog
Dialog Title
Title. Text must be quoted
Input Label
"enter no of meals "
Input Type
Multiple Choice
Input options (separate with ;)
"2;3;4"
Value entered
meal

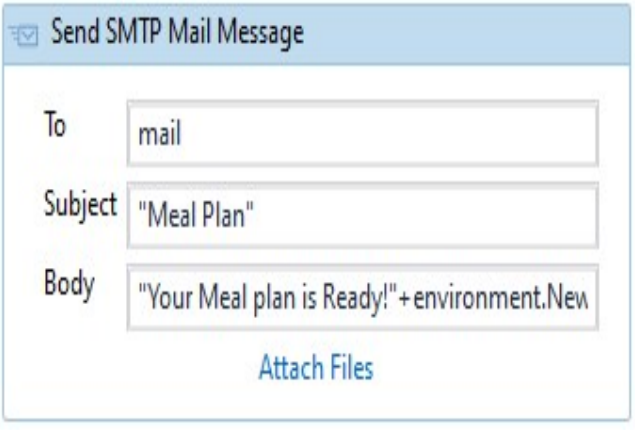

Input Dialog
Dialog Title
Title. Text must be quoted
Input Label
"ENTER YOUR MAIL ID"
Input Type
Text Box
Value entered
mail


Open Browser
"https://www.eatthismuch.com/"
Do
Click 'A not_sure_button'
alories
Not sure
Find Element 'LABEL'
I want to
Else If
Condition
want="Lose Weight"
Then
Body
Click 'LABEL'
Lose weight
Else If - Condition
want="Maintain"
Then
Body
Click 'LABEL'
ose weight
Maintain
Else
Body
Click 'FIELDSET'
Maintain
Build muscle
Click 'LABEL'
ndard
Metric
Find Element 'LABEL'
I am
If
Condition
sex="Male"
Then
Else
Sequence
Click 'LABEL'
Male
Sequence
Click 'LABEL'
Female


Type Into 'INPUT height-primary'
h.ToString
Type Into 'INPUT weight'
w.ToString
Type Into 'INPUT age'
years
age.ToString
Switch
Expression bodyfat
Default Add an activity
Case Low Click 'LABEL'
Case Medium Click 'LABEL'
Case High Click 'LABEL'
Add new case
Switch
Expression active
Default Add an activity
Case Sedentary Select Item 'SELECT c59_a...
Case Lightly Active SelectItem
Case Moderately Active SelectItem
Case Very Active SelectItem
Case Extremely Active SelectItem
Add new case
Click 'BUTTON calculate_button'
Delay
Click 'BUTTON'
Apply these se
Switch
Expression meal
Default Add an activity
Case 2 Select Item 'SELECT num_...
Case 3 SelectItem
Case 4 SelectItem
Add new case
Click 'BUTTON'
Generate


Data Scraping
Attach Browser 'TheAutoma Page'
Do
Extract Structured Data 'DIV'
Excel Application Scope
"C:\Users\Deepika\Documents\mealplam.xlsx"
Do
Write Range
"Sheet1"
"A2"
ExtractDataTable


Excel Application Scope
"C:\Users\Deepika\Documents\mealplam.xlsx"
Do
Write Range
"Sheet1"
"A2"
ExtractDataTable


Send SMTP Mail Message
To
mail
Subject
"Meal Plan"
Body
"Your Meal plan is Ready!"+environment.New
Attach Files

REFERENCES

[1] N. Lageman, M. Lindsey and W. Glodek (2006) "Dish Finding Android applications from runtime behaviour", The 6th IEEE International Conference on Advanced Learning Technologies, pp. 36 40, 5–7.

[2] H.Park, E. Kwon, E. Jung (2012) "Hotel Management Process" in AAAI Technical Report, Palo Alto, vol. SS-12-02.

[3] K. Aleksandrov, V. Schubert and J. Ovtcharova. (2014) "Finding food to Product Lifecycle Management for a Global Market, vol. 442.

[4] Pierre Nugues. (2011) "Knowledge and Finding System for receipes", IFAC Proceedings Volumes, vol. 44, no. 1, pp. 8999- 9004.

[5] F. Utaminingrum et.al., (2014) "Receipe Scrapping Process for Hotel Management ", Proceedings of the 2014 IEEE Emerging Technology and Factory Automation (ETFA), pp.