第三次上机实验报告

**学号：**202031906083  **姓名：**赖永兰  **班级：**自2002

**实验一程序代码**

#include<iostream>

using namespace std;

class Coordinate { // 定义Coordinate类

public:

Coordinate()

{

times = 2;

cout << "Coordinate construction1 called!" << endl;

}

Coordinate(int times1)

{

times = times1;

cout << "Coordinate construction2 called!" << endl;

}

~Coordinate()

{

cout << "Coordinate destruction called!" << endl;

}

void InputCoord()

{

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

{

cout << "Please Input x:" << endl;

cin >> Coord[i][1];

cout << "Please Input y:" << endl;

cin >> Coord[i][2];

}

}

void ShowCoord()

{

cout << "The coord is:" << endl;

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

{

cout << "(" << Coord[i][1] << "," << Coord[i][2] << ")" << endl;

}

}

void ShowAvgCoord()

{

float avgx = 0;

float avgy = 0;

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

{

avgx = avgx + Coord[i][1];

avgy = avgy + Coord[i][2];

}

avgx = avgx / times;

avgy = avgy / times;

cout << "The AVG coord is:" << endl;

cout << "(" << avgx << "," << avgy << ")" << endl;

}

private:

float Coord[100][100]; // 存放输入坐标的数组

int times; // 存放输入坐标数目

};

int main()

{

Coordinate y(5);

y.InputCoord();

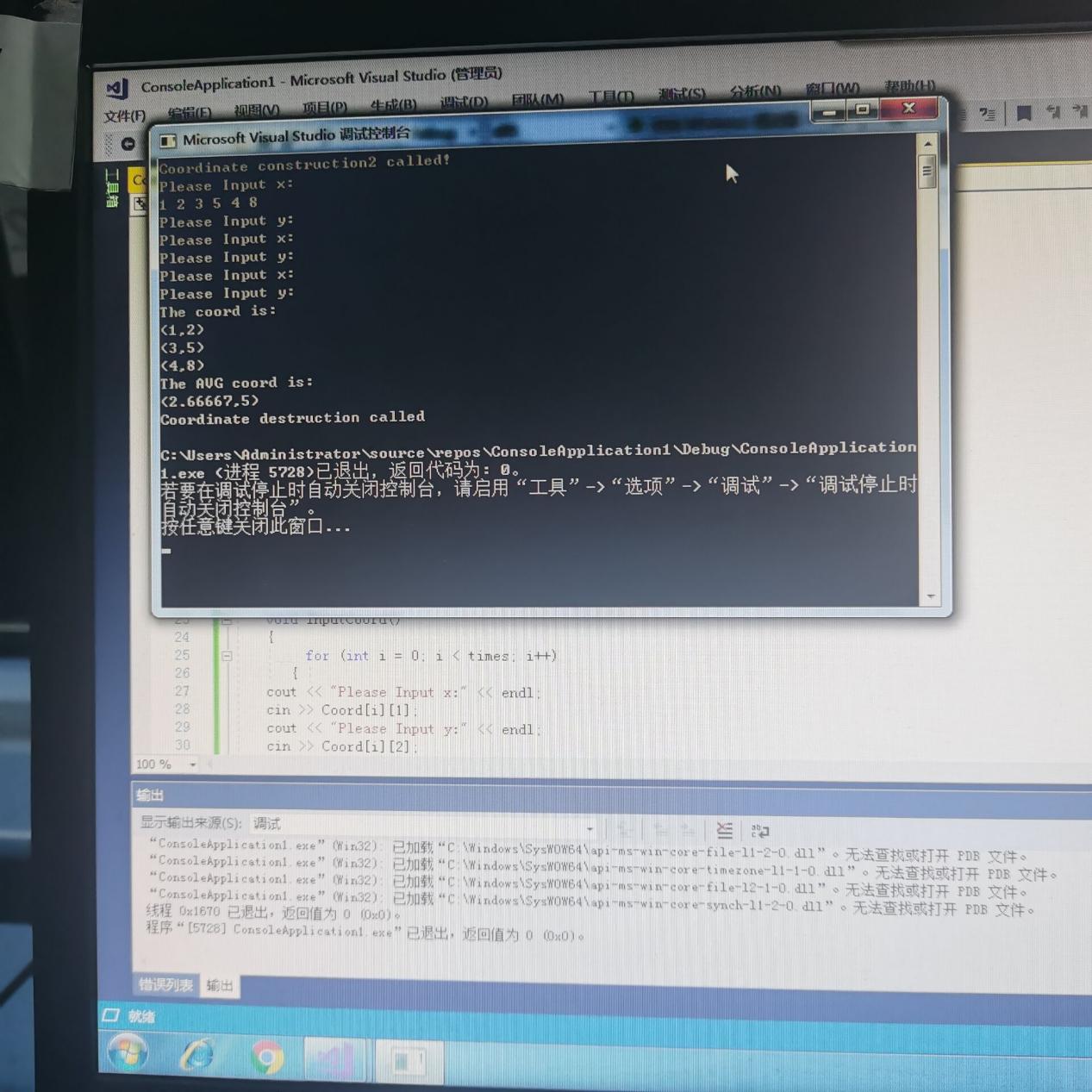
y.ShowCoord();

y.ShowAvgCoord();

}

**实验一程序结果**图形用户界面

低可信度描述已自动生成



1. **实验二程序代码**

#include<iostream>

#include<string>

using namespace std;

class Score {

public:

