**实验内容**

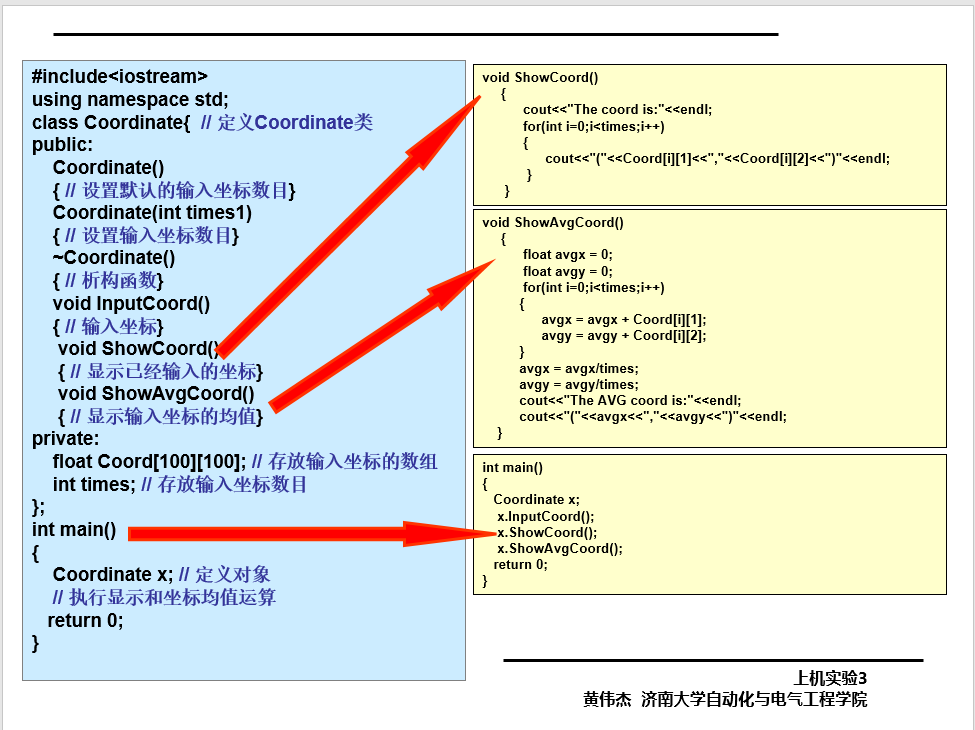
* **观察例程中的构造函数和析构函数的运行顺序；**
* **在main()函数中加入如下代码，观察运行结果：**

**Coordinate y(5);**

**y.InputCoord();**

**y.ShowCoord();**

**y.ShowAvgCoord();**



**程序代码**

#include<iostream>

using namespace std;

class coordinate{

public:

coordinate()

{

times = 2;

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

}

coordinate(int times1)

{

times = times1;

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

}

~coordinate()

{

cout << "coordinate derstruction 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];

int times;

};

int main()

{

coordinate y(5);

y.inputcoord();

