C++源程序

Main.cpp

#include"shape.h"

int main()

{

jvxing t1;

sanjiao t2;

zhengfang t3;

yuan t4;

shape \*p;

p=&t1;

p->setvalues();

p=&t2;

p->setvalues();

p=&t3;

p->setvalues();

p=&t4;

p->setvalues();

p=&t1;

p->area();

p=&t2;

p->area();

p=&t3;

p->area();

p=&t4;

p->area();

return 0;

}

Shape.cpp

#include "shape.h"

shape::shape(void)

{

}

shape::~shape(void)

{

}

void jvxing:: setvalues()

{

cin>>di>>gao;

};

float jvxing::area()

{

if((di>0)&(gao>0))

cout<<di\*gao<<endl;

else

{cout<<"Set Value Error!";

exit(0);

}

return 0;

};

void sanjiao:: setvalues()

{

cin>>di>>gao;

};

float sanjiao:: area()

{

if((di>0)&(gao>0))

cout<<0.5\*di\*gao<<endl;

else

{cout<<"Set Value Error!";

exit(0);

}

return 0;

};

void zhengfang::setvalues()

{

cin>>bian;

};

float zhengfang::area()

{

if(bian>0)

cout<<bian\*bian<<endl;

else

{ cout<<"Set Value Error!";

exit(0);

}

return 0;

};

void yuan::setvalues()

{

cin>>r;

};

float yuan::area()

{

if(r>0)

cout<<3.1415\*r\*r<<endl;

else

{cout<<"Set Value Error!";

exit(0);

}

return 0;

};

Shape.h

#pragma once

#include<iostream>

using namespace std;

class shape

{

public:

shape(void);

~shape(void);

virtual void setvalues()=0;

virtual float area()=0;

};

class jvxing:public shape

{

private:

float di;

float gao;

public:

virtual void setvalues();

virtual float area();

};

class sanjiao:public shape

{

private:

float di;

float gao;

public:

virtual void setvalues();

virtual float area();

};

class zhengfang:public shape

{

private:

float bian;

public:

virtual void setvalues();

virtual float area();

};

class yuan:public shape

{

float r;

public:

virtual void setvalues();

virtual float area();

};