МИНИСТЕРСТВО СВЯЗИ И ИНФОРМАТИЗАЦИИ РЕСПУБЛИКИ БЕЛАРУСЬ

Учреждение образования

«БЕЛОРУССКАЯ ГОСУДАРСТВЕННАЯ АКАДЕМИЯ СВЯЗИ»

ФАКУЛЬТЕТ ЭЛЕКТРОСВЯЗИ

КАФЕДРА ПОСТ

Основы и методологии программирования

Отчет по лабораторной работе №13

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# «Написание программ с использованием файлов»

# Цель: изучить приемы работы с файлами и способы создания файлов.

#include <iostream>

#include <string>

#include <fstream>

using namespace std;

struct STUDENT {

string name;

int group;

string phone;

int marks[5];

};

void readStudentFile(STUDENT student, string fileName);

void consoleStudentFile(string fileName);

void changeStudentFile(string fileName, string newName);

void writeStudentFile(STUDENT student, string fileName);

int main()

{

STUDENT student1 = { "Alex", 12, "80295456698", {10, 9, 10, 8, 5} };

writeStudentFile(student1, "student");

string fileName;

cout << "Input file name > ";

cin >> fileName;

readStudentFile(student1, fileName);

consoleStudentFile(fileName);

changeStudentFile(fileName, "Mary");

consoleStudentFile(fileName);

writeStudentFile(student1, fileName);

return 0;

}

void readStudentFile(STUDENT student, string fileName) {

ifstream file(fileName + ".txt");

if (!file.is\_open()) {

cout << "Something went wrong, file cannot be opened:(";

return;

}

getline(file, student.name);

student.group;

file >> student.group;

file.ignore();

getline(file, student.phone);

for (int i = 0; i < 5; i++) {

file >> student.marks[i];

}

file.close();

}

void consoleStudentFile(string fileName) {

ifstream file(fileName + ".txt");

if (!file.is\_open()) {

cout << "Something went wrong, file cannot be opened:(";

return;

}

STUDENT student;

readStudentFile(student, fileName);

getline(file, student.name);

file >> student.group;

file.ignore();

getline(file, student.phone);

for (int i = 0; i < 5; i++) {

file >> student.marks[i];

}

cout << "Name: " << student.name << endl;

cout << "Group: " << student.group << endl;

cout << "Phone: " << student.phone << endl;

cout << "Marks: ";

for (int i = 0; i < 5; i++) {

cout << student.marks[i] << " ";

}

file.close();

cout << endl;

}

void changeStudentFile(string fileName, string newName) {

STUDENT student;

readStudentFile(student, fileName);

ifstream file(fileName + ".txt");

if (!file.is\_open()) {

cout << "Something went wrong, file cannot be opened:(";

return;

}

readStudentFile(student, fileName);

getline(file, student.name);

file >> student.group;

file.ignore();

getline(file, student.phone);

for (int i = 0; i < 5; i++) {

file >> student.marks[i];

}

student.name = newName;

writeStudentFile(student, fileName);

}

void writeStudentFile(STUDENT student, string fileName) {

ofstream file(fileName + ".txt");

if (!file) {

cout << "Something went wrong, file cannot be opened:(";

return;

}

file << student.name << endl;

file << student.group << endl;

file << student.phone << endl;

for (int i = 0; i < 5; i++) {

file << student.marks[i] << " ";

}

file.close();

}