**ASSIGNMENT 6**

**Problem Statement:**

1. Create a class Shape having atmost two dimensions. Define two subclasses circle and rectangle of Shape.

    i) Override a method area.

    ii)Show compile time and run time polymorphism(Dynamic method dispatch).

    iii)Use a final method for display.

    iv) use super keyword.

**Solution:**

**CODE:**

import java.util.\*;

class Shape{

void pshape(){

System.out.println("Shape not specified.");

}

final void cp(){

System.out.println("This is the OG class.");

}

}

class Circle extends Shape{

void pshape(String shape){

System.out.println("Original method : ");

super.pshape();

System.out.println("Shape : " + shape);

}

public static void main(String args[]){

Circle c = new Circle();

System.out.println("Method overloading : shown in the method pshape()");

c.cp();

c.pshape("Circle");

}

}

class Rectangle extends Shape{

void pshape(){

System.out.println("Shape : Rectangle");

}

public static void main(String args[]){

Shape s = new Shape();

Rectangle r = new Rectangle();

s.pshape();

r.pshape();

s = r;

System.out.println("After method upcasting:");

s.pshape();

}

}

**OUTPUT:**

