```cpp
#include <iostream>
#include<iomanip>
#include<string>
#include<vector>
//#include "FoodItem.h"

using namespace std;


class FoodItem
{
private:
    string name;
    double calories;
    double fats;
    double sugars;
    double protein;
    double sodium;

public:
    FoodItem()
    {
        name = "";
        calories = 0;
        fats = 0;
        sugars = 0;
        protein = 0;
        sodium = 0;
    }
    FoodItem(string n, double c, double f, double su, double p, double so)
    {
        name = n;
        calories = c;
        fats = f;
        sugars = su;
        protein = p;
        sodium = so;
    }
    void setName(string n)
    {
        name = n;
    }
    void setCalories(double c)
    {
        calories = c;
    }
    void setFats(double f)
    {
        fats = f;
```

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50      }
51      void setProtein(double p)
52      {
53          protein = p;
54      }
55      void setSodium(double so)
56      {
57          sodium = so;
58      }
59      void setSugars(double su)
60      {
61          sugars = su;
62      }
63      string getName()
64      {
65          return name;
66      }
67      double getCalories()
68      {
69          return calories;
70      }
71      double getFats()
72      {
73          return fats;
74      }
75      double getSugars()
76      {
77          return sugars;
78      }
79      double getProtein()
80      {
81          return protein;
82      }
83      double getSodium()
84      {
85          return sodium;
86      }
87      FoodItem operator+ (FoodItem const& item)
88      {
89          FoodItem sum;
90          sum.calories = this->calories + item.calories;
91          sum.fats = this->fats + item.fats;
92          sum.sugars = this->sugars + item.sugars;
93          sum.protein = this->protein + item.protein;
94          sum.sodium = this->sodium + item.sodium;
95
96          return sum;
97      }
98  };
```

```cpp

int main()
{
    FoodItem item1 = { "donut",                270, 15, 15, 4, 260 };
    FoodItem item2 = { "protein bar",          190, 12, 7, 10, 190 };
    FoodItem item3 = { "apple",                95, 0, 19, 1, 2 };
    FoodItem item4 = { "pear",                 101, 0.285, 17.2, 0.676, 190 };
    FoodItem item5 = { "french fries",         180, 7.6, 0.9, 4, 246 };
    FoodItem item6 = { "hamburger",            266, 10.1, 5.2, 13.3, 396 };
    FoodItem item7 = { "instant ramen",        385, 14.5, 1.1, 7.9, 986 };
    FoodItem item8 = { "ten chicken nuggets",  410, 23, 1.9, 26, 750 };
    FoodItem item9 = { "supreme chicken taco", 340, 17, 4, 16, 580};
    FoodItem item10 = { "bean burrito",        350, 9, 3, 13, 1004};
    FoodItem calculatedTotal;

    vector<FoodItem>list = { item1, item2, item3, item4, item5, item6, item7, item8, item9, item10 };

    int choice;
    cout << "Welcome to Nutrition Tracker. Each value is represented in grams exept for calories. Please select an option from the list. \n";
    cout << "1. Select from list of food items. \n2. Add your own food item. \n3. Calculate selected total macros \n4. Finished \n";
    cin >> choice;
    while (choice != 4)
    {
        if (choice == 1)
        {
            cout << "List of food items: "<<endl;
            for (int i = 0; i < list.size(); i++)
            {
                cout << i + 1 << ". " << list[i].getName() << endl;
            }
            int option;
            cout << "Which item are you eating? Will be part of your combined nutritional value.";
            cin >> option;
            FoodItem temp = list[option - 1];
            calculatedTotal = calculatedTotal + temp;

        }
        if (choice == 2)
        {
            cout << "You are only adding an item, if you eat it you must select it from the list."<<endl;
```

```
140             FoodItem tempItem;
141             string name;
142             double calories;
143             double fats;
144             double sugars;
145             double protein;
146             double sodium;
147             cout << "Enter the name of your food item: " << endl;
148             cin >> ws;
149             getline(cin, name);
150             cout << "Enter calories: " << endl;
151             cin >> calories;
152             cout << "Enter fats (g): " << endl;
153             cin >> fats;
154             cout << "Enter sugars (g): " << endl;
155             cin >> sugars;
156             cout << "Enter protein (g): " << endl;
157             cin >> protein;
158             cout << "Enter sodium (mg): " << endl;
159             cin >> sodium;
160             tempItem.setName(name);
161             tempItem.setCalories(calories);
162             tempItem.setFats(fats);
163             tempItem.setSugars(sugars);
164             tempItem.setProtein(protein);
165             tempItem.setSodium(sodium);
166             list.push_back(tempItem);
167
168         }
169         if (choice == 3)
170         {
171             cout << "The total nutrional values are presented below.\n";
172             cout << "Calories: " << calculatedTotal.getCalories()<<endl;
173             if (calculatedTotal.getCalories() > 2000)
174             {
175                 cout << "You have exceeded recommended 2000 calorie intake
                       for the average adult" << endl;
176             }
177             cout << "Fats (g): " << calculatedTotal.getFats() << endl;
178             if (calculatedTotal.getFats() > 70)
179             {
180                 cout << "You have exceeded recommended 70g fats intake for
                       the average adult" << endl;
181             }
182             cout << "Sugars (g):" << calculatedTotal.getSugars() << endl;
183             if (calculatedTotal.getSugars() > 30)
184             {
185                 cout << "You have exceeded recommended 30g sugar intake
                      for the average adult" << endl;
```

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186             }
187             cout << "Protein (g): " << calculatedTotal.getProtein() <<
                  endl;
188             if (calculatedTotal.getProtein() > 50)
189             {
190                 cout << "You have exceeded recommended 50g protein intake
                      for the average adult" << endl;
191             }
192             cout << "Sodium (mg): " << calculatedTotal.getSodium() <<
                  endl;
193             if (calculatedTotal.getSodium() > 2300)
194             {
195                 cout << "You have exceeded recommended 2300mg sodium
                      intake for the average adult" << endl;
196             }
197
198         }
199         cout << "1. Select from list of food items. \n2. Add your own food
               item. \n3. Calculate selected total macros \n4. Finished
              \n"<<endl;
200         cin >> choice;
201     }
202 }
```