

```

1  import java.util.Scanner;
2  abstract class shape{
3      double a,b;
4      abstract void printArea();
5  }
6
7  class rectangle extends shape{
8      void getdata(double x, double y){
9          a=x;
10         b=y;
11     }
12
13     void printArea(){
14         System.out.println("Area of rectangle = " + (a*b));
15     }
16 }
17
18 class triangle extends shape{
19     void getdata(double x, double y){
20         a=x;
21         b=y;
22     }
23
24     void printArea(){
25         double area = 0.5*a*b;
26         System.out.println("Area of triangle = " + area);
27     }
28 }
29
30 class circle extends shape{
31     void getdata(double x){
32         a=x;
33     }
34
35     void printArea(){
36         double area = 3.14*a*a;
37         System.out.println("Area of circle = " + area);
38     }
39 }
40
41 public class Main
42 {
43     public static void main(String[] args) {
44         Scanner scan = new Scanner(System.in);
45         int ch;

```



```

38 }
39 }
40
41 public class Main
42 {
43     public static void main(String[] args) {
44         Scanner scan = new Scanner(System.in);
45         int ch;
46         shape si;
47         rectangle r = new rectangle();
48         triangle t = new triangle();
49         circle c = new circle();
50         System.out.println("\n1. Rectangle\n2. Triangle\n3. Circle\nEnter your choice: ");
51         ch = scan.nextInt();
52         switch(ch){
53             case 1: System.out.println("Enter length and breadth: ");
54                     double l = scan.nextDouble();
55                     double b = scan.nextDouble();
56                     r.getdata(l,b);
57                     r.printArea();
58                     break;
59
60             case 2: System.out.println("Enter base and height: ");
61                     double b1 = scan.nextDouble();
62                     double h = scan.nextDouble();
63                     t.getdata(b1,h);
64                     t.printArea();
65                     break;
66
67             case 3: System.out.println("Enter radius: ");
68                     double r1 = scan.nextDouble();
69                     c.getdata(r1);
70                     c.printArea();
71                     break;
72
73             default: System.out.println("Invalid Input");
74         }
75     }
76 }

```





1. Rectangle

2. Triangle

3. Circle

Enter your choice: 1

Enter length and breadth:

5 4

Area of rectangle = 20.0

...Program finished with exit code 0

Press ENTER to exit console.