

2/1/24 Lab-4

```
import java.util.Scanner;
```

```
abstract class shape
```

```
{
```

```
    double dim1, dim2, radius;
```

```
    shape(double a, double b)
```

```
{
```

```
        dim1 = a;
```

```
        dim2 = b;
```

```
}
```

```
    shape(double a)
```

```
{
```

```
        radius = a;
```

```
}
```

```
    abstract void printarea();
```

```
}
```

```
class rectangle extends shape
```

```
{
```

```
    rectangle(double a, double b)
```

```
{
```

```
        super(a, b);
```

```
}
```

```
    void printarea()
```

```
{
```

```
        System.out.println("area of rectangle: " + (dim1 * dim2));
```

```
}
```

```
}
```

```
class triangle extends shape
```

```
{
```

```
    triangle(double a, double b)
```

```
{
```

```
        super(a, b);
```

```
}
```



```
void printarea()  
{
```

```
    System.out.println("area of triangle : "+(dim1*dim2)/2);  
}
```

```
}
```

```
class circle extends shape
```

```
{
```

```
    circle(double a)
```

```
    {
```

```
        super(a);
```

```
    }
```

```
    void printarea()
```

```
    {
```

```
        System.out.println("area of circle : "+(3.14*(radius)*(radius)));
```

```
    }
```

```
}
```

```
class ShapeMain
```

```
{
```

```
    public static void main(String a[])
```

```
    {
```

```
        Scanner s = new Scanner(System.in);
```

```
        System.out.println("Praneeta M Reddy, BM22CS805");
```

```
        System.out.println("enter the length and breadth of rectangle:");
```

```
        double l = s.nextInt();
```

```
        double b = s.nextInt();
```

```
        Rectangle r = new Rectangle(l, b);
```

```
        System.out.println("enter the base and height of triangle:");
```

```
        double ba = s.nextInt();
```

```
        double h = s.nextInt();
```

```
        Triangle t = new Triangle(ba, h);
```

```
        System.out.println("enter the radius:");
```



```
double ra = s.nextInt();
Circle c = new Circle(ra);
Shape sh;
sh = c;
sh.printarea();
sh = r;
sh.printarea();
sh = c;
sh.printarea();
```

}

}

O/P

Praneeta M Reddy, IBM92CS205

enter the length and breadth of rectangle:

2 3

enter the base and height of triangle:

3 4

enter the radius:

5

area of rectangle: 6.0

area of triangle: 6.0

area of circle: 78.5

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