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**Date:31-05-2022**

**Object Oriented Programming LAB**

**Experiment No.: 21**

**Aim**

Create a Graphics package that has classes and interfaces for figures Rectangle, Triangle, Square and Circle. Test the package by finding the area of these figures.

**Procedures**

**Source Code**

import newfolder.\*;

import java.util.Scanner;

public class CO51 {

    public static void main(String [] args){

        double r,l,b,h,sum=0,s;

        Scanner sc=new Scanner(System.in);

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

        System.out.println("enter the radius of the circle");

        r=sc.nextDouble();

        newfolder.graPkg cir=new newfolder.cirArea(r);

        sum=cir.Area();

        System.out.println(sum);

        System.out.println("reactangle area");

        System.out.println("enter the length and breadth of the rectangle");

        l=sc.nextDouble();

        b=sc.nextDouble();

        newfolder.graPkg rect=new newfolder.rectArea(l,b);

        sum=rect.Area();

        System.out.println(sum);

        System.out.println("Triangle area");

        System.out.println("enter the breadth and height of the triangle");

        b=sc.nextDouble();

        h=sc.nextDouble();

        newfolder.graPkg tri=new newfolder.rectArea(b,h);

        sum=tri.Area();

        System.out.println(sum);

        System.out.println("square area");

        System.out.println("enter the side of the square");

        s=sc.nextDouble();

        newfolder.graPkg sq=new newfolder.cirArea(s);

        sum=sq.Area();

        System.out.println(sum);

    }

}

**New folder**

1. **Graphics package**

package newfolder;

public interface graPkg{

    final double pi=3.141;

    double Area();

}

1. **Circle**

package newfolder;

public class cirArea implements graPkg{

    double r;

    public cirArea(double r){

        this.r=r;

    }

    public double Area(){

        return pi\*(r\*r);

    }

}

1. **Rectangle**

package newfolder;

public class rectArea implements graPkg{

    double l,b;

    public rectArea(double l, double b){

        this.l=l;

        this.b=b;

    }

    public double Area(){

        return l\*b;

    }

}

1. **Square**

package newfolder;

public class sqArea implements graPkg{

    double s;

    void sqArea(double s){

        this.s=s;

    }

    public double Area(){

        return s\*s;

    }

}

1. **Triangle**

package newfolder;

public class triArea implements graPkg{

    double b,h;

    public triArea(double b, double h){

        this.b=b;

        this.h=h;

    }

    public double Area(){

        return 1/2\*(b\*h);

    }

}

**Output**

