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#include <Windows.h>

#include <iostream>

#include <string>

#include <vector>

#include <fstream>

#include <cmath> // для round

using namespace std;

class Student

{

string surname, marks;

public:

Student(string \_surname)

{

surname = \_surname;

}

Student(string \_surname, string \_marks)

{

surname = \_surname;

marks = \_marks;

}

void displayMarks()

{

cout << "-------------------------\n";

cout << "Оценки студента: " + surname << endl;

for (int i = 0; i < marks.size(); i++)

{

if (marks[i] != ',')

{

cout << marks[i];

if (i < marks.size() - 2)

cout << ",";

}

}

cout << "\n-------------------------\n";

}

};

int getRandomNum(int min, int max)

{

int range = max - min + 1;

srand((int)time(0));

return rand() % range + min;

}

int getMarksSum(int marks[], int len)

{

int res = 0;

\_\_asm

{

mov ecx, len //записываем длину массива

mov esi, marks //записываем оценки

cycl :

mov eax, [esi]

push ecx

add res, eax

pop ecx

add esi, 4

loop cycl

}

return res;

}

int studentsPerformance(int fours, int fives, int totalStudentsAmount)

{

int res = 0;

\_\_asm

{

mov eax, fours

add eax, fives

div totalStudentsAmount

mov res, eax

}

return res;

}

int main()

{

SetConsoleCP(1251);

SetConsoleOutputCP(1251);

vector<Student> students;

string surname, marks;

string amount;

int goodMarksAmount = 0;

int fours = 0;

int fives = 0;

ofstream myfile("example.txt");

for (int i = 0; i < 3; i++)

{

int marksCount = getRandomNum(1, 10);

cout << "Введите фамилию студента №" << i + 1 <<": "; cin >> surname;

marks = "";

int marksToSum[10];

for (int j = 0; j < marksCount; j++)

{

int mark = getRandomNum(2, 5);

marks += to\_string(mark) + ',';

marksToSum[j] = mark;

if (mark == 4)

{

fours++;

}

if (mark == 5)

{

fives++;

}

Sleep(100);

}

students.push\_back(Student(surname, marks));

students.back().displayMarks();

float avgMark = getMarksSum(marksToSum, marksCount) / (float)marksCount;

avgMark = round(avgMark \* 100) / 100;

cout << "Средний балл: " << avgMark << endl << endl;

myfile << surname << " " << marks << " Средний балл: " << avgMark << endl;

}

int perf = studentsPerformance(fours, fives, students.size());

cout << perf << "% - качество знаний";

myfile << perf << "% - качество знаний";

myfile.close();

}