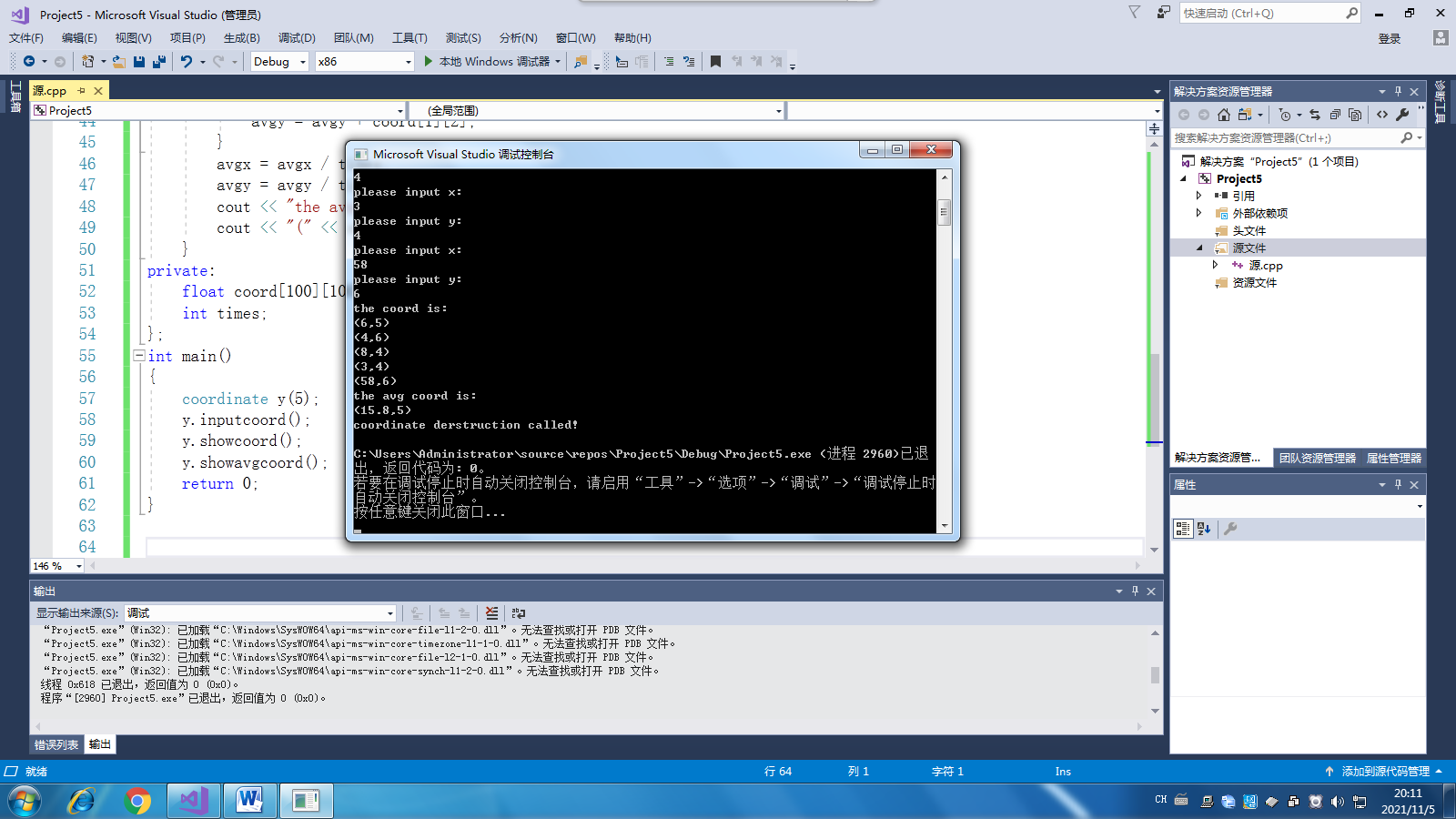
y.showcoord();

y.showavgcoord();

return 0;

}

**代码结果**



**二.实验内容（2）**

* **创建一个Score类，完成以下功能：**
  + **连续输入多位学生的成绩（成绩=科目A成绩+科目B成绩+科目C成绩）；**
  + **学生数目可以由用户自定义（默认为2个，最多为100个）；**
  + **显示每位同学的每科成绩和平均分；**
  + **显示每门科目的平均成绩；**
  + **对每门成绩进行排序并由高到底显示；**
  + **对整个文件进行打包。**

**实验代码**

#include<iostream>

#include<string>

using namespace std;

class score {

public:

score()

{

times = 2;

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

}

score(int times1)

{

times = times1;

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

}

~score()

{

cout << "score derstruction called!" << endl;

}

void input()

{

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 >> grade[i][1];

cout << "请输入科目B成绩:" << endl;

cin >> grade[i][2];

cout << "请输入科目C成绩:" << endl;

cin >> grade[i][3];

}

}

void showgrade()

{

float avg[100];

int sum;

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

{

sum = grade[i][1] + grade[i][2] + grade[i][3];

avg[i] = sum / 3;

}

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

{

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

}

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

{

cout << "姓名：" << name[i] << " 平均成绩:" << avg[i] << endl;

}

}

void showavggrade()

{

float avgA = 0;

float avgB = 0;

float avgC = 0;

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

{

avgA = avgA + grade[i][1];

avgB = avgB + grade[i][2];

avgC = avgC + grade[i][3];

}

avgA = avgA / times;

avgB = avgB / times;

avgC = avgC / times;

cout << "课程名称：A平均成绩：" << endl;

cout << avgA << endl;

cout << "课程名称：B平均成绩：" << endl;

cout << avgB << endl;

cout << "课程名称：C平均成绩：" << endl;

cout << avgC << endl;

