

User Manual

Diet Chatbot

Group 25- COMP 3111

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USER'S MANUAL

TABLE OF CONTENTS

	<u>Page #</u>
A. GENERAL INFORMATION	A-1
1.1 Chatbot Overview.....	A-1
B. USING the CHATBOT	B-1
2.1 Loggin On & User Input.....	B-2
2.2 Inputting menu for recommendations	B-2
2.3 Recommending the chatbot to new users	B-3
2.4 Water Reminders.....	B-4
2.5 Vegetarian Dishes List.....	B-5

1.0 GENERAL INFORMATION

A. GENERAL INFORMATION

1.1 System Overview

The objective of this project is to design a chatbot that helps user in picking up the best meal from a given menu. The chatbot provides recommendation based on users' body metrics (weight, height, BMR, BMI), goal, physical activity, diet restrictions, nutrient fact of food (calories) and the past calories consumption.

Based on the focus group and recommendations from the marketing department, the chatbot will provide the following services to users:

- Acquire information about the user when the user types in information including height, weight age, physical activity, gender, user goal (lose/gain weight) and diet restrictions
- The chatbot prepares a User ID for the user and calculates the users' BMR, BMI and the required number of calories the user needs to consume per day based on the user input
- The user can modify and re-input information about body metrics and diet restrictions later as well
- The chatbot also provides customizable reminders for the user to drink water every day. The user can set the number of reminders the user requires.
- The user can then input the menu as a text or JSON link for the chatbot to provide recommendations according to the users' goals
- The recommendations are based on the required calories the user needs to meet the goal, which is calculated earlier
- The recommendations are displayed on a carousel starting from most healthy to least healthy with calorie info for the user.
- The recommendations are modified to not include food items that are included in the users' diet restrictions.
- The chatbot can also recommend only vegetarian dishes based on the users' menu input.
- For HKUST Students, the chatbot can recommend vegetarian dishes starting from least number of calories to maximum number of calories for 5 operational locations/restaurants
- The recommendation system also provides portion size for the user based on the users' calorie requirement
- For our international customers in Hong Kong, along with the final recommendation chosen by the user, the user will also receive Chinese translation of the dish for ease of ordering.
- In order to encourage the user to eat the healthiest option, the chatbot will send out personalized motivation messages to the user.
- Information such as total calories consumed in a day is stored in the database and is used for refining the recommendations based on the users' past diet.
- The user also can send out coupon codes to new users, allowing both the old and the new user to receive coupons for ice-cream.

All the features of the project have been implemented and the diet chatbot is fully operational.

2.0 HOW TO USE THE CHATBOT

B. USING THE CHATBOT

2.1 Logging On & User Input

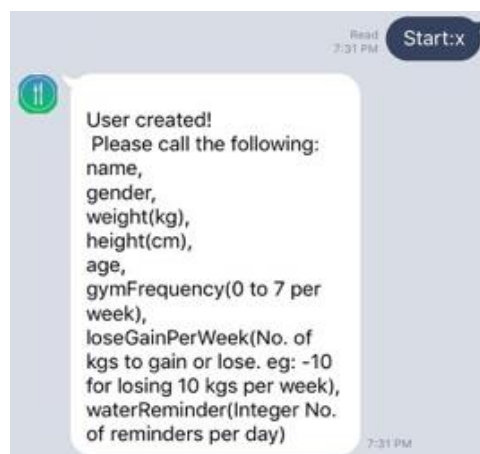
1. The user is required to add the chatbot as a friend by scanning the QR Code.



2. The name of the Chatbot is Dieting Chatbot. Once the user is added, the chatbot sends a message to the user “Got followed event”.



3. Once the chatbot is added, the user has to type **Start:x** for a new user ID to be created.



4. The user is then prompted to enter the user details one by one in the required format. Invalid inputs will be rejected by the system.

For example:

- **name:**TestUser

- **gender:**male
- **weight:**70
- **height:**170
- **age:**20
- **gymFrequency:**3
- **loseGainPerWeek:**10
- **waterMe:**2
- **restriction:**beef,pork



The user inputs gym frequency based on the number of times the user works out. The number input of water reminders is the number of hours the user wants to be reminded for water. The input for restrictions is the food items the user doesn't want to be recommended or is allergic to.

5. Once the user has inputted the fields, the user can type **profile:x** to retrieve this information and check it. The retrieval is possible later as well.



