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**Batch: MCA B**

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**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.

**Procedure**

**package\_graphics.java**

package package\_graphics;

interface interface\_graphics{

public float recArea(int l, int h);

public float cirArea(int r);

public float squArea(int a);

public float triArea(int l, int h);

}

public class package\_graphics implements interface\_graphics {

public float recArea(int l, int h){

return l\*h;

}

public float cirArea(int r){

return r\*r\*(float)3.14;

}

public float squArea(int a){

return a\*a;

}

public float triArea(int l, int h){

return l\*h\*(float)(.5);

}

}

**main\_graphics.java**

import package\_graphics.\*;

import java.util.\*;

public class main\_graphics {

public static void main(String []args){

package\_graphics testObj = new package\_graphics();

int l,h,r,a,c,d;

Scanner s=new Scanner(System.in);

System.out.print("Enter the length for rectangle : ");

l=s.nextInt();

System.out.print("Enter the breadth for rectangle : ");

h=s.nextInt();

System.out.print("Enter the radius of circle : ");

r=s.nextInt();

System.out.print("Enter the side for Square : ");

a=s.nextInt();

System.out.print("Enter the breadth for triangle : ");

c=s.nextInt();

System.out.print("Enter the height for triangle : ");

d=s.nextInt();

System.out.println("Area of rectangle = "+testObj.recArea(l,h));

System.out.println("Area of Circle = "+testObj.cirArea(r));

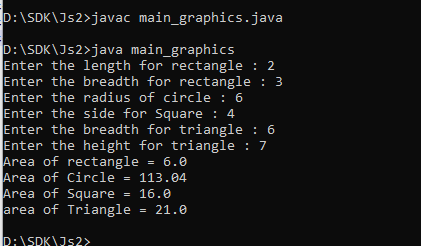
System.out.println("Area of Square = "+testObj.squArea(a));

System.out.println("area of Triangle = "+testObj.triArea(c,d));

}

}

**Output Screenshot**

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**Experiment No.: 22**

**Aim**

Create an Arithmetic package that has classes and interfaces for the 4 basic arithmetic operations.

Test the package by implementing all operations on two given numbers

**Procedure**

**arithamatic\_package.java**

package arithamatic\_package;

interface interface\_graphics{

public float add(int a, int b);

public float divide(int a, int b);

public float multiple(int a, int b);

public float substract(int a, int b);

public float remainder(int a, int b);

}

public class arithamatic\_package implements interface\_graphics {

public float add(int a, int b){

return a+b;

}

public float divide(int a, int b){

return a/b;

}

public float multiple(int a, int b){

return a\*b;

}

public float substract(int a, int b){

return a-b;

}

public float remainder(int a, int b){

return a%b;

}

}

**main\_arithamatic.java**

import arithamatic\_package.\*;

import java.util.\*;

class main\_arithamatic {

public static void main(String []args){

arithamatic\_package testObj = new arithamatic\_package();

int a,b;

Scanner s=new Scanner(System.in);

System.out.print("Enter the first value : ");

a=s.nextInt();

System.out.print("Enter the second value : ");

b=s.extInt();

System.out.println("ADD : "+testObj.add(a,b));

System.out.println("Substract : "+testObj.substract(a,b));

System.out.println("Multiple : "+testObj.multiple(a,b));

System.out.println("Divide : "+testObj.divide(a,b));

System.out.println("Remainder : "+testObj.remainder(a,b));

}

}

**Output Screenshot**

