```
import java.util.Scanner;
abstract class Shape{
double dim1,dim2;
Shape(double d1,double d2){
dim1=d1;
dim2=d2;
}
abstract double print_area();
}
class Rectangle extends Shape{
Rectangle(double d1,double d2){
super(d1,d2);
}
double print_area(){
return dim1*dim2;
}
}
class Triangle extends Shape{
Triangle(double d1,double d2){
super(d1,d2);
}
double print_area(){
return (dim1*dim2)/2;
}
}

class Circle extends Shape{
Circle(double d1,double d2){
super(d1,d2);
}
double print_area(){
return 3.14*dim1*dim1;
}
}
class Demo{
public static void main(String args[]){
Rectangle r=new Rectangle(5,10);
Triangle t=new Triangle(5,10);
Circle c= new Circle (5,5);
Shape s;
s=r;
System.out.println("the area of rectangle is:"+s.print_area());
```

```
double print_area(){
return 3.14*dim1*dim1;
}
}
class Demo{
public static void main(String args[]){
Rectangle r=new Rectangle(5,10);
Triangle t=new Triangle(5,10);
Circle c= new Circle (5,5);
Shape s;
s=r;
System.out.println("the area of rectangle is:"+s.print_area());
s=t;
System.out.println("the area of triangle is:"+s.print_area());
s=c;
System.out.println("the area of circle is:"+s.print_area());
}
}
```

```
C:\Users\PUNEETH K\Desktop\JAVA\LAB Programs>javac Demo.java

C:\Users\PUNEETH K\Desktop\JAVA\LAB Programs>java Demo
the area of rectangle is:50.0
the area of triangle is:25.0
the area of circle is:78.5

C:\Users\PUNEETH K\Desktop\JAVA\LAB Programs>
```

⇒ Using Abstract to override method [LAB-4]

```
import java.util.Scanner;
abstract class Shape{
  double dim1, dim2;
  Shape(double d1, double d2){
      dim1 = d1;
      dim2 = d2;
   }
  abstract double print_area();
 }
 class Rectangle extends Shape{
  Rectangle(double d1, double d2){
     super(d1, d2);
    }
   double print_area(){
    return dim1 * dim2;
   }
  }
 class Triangle extends Shape{
  Triangle(double d1, double d2){
       super(d1, d2);
    }
   double print_area(){
    return (dim1 * dim2)/2;
   }
  }
```

```
class Circle extends Shape {
  Circle (double d1, double d2){
   super (d1, d2);
  }
  double print_area() {
   return 3.14 * dim1 * dim2;
   }
  }
  class Demo4
   public static void main (String args[ ]) {
        Rectangle r = new Rectangle ( 5,10);
        Triangle t = new Triangle (5,10);
        Circle   c = new Circle (5,5);
         Shape s;
          s = r;
        System.out.println (" The area of Rectangle: +s.print_area
                                                    ());
  s=t;
  System.out.println("The area of triangle: +s.print_area());

  s=c;
  System.out.println(" The area of circle: +s.print_area());
  }
 }
```

Output:-

The area of Rectangle: 50.0

The area of triangle: 25.0

The area of circle: 78.5