**Aim:** a. Write a program to implement the concepts of Inheritance and Method overriding

**Code:**

class A

{

    void show()

    {

        System.out.println("Base Class");

    }

}

class B extends A

{

    void show()

    {

        System.out.println("Derived Class");

    }

}

class pra2a

{

    public static void main(String args[])

    {

        B s=new B();

        s.show();

    }

}

**Output:**

A computer screen shot of words

Description automatically generated

**Aim:** b. Write a program to implement the concepts of Abstract classes and methods

**Code:**

abstract class Shape

{

    public abstract double area();

}

class Circle extends Shape

{

    private double radius;

    public Circle(double radius)

    {

        this.radius=radius;

    }

    @Override

    public double area()

    {

        return Math.PI\*radius\*radius;

    }

}

public class pra2b

{

    public static void main(String[] args)

    {

        Circle circle=new Circle(10.0);

        System.out.println("Circle Area:"+circle.area());

    }

}

**Output:**

A close-up of a computer code

Description automatically generated

**Aim:** c. Write a program to implement the concept of interfaces

**Code:**

interface Shape

{

    double area();

    double perimeter();

}

class Circle implements Shape

{

    private double radius;

    public Circle(double radius)

    {

        this.radius=radius;

    }

    @Override

    public double area()

    {

        return Math.PI\*radius\*radius;

    }

    @Override

    public double perimeter()

    {

        return 2\*Math.PI\*radius;

    }

}

public class pra2c

{

    public static void main(String[] args)

    {

        Circle circle=new Circle(10.0);

        System.out.println("circle area:"+ circle.area());

        System.out.println("circle perimeter:"+ circle.perimeter());

    }

}

**Output:**

**A computer screen shot of a computer code

Description automatically generated**