파이썬 프로그래밍및실습

Developing a food recommendationfunction

Progress Report : 1

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1. Introduction

1) Background

Food is something you have to eat every day, but each time you choose a menu, it takes a lot of time to choose a satisfactory menu. This leads to a decrease in breakfast preparation time, lunch breaks, and work hours while thinking about meals. We need a program that automatically recommends food to solve the problem of wasting time through eating concerns and to select a more satisfying menu.

2) Project goal

The goal is to recommend food menus based on food-specific ratings given by customers, reducing the time to think about food during meal times and allowing them to select more satisfying menus.

3) Differences from existing programs

Existing programs recommend food lists that are already finished and cannot be edited. It is highly likely that foods that do not suit individual preferences will often be recommended. We have a difference from the existing program in that by applying a customization method in which customers directly add menus, words they want to leave, allergies, etc., they store only the information they need to make customized recommendations for that customer.

2. Functional Requirement

1) Function 1 : Menu Recommendation Function

- Explanation: We recommend the food based on the rating given by the customer by the food.

(1) Detailed function 1 : Select Category

- Explanation: Allows you to select the category in which you would like to be recommended for food.

(2) Detailed function 2: Save Memo

- Explanation: Save the words you want to leave on the recommended food, such as recipes, precautions, and allergies.

(3) Detailed function 3: Save Preferences

- Explanation: Leave a preference for the recommended food and allow it to be reflected in the new food recommendations.

2) Function 2: Menu editing function

- Explanation: Ability to edit items or information on recommended food lists

(1) Detailed function 1: Add Menu

- Explanation: Add food and leave notes such as preferences.

(2) Detailed function 2: Delete Menu

- Explanation: Delete foods you don't want to be recommended again.

3) Function 3: File Storage Function

- Explanation: Upload the newly entered information, such as preferences and notes, to the file.

3. Progress

1) Implementation of features

(1) Add Menu

- Input; menus: a 2D dictionary that stores categories and menus, ratings: a dictionary that stores menus and menu-specific evaluations.

Output; saved menus in the selected categories of the output menu, menus added to the ratings, and horoscopes added

- Description: First, you get a category input, and if that category is not in the keys of menus, you get it back in. If a category exists, enter the menu and rating you want to add and save additional menus and ratings in menus and ratings, respectively.

- What you've learned: Repeat statement, condition question, function, module

- Code Screenshot

```python
def add_m(menus,ratings):
    while True: # 알맞은 카테고리만 입력받기
        add_cate = input("메뉴 추가를 원하는 카테고리를 선택해 주세요. ")
        if add_cate not in menus.keys():
            print("입력한 카테고리가 존재하지 않습니다. ")
        else:
            break

    add_menu = input("추가를 원하는 메뉴를 입력해 주세요. ")
    add_rat = input("추가한 메뉴에 별점을 남겨 주세요. ")

    menus[add_cate].append(add_menu)
    ratings[add_menu] = add_rat
    print("메뉴 추가가 완료되었습니다. ")
```

(2) Delete Menu

- Input; menus: a 2D dictionary that stores categories and menus, ratings: a dictionary that stores menus and menu-specific evaluations.

Output: Menus, where the selected menu is deleted, the ratings where the menu and rating are missing.

- Description: Enter the category with the menu you want to delete first, and proceed with the deletion only if the category exists in the keys of the menu. Similarly, configure the deletion to proceed only when an incoming menu exists.

- What you've learned: Repeat statement, conditional statement, function, module

- Code Screenshot

```python
def del_m(menus,ratings):
    while True: # 카테고리 존재하지 않는 경우 삭제.
        del_cate = input("삭제를 원하는 메뉴가 있는 카테고리를 선택해 주세요. ")
        if del_cate not in menus.keys():
            print("선택한 카테고리가 존재하지 않습니다. 다시 선택해 주세요. ")
            continue
        else:
            break

    print(*menus[del_cate])
    while True:
        del_menu = input("삭제를 원하는 메뉴를 선택해 주세요. ")
        if del_menu not in menus[del_cate]:
            print("해당 카테고리에 존재하지 않는 음식입니다. ")
            continue
        else:
            break

    menus[del_cate].remove(del_menu)
    del ratings[del_menu]
    print("삭제가 완료되었습니다. ")
```

2) Test Results

(1) Add Menu

- Description: Test to see if the menu and horoscope have been added as normal.

