|  |
| --- |
| package vandana.projects.com; |
|  |  |
|  | public class Oops\_abstraction { |
|  |  |
|  | public static void main(String[] args) { |
|  | Shape s1 = new Circle("Red", 2.2); |
|  | Shape s2 = new Rectangle("Yellow", 2, 4); |
|  | System.out.println(s1.toString()); |
|  | System.out.println(s2.toString()); |
|  |  |
|  |  |
|  | } |
|  |  |
|  | } |
|  |  |
|  | abstract class Shape |
|  | { |
|  | String color; |
|  | abstract double area(); |
|  | public abstract String toString(); |
|  | public Shape(String color) |
|  | { |
|  | System.out.println("Shape constructor called"); |
|  | this.color = color; |
|  | } |
|  | public String getColor() |
|  | { |
|  | return color; |
|  | } |
|  | } |
|  | class Circle extends Shape |
|  | { |
|  | double radius; |
|  | public Circle(String color,double radius) |
|  | { |
|  | super(color); |
|  | System.out.println("Circle constructor called"); |
|  | this.radius = radius; |
|  | } |
|  | @Override |
|  | double area() |
|  | { |
|  | return Math.PI \* Math.pow(radius, 2); |
|  | } |
|  | @Override |
|  | public String toString() |
|  | { |
|  | return "Circle color is " + super.color + "and area is : " + area(); |
|  | } |
|  | } |
|  | class Rectangle extends Shape |
|  | { |
|  | double length; |
|  | double width; |
|  | public Rectangle(String color,double length,double width) |
|  | { |
|  | super(color); |
|  | System.out.println("Rectangle constructor called"); |
|  | this.length = length; |
|  | this.width = width; |
|  | } |
|  | @Override |
|  | double area() |
|  | { |
|  | return length\*width; |
|  | } |
|  | @Override |
|  | public String toString() |
|  | { |
|  | return "Rectangle color is " + super.color + |
|  | "and area is : " + area(); |
|  | } |
|  | } |