Assignment No. 04

Name:
Roll.No.:

/* Design a base class shape with two double type values and member functions to input the data and compute_area() for calculating area of shape. Derive two classes: triangle and rectangle. Make compute_area() as abstract function and redefine this function in the derived class to suit their requirements. Write a program that accepts dimensions of triangle/rectangle and display calculated area. Implement dynamic binding for given case study. */

Source Code :

```
import java.util.*;
abstract class shape
{
   double val1,val2;
   void input()
   {
      Scanner s =new Scanner(System.in);
      System.out.println("Enter the first value");
      val1= s.nextDouble();
      System.out.println("Enter the second value");
      val2= s.nextDouble();

   }
   abstract void compute_area();
}

class Triangle extends shape
{
   void compute_area()
   {
      double area;
      area = 0.5 * val1 * val2;
      System.out.println("--Calculate Traingle Area--");
      System.out.println("Traingle area:" + area);
   }

}

class Rectangle extends shape
{
   void compute_area()
   {
      double area;
      area = val1*val2;
      System.out.println("--Calculate Rectangle Area--");
      System.out.println(" Rectangle area"+ area);

   }
}
class Dynamic
{
   public static void main(String []args)
   {
      shape s;
      Triangle t= new Triangle();
      Rectangle r = new Rectangle();
      s=t;
```

```
        s.input();
        s.compute_area();
        s=r;
        s.input();
        s.compute_area();
    }
}
```

Output :

```
Enter the first value
10
Enter the second value
20
--Calculate Traingle Area--
Traingle area:100.0

Enter the first value
10
Enter the second value
20
--Calculate Rectangle Area--
 Rectangle area200.0

Process finished with exit code 0
```