- Test Results Screenshot

```
메뉴를 추가합니다.
메뉴: 한식 찌개 중식 양식 일식 간편식 기타
메뉴 추가를 원하는 카테고리를 선택해 주세요. 한식
추가를 원하는 메뉴를 입력해 주세요. ddd
추가한 메뉴에 별점을 남겨 주세요. 3
메뉴 추가가 완료되었습니다.
menu ['불고기', '오징어 두루치기', '닭볶음', '쌈밥', '비빔밥', '생선구이', '낚지볶음', '게장', '떡갈비', 'ddd']
ratings {'불고기': '0', '오징어 두루치기': '0', '닭볶음': '0', '쌈밥': '0', '비빔밥': '0', '생선구이': '0', '낚지볶음': '0', '게장': '0', '떡갈비': '0', '김치찌
개': '0', '순두부찌개': '0', '된장찌개': '0', '부대찌개': '0', '동태찌개': '0', '청국장': '0', '갈비탕': '0', '추어탕': '0', '삼계탕': '0', '짜장면': '0', '짬뽕
': '0', '볶음밥': '0', '탕수육': '0', '마파두부': '0', '양장피': '0', '깐풍기': '0', '유린기': '0', '고추잡채': '0', '토마토 스파게티': '0', '봉골레': '0', '크
림파스타': '0', '피자': '0', '함박스테이크': '0', '리조또': '0', '스테이크': '0', '햄버거': '0', '시저 샐러드': '0', '초밥': '0', '라멘': '0', '낫또': '0', '오
니기리': '0', '덮밥': '0', '우동': '0', '메밀소바': '0', '돈카츠': '0', '편의점도시락': '0', '샌드위치': '0', '토스트': '0', '샐러드': '0', '김밥': '0', '떡볶이
': '0', '핫도그': '0', '밥버거': '0', '시리얼': '0', '쌀국수': '0', '팟타이': '0', '카레': '0', '찜닭': '0', '수제비': '0', '칼국수': '0', '아구찜': '0', '닭갈
비': '0', '월남쌈': '0', 'ddd': '3'}
```

(2) Delete Menu

- Description: Test to see if the menu and horoscope have been successfully deleted.

- Test Results Screenshot

```
메뉴를 삭제합니다.
한식 찌개 중식 양식 일식 간편식 기타
삭제를 원하는 메뉴가 있는 카테고리를 선택해 주세요. 한식
불고기 오징어 두루치기 닭볶음 쌈밥 비빔밥 생선구이 낚지볶음 게장 떡갈비
삭제를 원하는 메뉴를 선택해 주세요. 불고기
삭제가 완료되었습니다.
menus ['오징어 두루치기', '닭볶음', '쌈밥', '비빔밥', '생선구이', '낚지볶음', '게장', '떡갈비']
ratings {'오징어 두루치기': '0', '닭볶음': '0', '쌈밥': '0', '비빔밥': '0', '생선구이': '0', '낚지볶음': '0', '게장': '0', '떡갈비': '0', '김치찌개': '0', '순두
부찌개': '0', '된장찌개': '0', '부대찌개': '0', '동태찌개': '0', '청국장': '0', '갈비탕': '0', '추어탕': '0', '삼계탕': '0', '짜장면': '0', '짬뽕': '0', '볶음밥
': '0', '탕수육': '0', '마파두부': '0', '양장피': '0', '깐풍기': '0', '유린기': '0', '고추잡채': '0', '토마토 스파게티': '0', '봉골레': '0', '크림파스타': '0',
'피자': '0', '함박스테이크': '0', '리조또': '0', '스테이크': '0', '햄버거': '0', '시저 샐러드': '0', '초밥': '0', '라멘': '0', '낫또': '0', '오니기리': '0', '덮
밥': '0', '우동': '0', '메밀소바': '0', '돈카츠': '0', '편의점도시락': '0', '샌드위치': '0', '토스트': '0', '샐러드': '0', '김밥': '0', '떡볶이': '0', '핫도그':
'0', '밥버거': '0', '시리얼': '0', '쌀국수': '0', '팟타이': '0', '카레': '0', '찜닭': '0', '수제비': '0', '칼국수': '0', '아구찜': '0', '닭갈비': '0', '월남쌈'
: '0'}
```

4. Changes in Comparison to the Plan

No changes made

5. Schedule

Work		11/10	11/17	11/24	12/1	12/8	12/15	12/22
Menu Recommendation	Select category				------>			
	Save Memo				---------------->			
	Save Preferences						---------------->	
Menu editing Function	Add Menu	Completion						
	Delete Menu		Completion					
File Storage Function				ongoing				