Program No. : Farmer\_Garcia\_Elliot\_H8.cpp

Programmer : Elliot Farmer Garcia

Course/Section : ELET 2300-07/23493

Instructor : Dr. F. Attarzadeh

Date Assigned : 11/21/2019

Date Modified : 11/21/2019

Due Date : 12/05/2019

Compiler : Microsoft Visual Studio Enterprise 2019

Environment : Console Applications

Operating System : Windows 7

**Program Flowchart**



**.cpp source file**

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Problem Statement

This program writes the make of the user's car to a specified file, writes

the model of the user's car to a specified file, writes the make and model

to a third specified file, then reads and prints the title and contents

of all of the above files.

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#include <iostream>

#include <string>

#include <fstream>

using namespace std;

string getinput(string out, int file = 0);

int createc(string f, string d);

int createmyCar(string makef, string modelf, string carf);

int printCar(string makef, string modelf, string carf);

int main() {

//get filenames and data for make, model, and myCar

string makef = getinput("Please enter filename for make", 1);

string make = getinput("Please enter make");

string modelf = getinput("Please enter filename for model", 1);

string model = getinput("Please enter model");

string carf = getinput("Please enter filename for car", 1);

//read and write files, quit if unsuccessful

if (createc(makef, make) | createc(modelf, model)

| createmyCar(makef, modelf, carf) | printCar(makef, modelf, carf)) {

cerr << "Unable to open file";

return 1;

}

//system("pause");

return 0;

}

//gets filenames and data from user

string getinput(string out, int file) {

//string to be acquired from user

string s;

//print prompt from provided argument

cout << out;

if (file)

cout << " (.txt will be appended)";

cout << ": ";

//write cin to s

getline(cin, s);

//append .txt if s is a filename

if (file)

s.append(".txt");

return s;

}

int createc(string f, string d) {

//open new file c for writing

ofstream c(f, ios::out | ios::trunc);

//throw error if file fails to open

if (!c.is\_open())

return 1;

//write d to file

c << d;

//close file

c.close();

return 0;

}

int createmyCar(string makef, string modelf, string carf) {

//open files for reading or writing

ifstream c1(makef, ios::in);

ifstream c2(modelf, ios::in);

ofstream myCar(carf, ios::out | ios::trunc);

//throw error if any files fail to open

if (!c1.is\_open() | !c2.is\_open() | !myCar.is\_open())

return 1;

//string for reading from c1 and c2

string buffer;

//read c1 into buffer, append to car

getline(c1, buffer);

myCar << buffer;

myCar << " ";

//read c2 into buffer, append to car

getline(c2, buffer);

myCar << buffer;

//close files

c1.close();

c2.close();

myCar.close();

return 0;

}

int printCar(string makef, string modelf, string carf) {

//open files for reading

ifstream c1(makef, ios::in);

ifstream c2(modelf, ios::in);

ifstream myCar(carf, ios::in);

//throw error if any files fail to open

if (!c1.is\_open() | !c2.is\_open() | !myCar.is\_open())

return 1;

//string for reading from files

string buffer;

cout << "\n";

//write table of filenames and file contents

//make

cout << makef << "\t\t\t";

getline(c1, buffer);

cout << buffer << "\n";

//model

cout << modelf << "\t\t\t";

getline(c2, buffer);

cout << buffer << "\n";

//car

cout << carf << "\t\t";

getline(myCar, buffer);

cout << buffer << "\n\n";

//close files

c1.close();

c2.close();

myCar.close();

return 0;

}

**Sample Runs**

Please enter filename for make (.txt will be appended): c1

Please enter make: Toyota

Please enter filename for model (.txt will be appended): c2

Please enter model: Camry Hybrid

Please enter filename for car (.txt will be appended): myCar

c1.txt Toyota

c2.txt Camry Hybrid

myCar.txt Toyota Camry Hybrid

Press any key to continue . . .

Please enter filename for make (.txt will be appended): c1

Please enter make: Mercedes-Benz

Please enter filename for model (.txt will be appended): c2

Please enter model: S 550

Please enter filename for car (.txt will be appended): myCar

c1.txt Mercedes-Benz

c2.txt S 550

myCar.txt Mercedes-Benz S 550

Press any key to continue . . .

Please enter filename for make (.txt will be appended): b1

Please enter make: Donzi

Please enter filename for model (.txt will be appended): b2

Please enter model: 41 GTZ

Please enter filename for car (.txt will be appended): myBoat

b1.txt Donzi

b2.txt 41 GTZ

myBoat.txt Donzi 41 GTZ

Press any key to continue . . .