

Name: Priyanshu Kumar
USN: IBM22CS210

classmate

Date _____

Page _____

LAB 4

```
import java.util.Scanner;  
import java.util.Math;  
  
class InputScanner  
{  
    Scanner s;  
    InputScanner()  
    {  
        s = new Scanner(System.in);  
    }
```

```
    public int takeInput(String m)  
    {  
        System.out.println(m);  
        return s.nextInt();  
    }  
}
```

```
abstract class Shape  
{
```

```
    int dim1, dim2;
```

```
    Shape(int dim1, int dim2)  
    {  
        this.dim1 = dim1;  
        this.dim2 = dim2;  
    }
```

```
    public abstract void printArea();
```

```
}
```

class Rectangle extends Shape

{
 Rectangle (int length, int breadth)
 super (length, breadth),
}

public void printArea () {

 System.out.println ("Area of
 rectangle = " + 15 *
 dim1 * dim2);

{

class Triangle extends Shape

{

Triangle (int base, int height) {

 super (base, height),

{

public void printArea () {

 System.out.println ("Area of triangle
 = " + 0.5 * dim1 * dim2);

{

{

class Circle extends Shape

{ Circle(int radius) {

super(radius, radius);

}

public void printArea () {

System.out.println ("Area of circle = "
+ 3.1415 * dim1* dim2);

}

}

public class ShapeDemo

{ public static void main (String args [])

InputScanner ic = new InputScanner();

Shape shape1, shape2, shape3;

int d1, d2;

System.out.println ("Rectangle : ");

d1 = ic.takeInput ("Enter length : ");

d2 = ic.takeInput ("Enter breadth : ");

shape1 = new Rectangle (d1, d2);

shape1.printArea ();

System.out.println ("Square : ");

d1 = ic.takeInput ("Enter side : ");

shape2 = new Square (d1, d1);

shape2.printArea ();

```
System.out.println("Enter side :");
d1 = sc.nextInt();
Shape3 = new Circle(d1, d1);
Shape3.printArea();
```

{

{

Output:

Rectangle

Enter length : 2

Enter breadth : 3

Area of rectangle = 6.0

