Green University of Bangladesh
Department of Computer Science and Engineering(CSE)
Faculty of Sciences and Engineering
Semester: (Spring, 2023), B.Sc. in CSE (Day)

LAB REPORT NO: 02
Course Title: Object Oriented Programing Lab
Course Code: CSE 202 Section: DE

Student Details

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Lab Date : 01/03/2023
Submission Date : 07/03/2023
Course Teacher's Name : Dr. Muhammad Aminur Rahaman

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Lab Report Status

Marks: …… **Signature:.....**
Comments:..... **Date:.....**

1. TITLE OF THE LAB EXPERIMENT:

Take three constructor where first constructor will calculate the area of triangle, second constructor will calculate the area of rectangle and third constructor will calculate the area of circle using overloading constructor. However, Input must be taken from users.

- Implement the above problem using switch case statements.

2. OBJECTIVES

- To implement such java program that would be able to calculate area of a triangle, rectangle and circle using switch case statement.

3. PROCEDURE

Step-1 : Start

Step-2 : Create an object of the Scanner class to take input from the user.

Step-3 : Declare some variables to store the number.

Step-4 : Take choice from user

Step-5 : If initialize the Rectangle area

Step-6 : Ask the user to initialize the length and weight

Step-7 : Calculate length * weight

Step-8 : If initialize the Triangle Area

Step-9 : Ask the user to initialize the height,base

Step-10 : Calculate half*height*base

Step-11 : If initialize the Circle Area

Step-12: Ask the user to initialize the radius

Step-13 : Calculat PI * radius* radius

Step-14 : Display the output.

Step-15 : End.

4. IMPLEMENTATION

```
**
 * Author:  moshiur
 * Created: Mar 7, 2023
 */

//MAIN METHOD
package labreportcode;
import java.util.Scanner;
public class LabReport2 {
public static void main(String[] args) {
System.out.println("Menu");
System.out.println("1.Area of a Triangle");
System.out.println("2.Area of a Rectangle");
System.out.println("3.Area of a Circle");
Scanner ss=new Scanner(System.in);
int ch=ss.nextInt();
switch(ch)
{
case 1:
{
System.out.println("Enter the value of Base:");
float base;
base=ss.nextInt();
```

```
System.out.println("Enter the value of Height:");
float height;
height=ss.nextInt();
Report2Class rr=new Report2Class(base,height);
break;
}
case 2:
{
System.out.println("Enter the value of Height:");
int heightt=ss.nextInt();
System.out.println("Enter value of Breadth:");
int breadthh=ss.nextInt();
Report2Class AOR=new Report2Class(heightt,breadthh);
break;
}
case 3:
{
System.out.println("Enter the value of Radius:");
float radius=ss.nextInt();
Report2Class AOC=new Report2Class(radius);
}
}
}
}
//REPORT2CLASS
package labreportcode;
public class Report2Class {
Report2Class(float b,float h)
{
```

```
float AOtT=(b*h)/2;
System.out.printf("Area of Triangle is:%f",AOtT);
}
Report2Class(int h,int b)
{
int AOR=h*b;
System.out.println("Area of Rectangle is:"+AOR);
}
Report2Class(float r)
{
float pi=(float)3.1416;
float AOC=pi*r*r;
System.out.println("Area of Circle is:"+AOC);
}
}
```

5. TEST RESULT

```java
/**
 * Author:  moshiur
 * Created: Mar 7, 2023
 */

//MAIN METHOD
package labreportcode;
import java.util.Scanner;
public class LabReport2 {
public static void main(String[] args) {
System.out.println("Menu");
System.out.println("1.Area of a Triangle");
System.out.println("2.Area of a Rectangle");
System.out.println("3.Area of a Circle");
Scanner ss=new Scanner(System.in);
int ch=ss.nextInt();
switch(ch)
{
case 1:
{
System.out.println("Enter the value of Base:");
float base;
base=ss.nextInt();
System.out.println("Enter the value of Height:");
float height;
height=ss.nextInt();
Report2Class rr=new Report2Class(base,height);
break;
}
```

```
case 2:
{
System.out.println("Enter the value of Height:");
int heightt=ss.nextInt();
System.out.println("Enter value of Breadth:");
int breadthh=ss.nextInt();
Report2Class AOR=new Report2Class(heightt,breadthh);
break;
}
case 3:
{
System.out.println("Enter the value of Radius:");
float radius=ss.nextInt();
Report2Class AOC=new Report2Class(radius);
}
}
}
}
//REPORT2CLASS
package labreportcode;
public class Report2Class {
Report2Class(float b,float h)
{
float AOtT=(b*h)/2;
System.out.printf("Area of Triangle is:%f",AOtT);
}
Report2Class(int h,int b)
```

```
  int AOR=h*b;
  System.out.println("Area of Rectangle is:"+AOR);
  }
  Report2Class(float r)
  {
  float pi=(float)3.1416;
  float AOC=pi*r*r;
```

put - Run (mavenproject1)

```
--------------------------------[ jar ]---------------------------------

--- exec-maven-plugin:3.0.0:exec (default-cli) @ mavenproject1 ---
Hello World!
------------------------------------------------------------------------
BUILD SUCCESS
```

6. ANALYSIS AND DISCUSSION:

1. The program is opening efficiently & displaying accurate outcomes.

2. The problem was not tough but it was very time consuming. Writing algorithm of that problem was slightly complicated.

3. Objectives of the problem IS successfully achieved.