Score()

{

times = 2;

}

Score(int times1)

{

times = times1;

}

void InputNameAndScore()

{

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

{

cout << "请输入学生姓名:" << endl;

cin >> Name[i];

cout << "请输入科目A成绩:" << endl;

cin >> SScore[i][1];

cout << "请输入科目B成绩:" << endl;

cin >> SScore[i][2];

cout << "请输入科目C成绩:" << endl;

cin >> SScore[i][3];

}

}

void ShowNameAndScore()

{

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

{

cout << "姓名: " << Name[i] << " 科目A成绩: " << SScore[i][1] << " 科目B成绩 " << SScore[i][2] << " 科目C成绩: " << SScore[i][3] << endl;

}

}

void ShowStdentAvgScore(int Sid)

{

float avg = 0;

avg = (SScore[Sid][1] + SScore[Sid][2] + SScore[Sid][3]) / 3;

cout << "姓名: " << Name[Sid] << " 平均成绩: " << avg << endl;

}

void ShowClassAvgScore(string ClassName)

{

int Cid;

float avg = 0;

if (ClassName == "A") Cid = 1;

if (ClassName == "B") Cid = 2;

if (ClassName == "C") Cid = 3;

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

{

avg = avg + SScore[i][Cid];

}

avg = avg / times;

cout << "课程名称: " << ClassName << "平均成绩: " << avg << endl;

}

void OrderScore(string ClassName)

{

int Cid;

if (ClassName == "A") Cid = 1;

if (ClassName == "B") Cid = 2;

if (ClassName == "C") Cid = 3;

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

{

SScore1[i] = SScore[i][Cid];

}

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

{

Name1[i] = Name[i];

}

for (int i = 1; i < times; i++)

{

if (SScore1[i] > SScore1[i - 1])

{

float temp = SScore1[i - 1];

SScore1[i - 1] = SScore1[i];

SScore1[i] = temp;

string temp1;

temp1 = Name1[i - 1];

Name1[i - 1] = Name1[i];

Name1[i] = temp1;

}

}

cout << "课程名称: " << ClassName << endl;

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

{

cout << "姓名: " << Name1[i] << " 成绩: " << SScore1[i] << endl;

}

}

private:

float SScore[100][3], SScore1[100];

string Name[100], Name1[100];

int times;

};

int main()

{

Score x;

x.InputNameAndScore();

x.ShowNameAndScore();

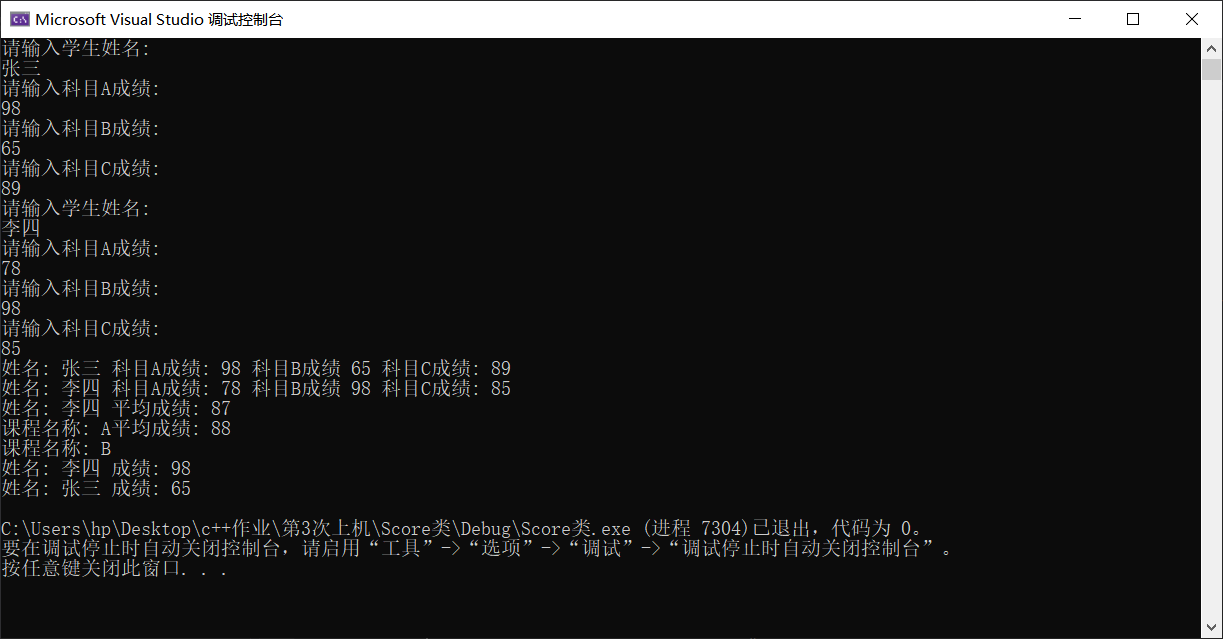
x.ShowStdentAvgScore(1);

x.ShowClassAvgScore("A");

x.OrderScore("B");

return 0;

}



1. **实验心得**

这次实验让我更好的理解了类和对象的概念，加深了对构造函数和析构函数的理解，知道了在添加初始化代码时需要定义自己的构造函数。同时，实验一让我对构造函数和析构函数的运行顺序也有了更深刻的印象。但是我觉得自己对这次实验内容还没有掌握的很好，还需要更多的练习和操作来巩固知识。

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