**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.

**Program:**

import java.io.\*;

import java.util.\*;

class Shape

{

public int l,b;

public double a;

public double pi=3.14;

Shape ()

{

l=0;

b=0;

System.out.println("length= "+l);

}

Shape (int l1)

{

l=l1;

System.out.println("Length= "+l);

}

public double area(int l, int b)

{

a=0;

return a;

}

public final void display(double a)

{

System.out.println("Area= "+a);

}

}

class Rectangle extends Shape

{

public double area(int l,int b)

{

a=l\*b;

return a;

//System.out.println("Area= "+a);

}

}

class Circle extends Shape

{

public double area(int l,int r)

{

a=(super.pi)\*l\*l;

return a;

//System.out.println("Area= "+a);

}

}

class Shape2

{

public static void main(String args[])

{

Shape ob = new Rectangle();

double a = ob.area(4,5);

ob.display(a);

Shape ob1 = new Shape(6);

ob = new Circle();

a = ob.area(5,5);

ob.display(a);

}

}

**Output:**

