import java.io.\*;

abstract class Shape

{

abstract void draw();

}

//In real scenario, implementation is provided by others i.e. unknown by end user

class Rectangle extends Shape

{ int l,w;

Rectangle() throws IOException

{ DataInputStream in=new DataInputStream(System.in);

System.out.println("\n\n\n\n\n\n");

System.out.println("\*\*\*\*\*\*Rectangle\*\*\*\*\*\*");

System.out.println("Enter Length and width of Rectangle");

l=Integer.parseInt(in.readLine());

w=Integer.parseInt(in.readLine());

}

void draw()

{

System.out.println("Area of Rectangle = "+(l\*w));

}

}

class Circle extends Shape

{ double r;

Circle() throws IOException

{

DataInputStream in=new DataInputStream(System.in);

System.out.println("\*\*\*\*\*\*Circle\*\*\*\*\*\*");

System.out.println("Enter Radius of a Circle");

r=Double.parseDouble(in.readLine());

}

void draw()

{

System.out.println("Area of Circle = "+(0.5\*r\*r));

}

}

//In real scenario, method is called by programmer or user

class Area\_Abstraction

{

public static void main(String args[]) throws IOException

{

Circle c=new Circle();

c.draw();

Rectangle d=new Rectangle();

d.draw();

}

}

