

截图

例5.1

```
#include<iostream>
#include<string>
using namespace std;
class Student
{public:
void get_value()
{cin>>num>>name>>sex;}
void display()
{cout<<"num:"<<num<<endl;
cout<<"name:"<<name<<endl;
cout<<"sex:"<<sex<<endl;}}
private:
    int num;
    string name;
    char sex;
};
class Student1:public Student
{public:
void get_value_1()
{cin>>age>>addr;}
void display_1()
{cout<<"age:"<<age<<endl;
cout<<"address:"<<addr<<endl;}
private:
    int age;
    string addr;
};
int main()
{Student1 stud;
stud.get_value();
stud.get_value_1();
stud.display();
stud.display_1();
return 0;
}
```

```
l zpy m 18 zhengzhou
num:1
name:zpy
sex:m
age:18
address:zhengzhou

-----
Process exited after 20.88 seconds with return value 0
请按任意键继续. . .
```

例5.2

```
#include<iostream>
#include<string>
using namespace std;
class Student
{public:
void get_value()
{cin>>num>>name>>sex;}
void display()
{cout<<"num:"<<num<<endl;
cout<<"name:"<<name<<endl;
cout<<"sex:"<<sex<<endl;}}
private:
int num;
string name;
char sex;
};
class Student1:private Student
{public:
void get_value_1()
{ get_value();
cin>>age>>addr;}
void display_1()
{display();
cout<<"age:"<<age<<endl;
cout<<"address:"<<addr<<endl;}}
private:
int age;
string addr;
};
int main()
{Student1 stud;
stud.get_value_1();
stud.display_1();
return 0;}
```

```
}
```

```
l zpy m 18 zhengzhou
num:1
name:zpy
sex:m
age:18
address:zhengzhou

-----
Process exited after 20.88 seconds with return value 0
请按任意键继续. . .
```

例5.3

```
#include<iostream>
#include<string>
using namespace std;
class Student
{public:
void get_value();
void display();
protected:
    int num;
    string name;
    char sex;
};
void Student::get_value()
{cin>>num>>name>>sex;}
void Student::display()
{cout<<"num:"<<num<<endl;
cout<<"name:"<<name<<endl;
cout<<"sex:"<<sex<<endl;}}
class Student1:protected Student
{public:
void get_value1();
void display1();
private:
    int age;
    string addr;
};
void Student1::get_value1()
{get_value();
cin>>age>>addr;
}
void Student1::display1()
```

```

{
cout<<"num:"<<num<<endl;
cout<<"name:"<<name<<endl;
cout<<"sex:"<<sex<<endl;
cout<<"age:"<<age<<endl;
cout<<"address:"<<addr<<endl;}
int main()
{Student1 stud1;
stud1.get_value1();
stud1.display1();
return 0;
}

```

```

1 zpy m 18 zhengzhou
num:1
name:zpy
sex:m
age:18
address:zhengzhou

-----
Process exited after 20.88 seconds with return value 0
请按任意键继续. . .

```

例5.5

```

#include<iostream>
#include<string>
using namespace std;
class Student
{public:
    Student(int n,string nam,char s)
    {num=n;
    name=nam;
    sex=s;}
    ~Student(){}
protected:
    int num;
    string name;
    char sex;
};
class Student1:public Student
{public:
    Student1(int n,string nam,char s,int a,string
ad):Student(n,nam,s)
    {age=a;

```

```

        addr=ad;
    }
    void show()
    {cout<<"num:"<<num<<endl;
    cout<<"name:"<<name<<endl;
    cout<<"sex:"<<sex<<endl;
    cout<<"age:"<<age<<endl;
    cout<<"address:"<<addr<<endl;}
    ~Student1(){}
    private:
        int age;
        string addr;
};
int main()
{Student1 stud1(10010,"Wang_Li",'f',19,"115 Beijing
Road,Shanghai");
    Student1 stud2(10011,"Zhang_fan",'m',21,"213 Shanghai
Road,Beijing");
    stud1.show();
    stud2.show();
    return 0;
}

```

```

num:10010
name:Wang_Li
sex:f
age:19
address:115 BeiJing Road,Shanghai
num:10011
name:Zhang_fan
sex:m
age:21
address:213 Shanghai Road,Beijing
-----
Process exited after 0.07954 seconds with return value 0
请按任意键继续

