SHRI VILEPARLE KELAVANI MANDAL'S
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)

Object Oriented Programming using Java Laboratory (DJS22FEL22)

NAME: Ayush Vinod Upadhyay
ROLL NO: I025
SAP ID: 60003220131
BRANCH: Information Technology
BATCH: 1

1. WAOOP to count the no. of objects created of a class using constructors.

```java
class MyClass {
    private static int objectCount = 0;

    public MyClass() {
        objectCount++; // Increment the count when a new object is created
    }

    public static int getObjectCount() {
        return objectCount;
    }
}

public class ObjectCountExample {
    public static void main(String[] args) {
        MyClass obj1 = new MyClass();
        MyClass obj2 = new MyClass();
        MyClass obj3 = new MyClass();

        int count = MyClass.getObjectCount();
        System.out.println("Number of objects created: " + count);
    }
}
```

```
C:\Users\ayush\Desktop\JAVA_assignment>javac ObjectCountExample.java

C:\Users\ayush\Desktop\JAVA_assignment>java ObjectCountExample
Number of objects created: 3
```

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2. WAP to display area of square and rectangle using the concept of overloaded constructor (use parameterized, non-parameterized and copy constructor).

```java
class Shape {
    private double area;

    public Shape() {
        area = 0;
    }

    public Shape(double area) {
        this.area = area;
    }

    public Shape(Shape shape) {
        this.area = shape.area;
    }

    public void displayArea() {
        System.out.println("Area: " + area);
    }
}
class Square extends Shape {
    public Square(double side) {
        super(side * side);
    }
}

class Rectangle extends Shape {
    public Rectangle(double length, double width) {
        super(length * width);
    }

    public Rectangle(Rectangle rectangle) {
        super(rectangle);
    }
}

public class AreaExample {
    public static void main(String[] args) {
        Square square = new Square(5);
        square.displayArea();

        Rectangle rectangle = new Rectangle(4, 6);
        rectangle.displayArea();

        Rectangle rectangleCopy = new Rectangle(rectangle);
        rectangleCopy.displayArea();
    }
}
```

```
C:\Users\ayush\Desktop\JAVA_assignment>javac AreaExample.java

C:\Users\ayush\Desktop\JAVA_assignment>java AreaExample
Area: 25.0
Area: 24.0
Area: 24.0
```