

```

1  import java.util.Scanner;
2  abstract class Shape
3  {
4      int d1;
5      int d2;
6      Shape(int a,int b)
7      {
8          d1=a;
9          d2=b;
10     }
11     abstract void printarea();
12 }
13 class Rectangle extends Shape
14 {
15     Rectangle(int a,int b)
16     {
17         super(a,b);
18     }
19     void printarea()
20     {
21         float area=(float)d1*d2;
22         System.out.println("Area of the rectangle :"+area);
23     }
24 }
25 class Triangle extends Shape
26 {
27     Triangle(int a,int b)
28     {
29         super(a,b);
30     }
31     void printarea()
32     {
33         float area=(float)d1*d2/2;
34         System.out.println("Area of the triangle :"+area);
35     }
36 }
37 class Circle extends Shape
38 {
39     Circle(int a,int b)
40     {

```

```

37 class Circle extends Shape
38 {
39     Circle(int a,int b)
40     {
41         super(a,b);
42     }
43     void printarea()
44     {
45         float area=(float)3.14*d1*d1;
46         System.out.println("Area of the circle :"+area);
47     }
48 }
49 class Main
50 {
51     Run | Debug
52     public static void main(String args[])
53     {
54         int ch,flag=0;
55         Scanner ss=new Scanner(System.in);
56         while(flag==0)
57         {
58             System.out.println("Enter the choice whose area has to be calculated");
59             System.out.println("1.RECTANGLE\n2.TRIANGLE\n3.CIRCLE");
60             ch=ss.nextInt();
61             switch(ch)
62             {
63                 case 1:
64                     System.out.println("Enter the dimensions of rectangle");
65                     int x=ss.nextInt();
66                     int y=ss.nextInt();
67                     Rectangle r=new Rectangle(x,y);
68                     r.printarea();
69                     break;
70                 case 2:
71                     System.out.println("Enter the dimensions of triangle");
72                     int s=ss.nextInt();
73                     int w=ss.nextInt();
74                     Triangle t=new Triangle(s,w);
75                     t.printarea();

```

```

51 public static void main(String args[])
52 {
53     int ch,flag=0;
54     Scanner ss=new Scanner(System.in);
55     while(flag==0)
56     {
57         System.out.println("Enter the choice whose area has to be calculated");
58         System.out.println("1.RECTANGLE\n2.TRIANGLE\n3.CIRCLE");
59         ch=ss.nextInt();
60         switch(ch)
61         {
62             case 1:
63                 System.out.println("Enter the dimensions of rectangle");
64                 int x=ss.nextInt();
65                 int y=ss.nextInt();
66                 Rectangle r=new Rectangle(x,y);
67                 r.printarea();
68                 break;
69             case 2:
70                 System.out.println("Enter the dimensions of triangle");
71                 int s=ss.nextInt();
72                 int w=ss.nextInt();
73                 Triangle t=new Triangle(s,w);
74                 t.printarea();
75                 break;
76             case 3:
77                 System.out.println("Enter the radius of circle");
78                 int f=ss.nextInt();
79                 Circle c=new Circle(f,f);
80                 c.printarea();
81                 break;
82             default:
83                 flag=1;
84         }
85     }
86 }
87 }

```

```
C:\Users\akki\Desktop\PROJECT WORK>javac areas.java
```

```
C:\Users\akki\Desktop\PROJECT WORK>java Main
```

```
Enter the choice whose area has to be calculated
```

```
1.RECTANGLE
```

```
2.TRIANGLE
```

```
3.CIRCLE
```

```
1
```

```
Enter the dimensions of rectangle
```

```
20 10
```

```
Area of the rectangle :200.0
```

```
Enter the choice whose area has to be calculated
```

```
1.RECTANGLE
```

```
2.TRIANGLE
```

```
3.CIRCLE
```

```
2
```

```
Enter the dimensions of triangle
```

```
9 7
```

```
Area of the triangle :31.5
```

```
Enter the choice whose area has to be calculated
```

```
1.RECTANGLE
```

```
2.TRIANGLE
```

```
3.CIRCLE
```

```
3
```

```
Enter the radius of circle
```

```
6
```

```
Area of the circle :113.04
```

```
Enter the choice whose area has to be calculated
```

```
1.RECTANGLE
```

```
2.TRIANGLE
```

```
3.CIRCLE
```

```
5
```

```
C:\Users\akki\Desktop\PROJECT WORK>
```