```java
import java.util.Scanner;

abstract class Shape {
    int dim1;
    int dim2;


    public Shape() {
        this.dim1 = 0;
        this.dim2 = 0;


    }


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


    public abstract void printArea();

}

class Rectangle extends Shape {
    public Rectangle(int length, int width) {
        dim1 = length;
        dim2 = width;
    }


    public void printArea() {


        int area = dim1 * dim2;
```

```java
      System.out.println("Area of Rectangle: " + area);


   }
}


class Triangle extends Shape {
   public Triangle(int base, int height) {

      dim1 = base;

      dim2 = height;

   }


   public void printArea() {


      double area = 0.5 * dim1 * dim2;

      System.out.println("Area of Triangle: " + area);


   }
}


class Circle extends Shape {
   public Circle(int radius) {


      dim1 = radius;

      dim2 = 0;

   }


   public void printArea() {


      double area = Math.PI * dim1 * dim1;

      System.out.println("Area of Circle: " + area);

   }
```

```java
    }

public class shapes {

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);

        System.out.println("Enter length and width for Rectangle:");

        int length = in.nextInt();
        int width = in.nextInt();
        Shape rectangle = new Rectangle(length, width);
        rectangle.printArea();

        System.out.println("Enter base and height for Triangle:");

        int base = in.nextInt();
        int height = in.nextInt();
        Shape triangle = new Triangle(base, height);
        triangle.printArea();

        System.out.println("Enter radius for Circle:");

        int radius = in.nextInt();
        Shape circle = new Circle(radius);
        circle.printArea();

        in.close();
System.out.println("enter your name:AARUSHA GP");
System.out.println("enter your usn:1BM23CS005");
    }
```

}

Output:

```
C:\Users\Admin\Desktop>javac shapes.java

C:\Users\Admin\Desktop>java shapes
Enter length and width for Rectangle:
20
40
Area of Rectangle: 800
Enter base and height for Triangle:
30
60
Area of Triangle: 900.0
Enter radius for Circle:
30
Area of Circle: 2827.4333882308138
enter your name:AARUSHA GP
enter your usn:1BM23CS005
```