```

例5.6

```

#include<iostream>
#include<string>
using namespace std;
class Student
{public:
    Student(int n,string nam)
    {num=n;
    name=nam;}

```

```

    void display()
    {cout<<"num:"<<num<<endl<<"name:"<<name<<endl;}
protected:
    int num;
    string name;
};
class Student1:public Student
{
public:
    Student1(int n,string nam,int n1,string nam1,int a,string
ad):Student(n,nam),monitor(n1,nam1)
    {age=a;
    addr=ad;}
    void show()
    {cout<<"This student is:"<<endl;
    display();
    cout<<"age:"<<age<<endl;
    cout<<"address:"<<addr<<endl<<endl;}
    void show_monitor()
    {cout<<endl<<"Class monitor is:"<<endl;
    monitor.display();
    }
private:
    Student monitor;
    int age;
    string addr;
};
int main()
{Student1 stud1(10010,"Wang_Li",10001,"Li_jun",19,"115 Beijing
Road,Shanghai");
stud1.show();
stud1.show_monitor();
return 0;
}

```

```
This student is:
num:10010
name:Wang_Li
age:19
address:115 Beijing Road, Shanghai

Class monitor is:
num:10001
name:Li_jun

-----
Process exited after 0.0761 seconds with return value 0
请按任意键继续. . .
```

例5.7

```
#include<iostream>
#include<string>
using namespace std;
class Student
{public:
    Student(int n,string nam)
    {num=n;
    name=nam;}
    void display()
    {cout<<"num:"<<num<<endl<<"name:"<<name<<endl;}
protected:
    int num;
    string name;
};
class Student1:public Student
{
public:
    Student1(int n,string nam,int a):Student(n,nam)
    {age=a;}
    void show()
    {display();
    cout<<"age:"<<age<<endl;}
private:
    int age;
};
class Student2:public Student1
{public:
    Student2(int n,string nam,int a,int s):Student1(n,nam,a)
    {score=s;}
    void show_all()
    {show();
```

```

        cout<<"score"<<score<<endl;}
    private:
        int score;
    };
int main()
{Student2 stud(10010,"Li",17,89);
stud.show_all();
return 0;
}

```

```

num:10010
name:Li
age:17
score89

-----
Process exited after 0.1073 seconds with return value 0
请按任意键继续. . .

```

例5.8

```

#include<iostream>
#include<string>
using namespace std;
class Teacher
{
public:
    Teacher(string nam,int a,string t)
    {
        name = nam;
        age = a;
        title =t;
    }
    void display()
    {
        cout<<"name: "<<name<<endl;
        cout<<"age: "<<age<<endl;
        cout<<"title: "<<title<<endl;
    }
protected:

```



```

    string name;
    int age;
    string title;
};

class Student
{
public:
    Student(string nam,char s,float sco)
    {
        name1 = nam;
        sex = s;
        score = sco;
    }
    void display1()
    {
        cout<<"name: "<<name1<<endl;
        cout<<"sex: "<<sex<<endl;
        cout<<"score: "<<score<<endl;
    }
protected:
    string name1;
    char sex;
    float score;
};

class Graduate:public Teacher,public Student
{
public:
    Graduate(string nam,int a,char s,string t,float sco,float
w):Teacher(nam,a,t),Student(nam,s,sco),wage(w){}
    void show()
    {
        cout<<"name: "<<name<<endl;
        cout<<"age: "<<age<<endl;
        cout<<"sex: "<<sex<<endl;
        cout<<"score: "<<score<<endl;
        cout<<"title: "<<title<<endl;
        cout<<"wage: "<<wage<<endl;
    }
private:
    float wage;
};

```

```

int main()
{
    Graduate grad1("Wang_li",24,'f',"assistant",89.5,2400);
    grad1.show();
    return 0;
}

```

```

name: Wang_li
age: 24
sex: f
score: 89.5
title: assistant
wage: 2400
-----
Process exited after 0.08389 seconds with return value 0
请按任意键继续. . .

