#include <iostream>

using namespace std;

class Shape {

public:

virtual void Show\_data() = 0;

virtual void Area() = 0;

};

class Rectangle : public Shape {

private:

float length;

float width;

public:

Rectangle(float len, float wid) : length(len \* 2), width(wid / 2) {}

void Show\_data() override {

cout << "the length of the rectangle is " << length << " and the width is " << width << endl;

}

void Area() override {

cout << "\t The area of the rectangle = " << (length \* width) << endl;

}

};

class Circle : public Shape {

private:

float radius;

public:

Circle(int rad) : radius(rad / 2) {}

void Show\_data() override {

cout << "the radius of the circle is " << radius << endl;

}

void Area() override {

cout << "\t The area of the circle = " << (3.14 \* radius \* radius) << endl;

}

};

int main() {

Shape\* shp;

Rectangle rec(5.5, 6);

shp = &rec;

shp->Show\_data();

shp->Area();

Circle cir(10);

shp = &cir;

shp->Show\_data();

shp->Area();

return 0;

}