/\*

Incomes Program

This program reads a file of income amounts classified by gender and computes the average income for each gender

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#include <iostream>

#include <iomanip> //For Setprecision()

#include <fstream> //For file I/O

#include <string> //For string type

using namespace std;

int main() {

 char gender; //Coded 'F' = female, 'M' = male

 int femaleCount, maleCount; //number of female and male income amounts

 float amount, femaleSum, maleSum, femaleAverage, maleAverage; //Amount of income, totals, and average

 ifstream incFile; //File of income amounts

 string fileName; //External name of file

 cout << fixed << showpoint << setprecision(2);

 cout << "Name of the income data file: ";

 cin >> fileName;

 incFile.open(fileName.c\_str());

 if ( !incFile )

 {

 cout << "\*\* Can't open input file \*\*" << endl;

 return 1;

 }

 incFile >> gender >> amount; //Perform priming read

 /\* Initialize process \*/

 femaleCount = 0;

 femaleSum = 0;

 maleCount = 0;

 maleSum = 0;

 /\* Update process \*/

 while (incFile)

 {

 cout << "Gender: " << gender << " Amount: " << amount << endl;

 if (gender == 'F')

 {

 femaleCount++;

 femaleSum = femaleSum + amount;

 }

 else

 {

 maleCount++;

 maleSum = maleSum + amount;

 }

 incFile >> gender >> amount; //Update ending condition

 }

 /\* Compute average incomes \*/

 femaleAverage = femaleSum / float(femaleCount);

 maleAverage = maleSum / float(maleCount);

 /\* Output results \*/

 cout << “For “ << femaleCount << “ females, the average income is “ << femaleAverage <<
 endl;

 cout << “For “ << maleCount << “ males, the average income is “ << maleAverage <<
 endl;

 return 0;

}