第三次上机实验：

作业部分：

1.代码：

// main.cpp

// 作业1

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved.

#include <iostream>

#include <cstring>

#include <string.h>

using namespace std;

class student{

private:

int no;

int class\_no;

char \*name;

int grade;

public:

student(int no,int class\_no,char \*name,int grade);

~student(){

if(name!=NULL){

delete name;

}

}

void show(){

cout<<"学生:"<<name<<endl;

cout<<"学号:"<<no<<endl;

cout<<"班级:"<<class\_no<<endl;

cout<<"成绩:"<<grade<<endl;

}

void Modify(int ch\_gras){

grade=ch\_gras;

}

};

student::student(int no,int class\_no,char \*name,int grade){

student::no=no;

student::class\_no=class\_no;

student::name=new char[strlen(name)+1];

strcpy(student::name, name);

student::grade=grade;

}

int main(int argc, const char \* argv[]) {

// insert code here...

student stu[5]={

student(1, 1403, "Tom", 78),

student(2, 1403, "Mik", 80),

student(3, 1403, "Gre", 98),

student(4, 1403, "Ley", 86),

student(5, 1403, "Kit", 90),

};

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

stu[i].show();

}

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

(stu+j)->show();

}

return 0;

}

运行结果：

**学生:Tom**

**学号:1**

**班级:1403**

**成绩:78**

**学生:Mik**

**学号:2**

**班级:1403**

**成绩:80**

**学生:Gre**

**学号:3**

**班级:1403**

**成绩:98**

**学生:Ley**

**学号:4**

**班级:1403**

**成绩:86**

**学生:Kit**

**学号:5**

**班级:1403**

**成绩:90**

**学生:Tom**

**学号:1**

**班级:1403**

**成绩:78**

**学生:Mik**

**学号:2**

**班级:1403**

**成绩:80**

**学生:Gre**

**学号:3**

**班级:1403**

**成绩:98**

**学生:Ley**

**学号:4**

**班级:1403**

**成绩:86**

**学生:Kit**

**学号:5**

**班级:1403**

**成绩:90**

**Program ended with exit code:0**

**2.**

// main.cpp

// 作业4

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved

#include <iostream>

using namespace std;

class samp{

private:

int i;

public:

samp(int n){i=n;}

void set\_i(int n){i=n;}

int get\_i(){return i;}

};

void sqe\_it(samp &o){

o.set\_i(o.get\_i()\*o.get\_i());

cout<<"copy of has i value of"<<o.get\_i()<<endl;

}

int main(int argc, const char \* argv[]) {

// insert code here...

samp a(10);

sqe\_it(a);

cout<<"copy of a has i value of"<<a.get\_i()<<endl;

return 0;

}

运行结果：

**copy of has i value of100**

**copy of a has i value of100**

**Program ended with exit code: 0**

**3.**

// main.cpp

// 作业6

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved.

#include <iostream>

using namespace std;

class Circle{

private:

float radius;

static int count;

public:

Circle(float r){

radius=r;

count++;

}

~Circle(){

count--;

}

static int num(){

return count;

}

};

int Circle::count=0;

int main(int argc, const char \* argv[]) {

// insert code here...

Circle r1(2),r2(3),r4(4),r5(5);

int count=Circle::num();

r1.~Circle();

cout<<"总共有:"<<count<<"个圆!"<<endl;

cout<<"还有:"<<Circle::num()<<"个"<<endl;

return 0;

}

运行结果：

**总共有:4个圆!**

**还有:3个**

**Program ended with exit code: 0**

实验部分：

1.

// main.cpp

// 实验1

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved.

#include <iostream>

using namespace std;

class counter{

int value;

public:

counter(int number);

void increment();

void decrement();

int getvalue();

void print();

};

counter::counter(int number){

value=number;

}

void counter::increment(){

value++;

}

void counter::decrement(){

value--;

}

int counter::getvalue(){

return value;

}

void counter::print(){

cout<<value<<endl;

}

int main(int argc, const char \* argv[]) {

// insert code here...

counter a(0);

a.increment();

a.increment();

a.increment();

a.decrement();

cout<<a.getvalue()<<endl;

a.increment();

a.print();

return 0;

}

运行结果：

**2**

**3**

**Program ended with exit code: 0**

**2.**

**＊＊＊＊＊＊＊＊＊＊＊student.hpp＊＊＊＊＊＊＊＊＊＊＊＊＊**

#ifndef student\_hpp

#define student\_hpp

#include <stdio.h>

class Student{

private:

int number;

char \*name;

float score;

public:

Student(int numberi,char \*namei,float scorei);

~Student();

void Modify(float nscore){

score=nscore;

}

void print();

};