```

习题8

```

#include <iostream>
using namespace std;
class A{
public:
    A(){
        cout<<"constructing A"<<endl;
    }
    ~A(){
        cout<<"destructing A"<<endl;
    }
};

class B:public A{
public:
    B(){
        cout<<"constructing B"<<endl;
    }
    ~B(){
        cout<<"destructing B"<<endl;
    }
};

```

```

class C:public B{
    public:
        C(){
            cout<<"constructing C"<<endl;
        }
        ~C(){
            cout<<"destructing C"<<endl;
        }
};

int main(){
    C c1;
    return 0;
}

```

```

constructing A
constructing B
constructing C
destructing C
destructing B
destructing A
-----
Process exited after 0.09642 seconds with return value 0
请按任意键继续. . .

```

习题9

```

#include <iostream>
#include <string>
using namespace std;
class Teacher{
public:
    Teacher(string nam,int a,char s,string tit,string ad,string t){
        name = nam;
        age = a;
        sex = s;
        title = tit;
        addr = ad;
        tel = t;
    }
    void display(){

```

```

        cout<<"name:"<<name<<endl;
        cout<<"age:"<<age<<endl;
        cout<<"sex:"<<sex<<endl;
        cout<<"title:"<<title<<endl;
        cout<<"address:"<<addr<<endl;
        cout<<"tel:"<<tel<<endl;
    }
protected:
    string name;
    int age;
    char sex;
    string title;
    string addr;
    string tel;
};

class Cadre{
public:
    Cadre(string nam,int a,char s,string p,string ad,string t){
        name = nam;
        age = a;
        sex = s;
        post = p;
        addr = ad;
        tel = t;
    }
    void display(){
        cout<<"name:"<<name<<endl;
        cout<<"age:"<<age<<endl;
        cout<<"sex:"<<sex<<endl;
        cout<<"post:"<<post<<endl;
        cout<<"address:"<<addr<<endl;
        cout<<"tel:"<<tel<<endl;
    }
protected:
    string name;
    int age;
    char sex;
    string post;
    string addr;
    string tel;
};

```

```

class Person:public Teacher,public Cadre{
public:
    Person(string nam,int a,char s,string tit,string p,string
ad,string t,float
w):Teacher(nam,a,s,tit,ad,t),Cadre(nam,a,s,p,ad,t),wage(w){
    }
    void show(){
        Cadre::display();
        cout<<"wage:"<<wage<<endl;
    }
protected:
    string name;
    int age;
    char sex;
    string title;
    string post;
    string addr;
    string tel;
    float wage;
};

int main(){
    Person
person1("zhang",19,'m',"asd","124325","Zhengzhou,Henan","1233445667
",1534.5);
    person1.show();
    return 0;
}

```

```

name:zhang
age:19
sex:m
post:124325
address:Zhengzhou, Henan
tel:1233445667
wage:1534.5

```

```

-----
Process exited after 0.08832 seconds with return value 0
请按任意键继续. . .

```

```

#include <iostream>
#include <cstring>
using namespace std;
class Teacher{
public:
    Teacher(int n,char nam[],char s){
        num = n;
        strcpy(name,nam);
        sex = s;
    }
    void display(){
        cout<<"num:"<<num<<endl;
        cout<<"name:"<<name<<endl;
        cout<<"sex:"<<sex<<endl;
    }
private:
    int num;
    char name[20];
    char sex;
};

class BirthDate{
public:
    BirthDate(int y,int m,int d){
        year = y;
        month = m;
        day = d;
    }
    void display(){
        cout<<"birthday:"<<month<<"/"<<day<<"/"<<year<<endl;
    }
    void change(int y,int m,int d){
        year = y;
        month = m;
        day = d;
    }
private:
    int year;
    int month;
    int day;
};

class Professor:public Teacher{

```

```

public:
    Professor(int n,char nam[],char s,int y,int m,int d,float
a):Teacher(n,nam,s),birthday(y,m,d){
        area = a;
    }
    void display(){
        Teacher::display();
        birthday.display();
        cout<<"area:"<<area<<endl;
    }
    void change(int y,int m,int d){
        birthday.change(y,m,d);
    }
private:
    float area;
    BirthDate birthday;
};

int main(){
    Professor prof(3012,"zhang",'f',1949,10,1,123.5);
    prof.display();
    prof.change(1950,6,1);
    prof.display();
    return 0;
}

```

```

1 num:3012
2 name:zhang
3 sex:f
4 birthday:10/1/1949
5 area:123.5
6 num:3012
7 name:zhang
8 sex:f
9 birthday:6/1/1950
10 area:123.5

-----
Process exited after 0.08176 seconds with return value 0
请按任意键继续. . .

```