/\*

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;

}