#endif /\* student.hpp \*/

**＊＊＊＊＊＊＊＊＊＊＊student.cpp＊＊＊＊＊＊＊＊＊＊＊＊＊**

#include <iostream>

#include <cstring>

#include "student.hpp"

using namespace std;

Student::Student(int numberi,char \*namei,float scorei){

number=numberi;

name=new char[strlen(namei)+1];

strcpy(name, namei);

score=scorei;

}

Student::~Student(){

if(name!=NULL) delete []name;

}

void Student::print(){

cout<<"Number:"<<number<<" Name:"<<name<<" Score:"<<score<<endl;

}

＊＊＊＊＊＊＊＊＊＊＊main.cpp＊＊＊＊＊＊＊＊＊＊＊＊＊＊

// main.cpp

// 实验2

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved.

#include <iostream>

#include <cstring>

#include "student.hpp"

using namespace std;

int main(int argc, const char \* argv[]) {

// insert code here...

int number;

char name[15];

float scorei;

cout<<"Enter number:\n";cin>>number;

cout<<"Enter name:\n";cin>>name;

cout<<"Enter score:\n";cin>>scorei;

Student stu1(number, name, scorei);

cout<<"Enter number:\n";cin>>number;

cout<<"Enter name:\n";cin>>name;

cout<<"Enter score:\n";cin>>scorei;

Student stu2(number,name,scorei);

stu2.Modify(87);

stu1.print();

stu2.print();

return 0;

}

运行结果：

**Enter number:**

**1**

**Enter name:**

**Tom**

**Enter score:**

**45**

**Enter number:**

**2**

**Enter name:**

**Mike**

**Enter score:**

**70**

**Number:1 Name:TOM Score:45**

**Number:2 Name:MIKE Score:87**

**Program ended with exit code: 0**

**3.**

// main.cpp

// 实验3

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved.

#include <iostream>

using namespace std;

class Rectangle{

private:

int length;

int width;

public:

Rectangle(int l,int w){

length=l;

width=w;

}

~Rectangle(){};

float Area(){

return (float)length\*width;

}

};

int main(int argc, const char \* argv[]) {

// insert code here...

Rectangle rec(3, 5);

cout<<"该矩形面积是:"<<rec.Area()<<endl;

return 0;

}

运行结果：

**该矩形面积是:15**

**Program ended with exit code: 0**

**4.**

// main.cpp

// 实验4

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved.

#include <iostream>

using namespace std;

class Date {

int d, m, y;

public:

Date(int y,int m,int d){

Date::d=d;

Date::m=m;

Date::y=y;

}

int day( ) const{ return d; }

int month( ) const { return m; }

int year( ) const;

};

inline int Date::year( ) const {

return y;

}

int main(int argc, const char \* argv[]) {

Date d(2016,3,24);

cout<<"现在是:"<<d.year()<<"年"<<endl;

return 0;

}

运行结果：

**现在是:2016年**

**Program ended with exit code: 0**

**5.**

// main.cpp

// 实验5

// Created by mac on 16/3/25.

// Copyright © 2016年 mac. All rights reserved.

#include <iostream>

using namespace std;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

class Score{

float english;

float mathematics;

float computer;

public:

Score(float x1, float y1, float z1);

Score( );

void print( );

void modify(float x2, float y2, float z2);

}; //Score类的声明

Score::Score(){

english=60;

mathematics=60;

computer=60;

}

Score::Score(float x1, float y1, float z1){

computer=x1;

english=y1;

mathematics=z1;

}

void Score::modify(float x2, float y2, float z2){

computer=x2;

english=y2;

mathematics=z2;

}

void Score::print(){

cout<<"Computer:"<<computer<<endl;

cout<<"English:"<<english<<endl;

cout<<"Mathematics:"<<mathematics<<endl;

}

//Score类的定义

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

//Student类的定义

class Student{

private:

int number;

char \*name;

Score score;

public:

Student(int numberi,char \*namei,float x1, float y1, float z1);

~Student();

void Modify(float x1, float y1, float z1){

score.modify(x1, y1, z1);

}

void print();

};

Student::Student(int numberi,char \*namei,float x1, float y1, float z1):score(x1,y1,z1){

number=numberi;

name=new char[strlen(namei)+1];

strcpy(name, namei);

}

Student::~Student(){

if(name!=NULL) delete []name;

}

void Student::print(){

cout<<"NO.:"<<number<<endl;

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

cout<<" \*Score\*"<<endl;

score.print();

}

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

int main(int argc, const char \* argv[]) {

// insert code here...

Student stu1(06143047,"黄柯",100,100,100);

stu1.print();

return 0;

}

运行结果：

**NO.:1623591**

**Name:黄柯**

**\*Score\***

**Computer:100**

**English:100**

**Mathematics:100**

**Program ended with exit code: 0**