

First Page: Interface

```
assignment4 > J interface_assignment4_dc128280_YangYishu.java > test > main(String[])
1  import java.lang.*;
2  /**general case of interface involve area */
3  interface CArea{
4      double pi = 3.141592653;
5      double calc(double x,double y);
6  }
7  /*class of circle area */
8  class rect implements CArea{
9      public double calc(double x,double y){
10         return x*y;
11     }
12 }
13 /*class of rectangle area */
14 class circle implements CArea{
15     public double calc(double x,double y){
16         return pi*x*x;
17     }
18 }
19 class test{
20     Run | Debug
21     public static void main(String arg[]){
22         circle c = new circle();
23         rect r = new rect();
24         System.out.println("Area of the circle is "+c.calc(x: 10, y: 10));
25         System.out.println("Area of the rectangle is "+r.calc(x: 20, y: 15));
26     }
27 }
```

Windows PowerShell

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安装最新的 PowerShell，了解新功能和改进！ <https://aka.ms/PSWindows>

```
PS C:\Users\YangYiShu\Desktop\lab> & 'C:\Program Files\Java\jdk-17.0.4.1\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\YangYiShu\AppData\Roaming\Code\User\workspaceStorage\6aeb430d872b6397bdb46c8dad065ba9\redhat.java\jdt_ws\lab_2d64457b\bin' 'test'
Area of the circle is 314.1592653> c;; cd 'c:\Users\YangYiShu\Desktop\lab'; & 'C:\Program Files\Java\jdk-17.0.4.1\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\YangYiShu\AppData\Roaming\Code\User\workspaceStorage\6aeb430d872b6397bdb46c8dad065ba9\redhat.java\jdt_ws\lab_2d64457b\bin' 'test'
Area of the circle is 314.1592653
Area of the rectangle is 300.0
PS C:\Users\YangYiShu\Desktop\lab>
```

Next Page: Abstract

C:\> Users > YangYiShu > Desktop > lab > assignment4 > abstract_assignment4_dc128280_YangYishu.java > Area

```
1  import java.lang.Math;
2  /** total definition of area using abstract */
3  abstract class Total
4  {abstract void area();
5    double area;
6  }
7  /** extension from calculation of rect */
8  class Rect extends Total{
9    double w=345.67544,h=1214234.54367;
10 void area()
11 {
12     area = w*h;
13     System.out.println("area of Rectangle -->" + area);
14 }
15 }
16 /** extension from calculation of cir */
17 class Cir extends Total{
18     double r=5.432;
19 void area()
20 {
21     area = Math.PI * r * r;
22     System.out.println("area of Circle -->" + area);
23 }
24 }
25 /** final calculation */
26 class Area
27 {
28 public static void main(String [] args)
29 {
30     Rect r = new Rect();
31     Cir c = new Cir();
32
33     r.area();
34     c.area();
35 }
36 }
```

Windows PowerShell

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```
PS C:\Users\YangYiShu> & 'C:\Program Files\Java\jdk-17.0.4.1\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\YangYiShu\AppData\Local\Temp\vscodesws_ff74a\jdt_ws\jdt.ls-java-project\bin' 'Area'
```

```
area of Rectangle -->4.197310601463265E8
```

```
area of Circle -->92.69779319063629
```

```
PS C:\Users\YangYiShu>
```