}

private:

string name[100];

float grade[100][100];

int times;

};

int main()

{

score a(2);

a.input();

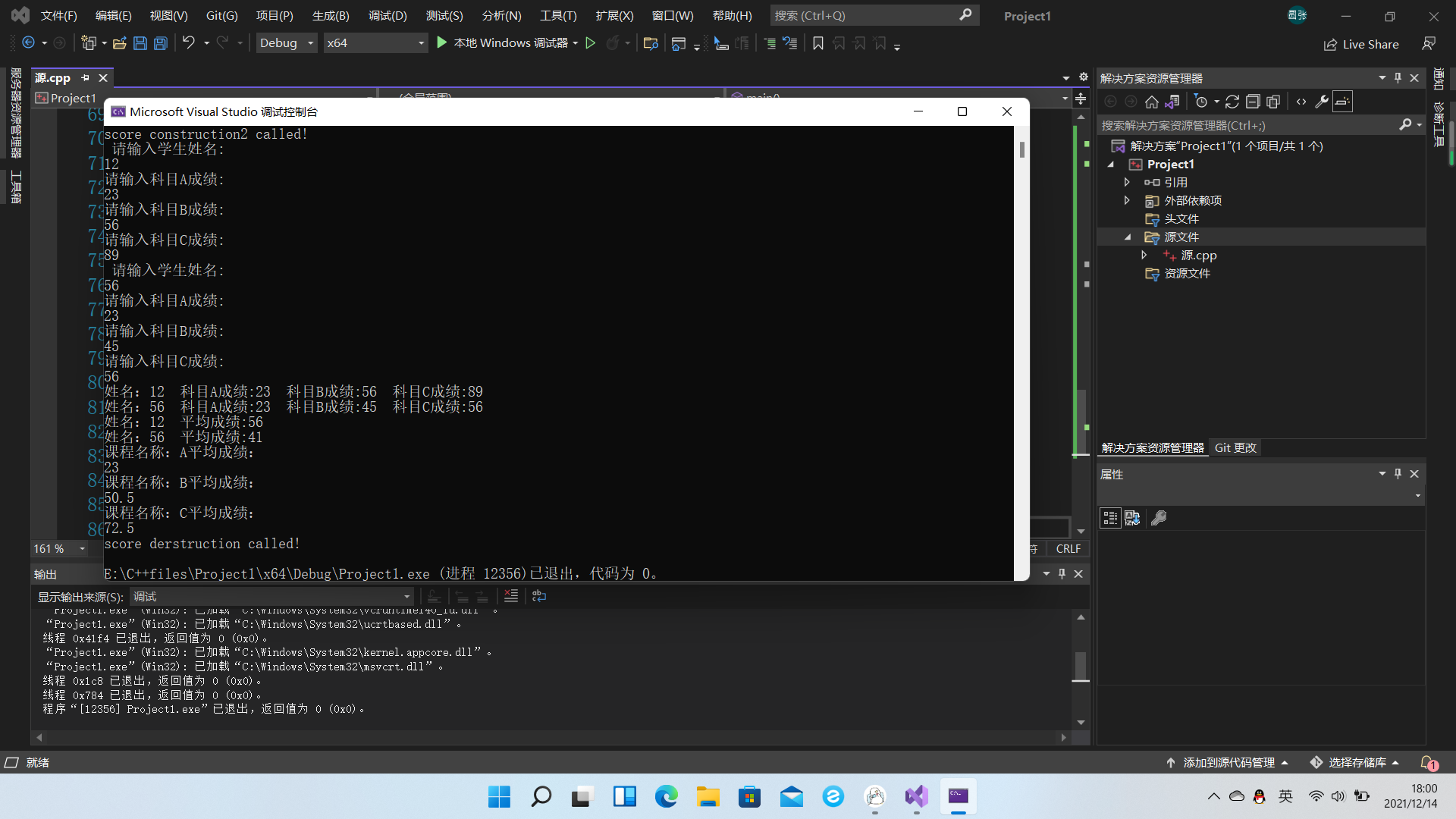
a.showgrade();

a.showavggrade();

return 0;

}

**代码结果**



**感想心得**  
读入名字时出现无法将多个名字带入到程序中的问题，改用为单独的string name[100];后解决问题

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