6. The user can re-input the body metrics, diet restrictions, user goals and water reminders by simply typing in the keywords followed by the updated value.

For example:

- **weight:80**

This change can be checked by inputting **profile:x**.



7. The chatbot then calculates the BMR, BMI and required calories for the user per day based on the user information to provide the best recommendations.

2.2 Inputting Menu for recommendation

The recommendation product includes multiple features of the diet chatbot. This includes:

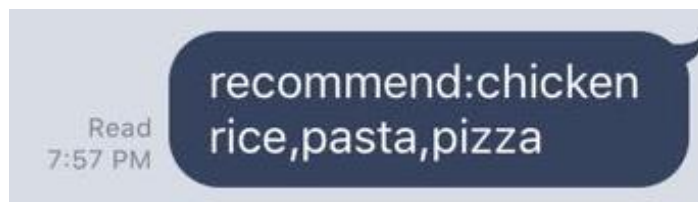
- Chinese translation of the dish chosen by the user
- Motivational messages to the user
- Taking into account diet restrictions of the user
- Input menu as text and JSON URL and recommend dishes
- Recommend portion size for the dish based on calories requirement and display calories information
- Taking into account users' past calorie consumption to recommend dishes

The inputs for recommendation are taken in text as well as JSON format. Based on the way the user is providing the text the user needs to follow one of the formats:

1. For Text

recommend:<dish1,dish2,dish3,dish4>

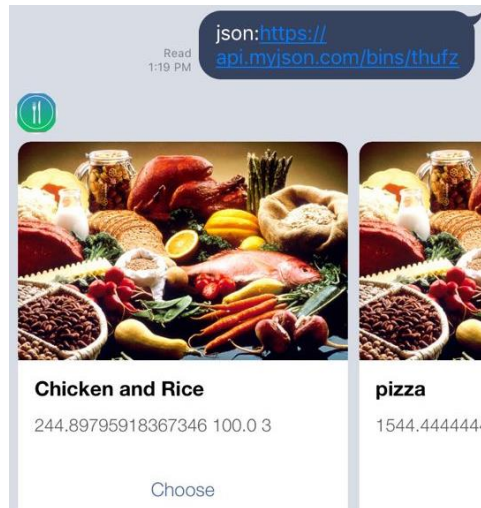
- I. The user types in recommend followed by a list of dishes separated by commas as text.



2. For JSON

json:<testURL>

- I. The user inputs the JSON URL with the menu instead of testURL.



3. For vegetarian only input

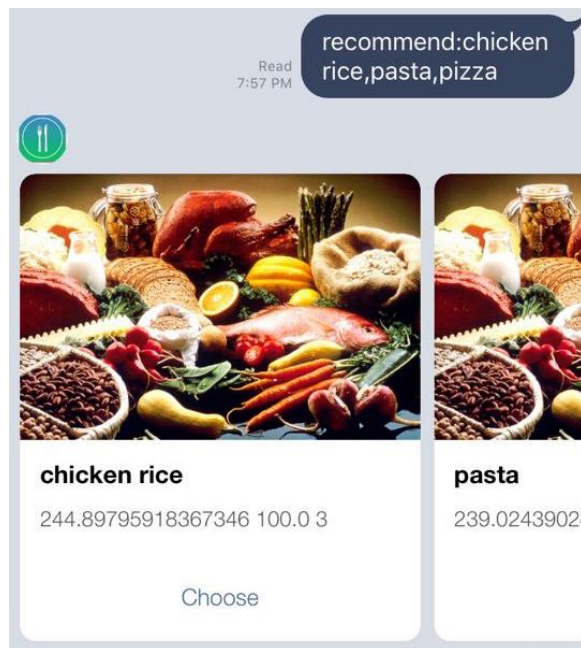
vege:<dish1,dish2,dish3,dish4>

- I. The user types in vege followed by a list of dishes separated by commas as text.



Rest of the steps are same for all three cases:

- I. The chatbot will reply with an ordered list of recommendations with the leftmost being the first recommendation (best for the user).

