2/11/24

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Date Page

abstract class

LAB-4

```
import java.util.Scanner;
abstract class Shape {
    double a;
    double b;
    Shape(double d1, double d2) {
        this.a = d1;
        this.b = d2;
    }
    abstract double area();
}
class Rectangle extends Shape {
    Rectangle(double d1, double d2) {
        super(d1, d2);
    }
    double area() {
        Sout("area of rectangle = ");
        return a*b;
    }
}
class Triangle extends Shape {
    Triangle(double d1, double d2) {
        super(d1, d2);
    }
    double area() {
        Sout("area of triangle = ");
        return (a*b)/2;
    }
}
```

```
class Circle extends Shape {
    Circle (double r) {
        super (r, 0);
    }
    double area() {
        System.out.print("area of
        return 3.14 * a * a;
    }
}

class AbstractClass {
    PSVM() {
    Scanner sn = new Scanner(System.in);
    Sout("enter dim. of rectangle");
    int l = sn.nextInt();
    int breadth = sn.nextInt();
        b

    Sout("enter dim for triangle")
    int b = sn.nextInt();
    int h = sn.nextInt();

    Sout("enter dim of circle")
    int r = sn.nextInt();

    Rectangle r = new Rectangle (l, b);
    Triangle t = new Triangle (b, h);
    Circle c = new Circle (radius);

    Sout (r.area());
    Sout (t.area());
    Sout (c.area());
    }
}
```

O/P

```
enter dim of rectangle
2 3
Enter dim of triangle
2 4
enter the dim of circle
area of rectangle = 6.0
area of triangle = 4.0
Area of circle = 28.259999999
```

Result:
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