```
// This program reads in from the keyboard a record of financial information
// consisting of a person's name, income, rent, food costs, utilities and
// miscellaneous expenses. It then determines the net money
// (income minus all expenses)and places that information in a record
// which is then written to an output file.

// Michael Steele

#include <fstream>
#include <iostream>
#include <iomanip>
using namespace std;

const int NAMESIZE = 15;

struct  budget // declare a structure to hold name and financial information
{
        char name[NAMESIZE + 1];
        float income;           // person's monthly income
        float rent;                     // person's monthly rent
        float food;                     // person's monthly food bill
        float utilities;   // person's monthly utility bill
        float miscell;          // person's other bills
        float net;                      // person's net money after bills are paid
};

int main()
{
        fstream indata;
        ofstream outdata;       // output file of
                                                // student.

        indata.open("income.dat", ios::out | ios::binary);       // open file as binary

        // output.

        outdata.open("student.out", ios::out); // output file that we
                                                                // will write student
                                                                // information to.

        outdata << left << fixed << setprecision(2);   // left indicates left

// justified for fields
```

```
        budget person;          // defines person to be a record

        cout << "Enter the following information" << endl;

        cout << "Person's name: ";
        cin.getline(person.name, NAMESIZE);

        cout << "Income :";
        cin >> person.income;

        // FILL IN CODE TO READ IN THE REST OF THE FIELDS:
        // rent, food, utilities AND miscell TO THE person RECORD
        cout << "Rent: " << endl;
        cin >> person.rent;

    cout << "Food: " << endl;
        cin >> person.food;

        cout << "Utilities: " << endl;
        cin >> person.utilities;

        cout << "misc: " << endl;
        cin >> person.miscell;


        // find the net field
        person.net = person.income-(person.rent + person.food + person.utilities +
person.miscell);
        // FILL IN CODE TO DETERMINE NET INCOME (income - expenses)
        cout << "Net income: " << person.net << endl;

        // write this record to the file
        // Fill IN CODE TO WRITE THE RECORD TO THE FILE indata (one instruction)
        indata.write((char *) (&person), sizeof(person));

        indata.close();

        // FILL IN THE CODE TO REOPEN THE indata FILE, NOW AS AN INPUT FILE.
        indata.open("indata.dat", ios::in | ios::binary);
    outdata << "Name " << person.name << "     Income:" << person.rent << "     Rent:" <<
person.rent << "       Food:" << person.food << "       Misc:" << person.miscell << "       Util" <<
person.utilities;
```

```
        // FILL IN THE CODE TO READ THE RECORD FROM indata AND PLACE IT IN THE

        // write information to output file
        outdata << setw(20) << "Name" << setw(10) << "Income" << setw(10) << "Rent"
                << setw(10) << "Food" << setw(15) << "Utilities" << setw(15)
                << "Miscellaneous" << setw(10) << "Net Money" << endl << endl;

        // FILL IN CODE TO WRITE INDIVIDUAL FIELD INFORMATION OF THE RECORD TO
        // THE outdata FILE.(several instructions)

        return 0;
}
```