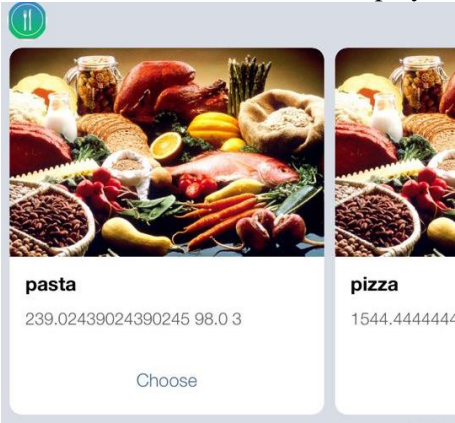


The recommendations will take into account diet restrictions and will not display dishes with items the user has defined as restricted. It will also take into account past calories intake if the chatbot has been used for more than 7 days.

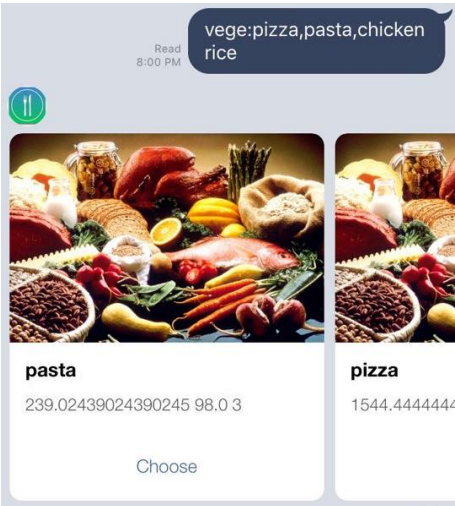
For example:
If the user sets **restriction:chicken,beef,pork**



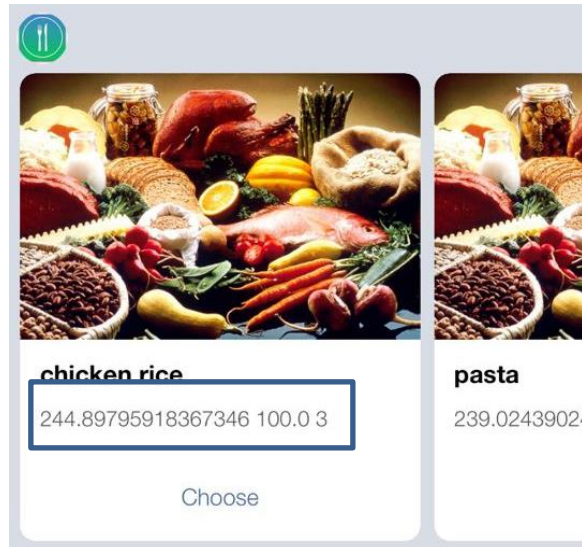
The dishes with beef and chicken will not be displayed in the recommendation system.



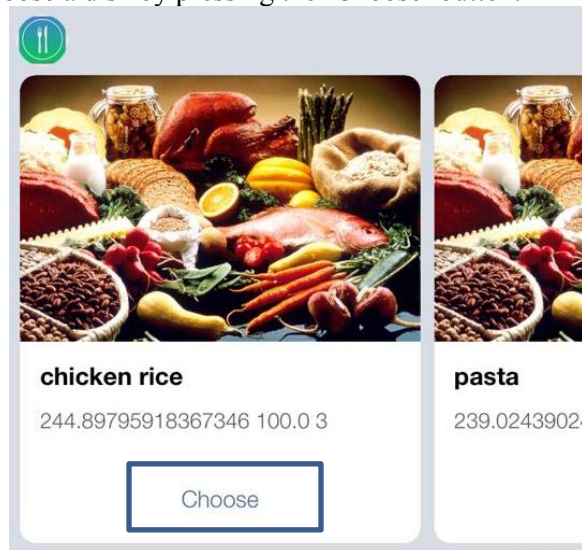
II. For vegetarian case, only vegetarian dishes will be displayed and non-vegetarian dishes will be omitted.



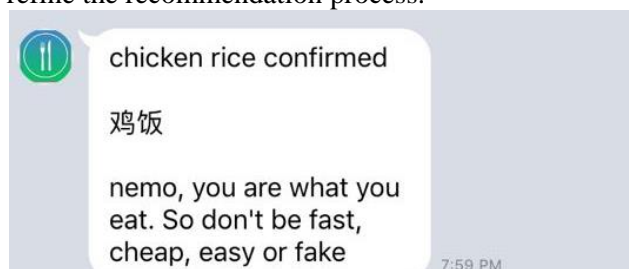
III. The chatbot will also provide calories information and recommended portion size for the dish.



- IV. The user can choose a dish by pressing the 'Choose' button.



