Documentation

Target assessment level

Target assessment level of this work is 3.

Specification

What does the program do?

The program:

1. reads food data from a text file
2. distinguishes between collected and uncollected food items
3. analyzes only the collected food items
4. summarizes the user's preferences based on multiple attributes, including
    - cuisine style (European, American, Asian)
    - meal type (breakfast, lunch/dinner, dessert)
    - calorie level (high, medium, low)
    - flavour (sweet, umami, savory)
5. prints a summary of the user's food preferences based on the analysis

The user supplies the name of the input file from the keyboard.

Data format

The input data text file consists of multiple lines.
Each line represents one food item and contains the following information in this order:

food_name collected_status cuisine_style meal_type calorie_level flavour

Where:

1. food_name is a string
2. collected_status is a single word
3. cuisine_style is a single word
4. meal_type is one of a single word

5. calorie_level is a single word
6. flavour is a single word

Only food items marked as collected are included in the analysis.

Correctness

Typical test case

File foods.txt contains data from 15 foods with different attributes, including collected status, meal type, calorie level, flavour, and cuisine style. When the program (file main.py) is run the output is correct and includes:

Give path to data file: foods.txt

Total number of foods: 15

Number of collected foods: 9

For the collected foods:

Breakfast foods: Dim_Sum, French_toast

Lunch/Dinner foods: Pizza, Hamburger, Spaghetti, Sushi, Cheese_Fondue

Dessert foods: Churros, Tiramisu

Favorite cuisine style: European

Favorite calorie level: high

Favorite flavour: savory

Resource management

The input file is opened using a with-statement, and will therefore be closed automatically.