24/10/2024 O Develop a pua program to Create an abstract class named shake that contains two integers and an empty method named punt Aua(). Provide these classes named sectangle, triangle and circle such that each one of the classes extends the Clars shape · Each one of the classes contain only method frint mead that prints the area of the given shape. abstract class Shape & spotected int dimensions; for tected int demension 2; the dimensions faiblic Shape (int dimension), ent dimension2) this dimension 2 = dimension 2, fublic abstract void frint Area (); Class Rectangle extends shapes Sublic Rectangle (int width, intheight) & 3 Super (width, height);

Date Page No. System. Out pinelly ("Alea of Reclarge: "+ area! Class Thrangle extends shape & . Souble Triangle extents Shape { Spublic Trougle (int base, Ind height) 5 Super (base, height); fabli: void fount Alea() {

double area = 0.5 * dimension (* dimension2;

systemione fruntly ("Area of transfe:"+ area); Clas Circle extends Shapes Spublic Ciscle (int radius) { Super (rodius, o); fublic void frink Area () {

double area = Math. PI * dimension | * 2 System. out printly ("Area of Circle:"+ area);

for public Class laby } Shape = new Rectangle (5,16); rectargle frint Area (); Shape Evangle = new Tevangle (5,10) 3 triangle punt Alea (); Shape circle = new Corcle (7); ? Ciscle · print Area (); Area of Though : 25.0

Area of Circle: 153.93 804002189

```
abstract class Chape {
    nf disensioni;
    int disensioni;
    int disensioni, int dimension2) {
        this.disensioni = diamension2;
        this.disensioni = diamension2;
        public abstract void printArea();
    }
    class Rectangle extends Shape {
        public void printArea() {
            int area = disensioni * dimension2;
            system.out.printIn("Area of Rectangle: " + area);
    }
    class Triangle extends Shape {
        public void printArea() {
            int area = disensioni * dimension2;
            system.out.printIn("Area of Rectangle: " + area);
    }
    class Triangle extends Shape {
        public void printArea() {
            double area = 0.5 * dimension1 * disension2;
            system.out.printIn("Area of Triangle: " + area);
    }
    class Triangle extends Shape {
        public void printArea() {
            double area = 0.5 * disension1 * disension2;
            system.out.printIn("Area of Triangle: " + area);
    }
}
    class Circle extends Shape {
        public (cricle(cit radius) {
            system.out.printIn("Area of Triangle: " + area);
    }
}
    public void printArea() {
            double area * Nath, R: * dimension1 * dimension1;
            system.out.printIn("Area of Circle: " + area);
}
}

public cricle area * Nath, R: * dimension1 * dimension1;
            system.out.printIn("Area of Circle: " + area);
}
}

public cricle area * Nath, R: * dimension1 * dimension1;
            system.out.printIn("Area of Circle: " + area);
}

public cricle area * Carcle area * Carcle(");
    circle.printArea();
}

Shape triangle = new Triangle(5, 10);
            triangle.printArea();
}
```

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C:\Users\sanch>cd C:\Users\sanch\Desktop\java

C:\Users\sanch\Desktop\java>javac lab4.java

C:\Users\sanch\Desktop\java>java lab4 Area of Rectangle: 50 Area of Triangle: 25.0 Area of Circle: 153.93804002589985