- V. The chatbot will accept this as the dish the user consumed out of the recommendations. The chatbot will return the dish name followed by the Chinese translation and a personalized motivational message for the user. The calories information is then sent into the database to refine the recommendation process.



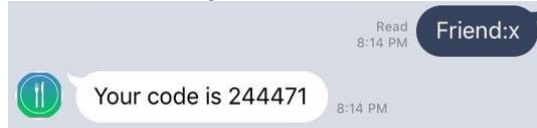
2.3 Recommending the chatbot to new users

This will implement the new feature recommended by the marketing department.

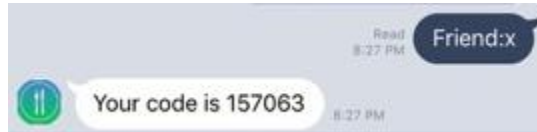
1. For old users

friend:x

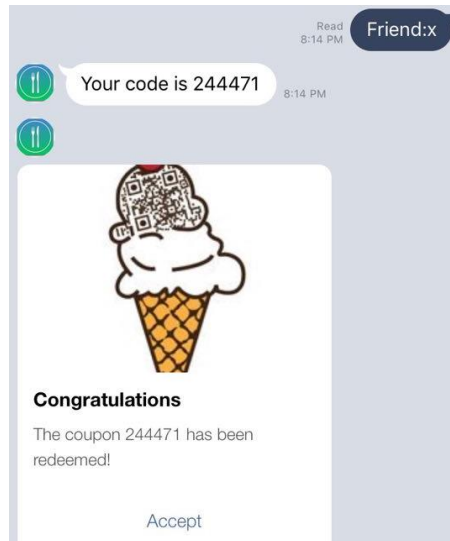
- I. friend:x will generate a random 6 digit code that the user can share with a friend



- II. A user can generate unlimited codes



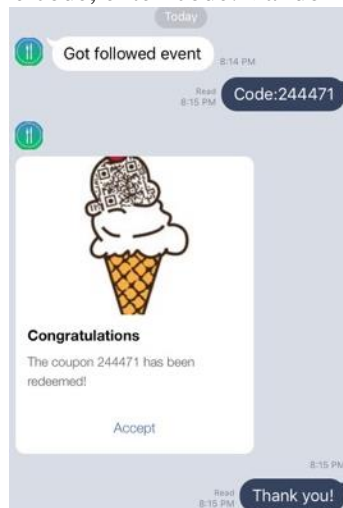
- III. The total number of codes that can be generated is 5000 random codes.
- IV. If the new user inputs the code, the old user will receive a confirmation picture and text saying "Congratulations"



2. For new users

code:<random come provided by friend>

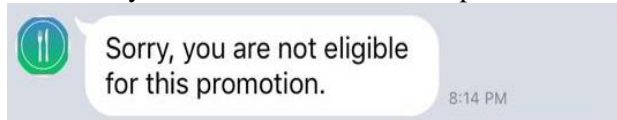
- V. In order to redeem the code, enter 'code:<random come provided by friend>'.



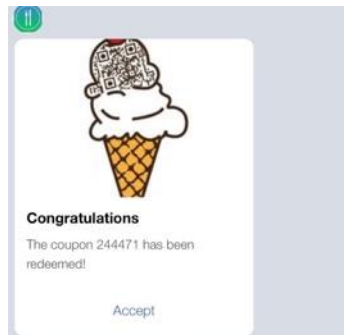
- VI. The code can only be redeemed once.



- VII. The code can only redeem if you are a new user after the promotion has started



- VIII. If the coupon is accepted, the bot will send a confirmation picture to the new user saying "Congratulations"



- IX. New user can both generate random codes as well.

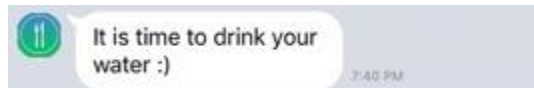
2.4 Water Reminders

This will implement the water reminder feature for the user.

- The user can input the **waterReminders:<value>** field .
- Value represents the number of times the user wants to be reminded in a day.



- The user is reminded to drink water.



2.5 Vegetarian Dishes List

This will implement the vegetarian dish feature for location. This feature is limited to the 5 operational restaurants of HKUST:

- The user can type **vege:<place>**
- Place can be any of the following: **Subway, LG&, Café, Bistro, LSK**
- For example: **vege:Cafe**

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- The user is displayed with a list of vegetarian options at Subway from the healthiest to the least healthy options.

