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**OBJECT ORIENTED PROGRAMING LAB**

**Experiment No.: 17**

# 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

**Source Code**

import graphics.\*;

import java.util.\*;

public class Driver{

public static void main(String [] args){

Scanner Sc =new Scanner(System.in);

int choice;

area\_cal obj1 = new circle();

area\_cal obj2= new rectangle();

area\_cal obj3 = new square();

area\_cal obj4= new triangle();

while(true){

System.out.println("enter the option 1)circle, 2)rectangle, 3)square, 4)triangle 0)exit");

choice = Sc.nextInt();

switch(choice) {

case 1:

obj1.area();

break;

case 2:

obj2.area();

break;

case 3:

obj3.area();

break;

case 4:

obj4.area();

break;

case 0: System.exit(0);

default:System.out.println("invalid opt");

break;

}

}

}

}

package graphics;

public interface area\_cal{

final double pi=3.141;

void area();

}

package graphics;

import java.util.\*;

public class circle implements area\_cal{

double r,area=0;

public void area(){

Scanner Sc= new Scanner(System.in);

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

r=Sc.nextDouble();

// String area= Double.toString(Math.PI\*r\*r);

area=pi\*(r\*r);

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

}

}

package graphics;

import java.util.Scanner;

public class rectangle implements area\_cal {

int l,b;

public void area(){

Scanner sc = new Scanner(System.in);

System.out.println("Enter the length of the rectangle :");

l = sc.nextInt

System.out.println("Enter the breath of the rectangle");

b = sc.nextInt();

System.out.println("Area of the rectangle = "+l\*b);

}

}

package graphics;

import java.util.Scanner;

public class square implements area\_cal{

int side;

public void area() {

Scanner sc = new Scanner(System.in);

System.out.println("Input side length of square : ");

side = sc.nextInt();

String area = Double.toString(side\*side);

System.out.println("Area of the square : "+area);

}

}

package graphics;

import java.util.Scanner;

public class triangle implements area\_cal{

int height;

int breadth;

public void area() {

Scanner sc = new Scanner(System.in);

System.out.println("Input height of the triangle : ");

height = sc.nextInt();

System.out.println("Input breadth of triangle : ");

breadth = sc.nextInt();

String area = Double.toString((height\*breadth)/2f);

System.out.println("Area of the triangle is : "+area);

}

}

**Output Screenshot**

