第六次实验报告

实验内容:

#include<iostream>

#include<string>

using namespace std;

class MyArray {

public:

MyArray(int length);

~MyArray();

void Input();

void Display(string);

protected:

int\* alist;

int length;

};

MyArray::MyArray(int leng)

{

if (leng <= 0)

{

cout << "error length";

exit(1);

}

length = leng;

alist = new int[length];

if (alist == NULL)

{

cout << "assign failure";

exit(1);

}

cout << "MyArray类对象已创建!" << endl;

}

MyArray::~MyArray()

{

delete[] alist;

cout << "MyArray类对象已撤销!" << endl;

}

void MyArray::Display(string str)

{

int i;

int\* p = alist;

cout << str << length << "个整数: ";

for (i = 0; i < length; i++, p++)

cout << \*p << "";

cout << endl;

}

void MyArray::Input()

{

cout << "请从键盘输入" << length << "个整数:";

int i;

int\* p = alist;

for (i = 0; i < length; i++, p++)

cin >> \*p;

}

class SortArray : public MyArray {

public:

void Sort();

SortArray(int leng) :MyArray(leng)

{

cout << "SortArray类对象已创建!" << endl;

}

~SortArray();

};

SortArray::~SortArray()

{

cout << "SortArray类对象已撤销!" << endl;

}

void SortArray::Sort()

{

int i, j, temp;

for (i = 0; i < length - 1; i++)

for (j = 0; j < length - i - 1; j++)

{

if (alist[j] > alist[j + 1])

{

temp = alist[j];

alist[j] = alist[j + 1];

alist[j + 1] = temp;

}

}

}

int main()

{

SortArray s(5);

s.Input();

s.Display("显示排序以前的");

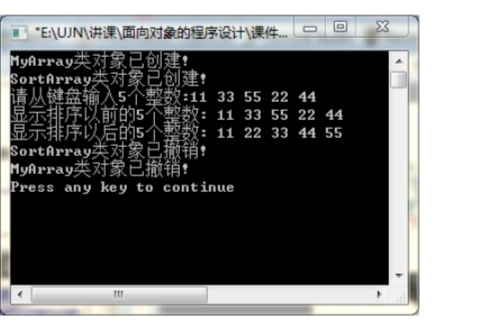
s.Sort();

s.Display("显示排序以后的");

return 0;

}

运行结果:



感想:对于本次上机所学的构造函数，也是c++程序很重要的内容，尤其要了解函数调用顺序。对于构造函数调用顺序是先调用基类的构造函数，再调用对象成员构造函数，最后调用派生类的构造函数；析构函数的调用顺序是先调用派生类的构造函数，再调用对象成员构造函数，最后调用基类的构造函数；(与构造函数调用顺序相反)。

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