class

Aim:

Write a Java program to illustrate the abstract class concept.

Create an abstract class CalcArea and declare the methods triangleArea(double b, double h), rectangleArea(double l, double b), squareArea(double s), circleArea(double r).

Create a class FindArea which extends the abstract class CalcArea used to find areas of triangle, rectangle, square, circle.

Write a class Area with the **main()** method which will receive **two** arguments and convert them to **double** type.

If the input is given as command line arguments to the **main()** as **"1.2","2.7"** then the program should print the output as:

```
Area of triangle : 1.62
Area of rectangle : 3.24
Area of square : 1.44
Area of circle : 22.890600000000000
```

Note: Please don't change the package name.

## **Source Code:**

## q11286/Area.java

```
package q11286;
public class Area {
  public static void main(String args[]) {
      FindArea area = new FindArea();
      area.triangleArea(Double.parseDouble(args[0]), Double.parseDouble(args[1]));
      area.rectangleArea(Double.parseDouble(args[0]), Double.parseDouble(args[1]));
      area.squareArea(Double.parseDouble(args[0]));
      area.circleArea(Double.parseDouble(args[1]));
   }
}
// Write all the classes with definitions
abstract class CalcArea
  abstract void triangleArea(double b,double h);
   abstract void rectangleArea(double l,double b1);
  abstract void squareArea(double s);
   abstract void circleArea(double r);
}
class FindArea extends CalcArea
  void triangleArea(double b,double h)
   {
      System.out.println("Area of triangle : "+(0.5*b*h));
```

```
void rectangleArea(double 1,double b1)
     System.out.println("Area of rectangle : "+l*b1);
  void squareArea(double s)
     System.out.println("Area of square : "+s*s);
  void circleArea(double r)
     System.out.println("Area of circle : "+3.14*r*r);
}
```

## Execution Results - All test cases have succeeded!

```
Test Case - 1
User Output
Area of triangle : 7.529400000000001
Area of rectangle : 15.058800000000002
Area of square : 12.6736
Area of circle : 56.18370600000001
```

Test Case - 2	
User Output	
Area of triangle : 83.14375000000001	
Area of rectangle : 166.28750000000002	
Area of square : 157.50250000000003	
Area of circle : 551.26625	