LAB-4

```
import java.util.*;
abstract class Shape {
    int a;
    int b;
    Shape (int a, int b) {
        this.a = a;
        this.b = b;
    }
    Shape (int a) {
        this.a = a;
    }
    Shape () {
        this.a = 0;
        this.b = 0;
    }
    void printArea() {}
}
class Triangle extends Shape {
    Triangle (int a, int b) {
        super(a,b);
    }
    void printArea() {
        System.out.println("area of the rectangle
                is = " + (a*b));
    }
}
class Circle extends Shape {
    Circle(int a) {
        super(a);
    }
```

```
Void printArea() {
    System.out.println("the area of circle
        is =" + (3.14 * a * a));
    }
}
Class Shapes {
    Public Static Void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        int ch, a, b;
        while (true) {
            System.out.println("Enter 1 for triangle");
            System.out.println("enter 2 for rectangle");
            System.out.println("enter 3 for circle");
            System.out.println("enter 4 for exit");
            ch = scan.nextInt();
            Switch(ch) {
                Case 1: System.out.println("enter
                    the base and height of triangle
                    ");
                a = scan.nextInt();
                b = scan.nextInt();
                triangle t = new triangle(a,b);
                t.printArea();
                break;
                Case 2: System.out.println("enter
                    the length & breadth of rectangle");
                a = scan.nextInt();
                b = scan.nextInt();
                rectangle r = new rectangle(a,b);
                r.printArea();
                break;
```

```
case 3: System.out.println("enter the radius
        of the circle");
        a = scan.nextInt();
        Circle c = new circle(a);
        c.printArea();
        break;
case 4: scan.close();
          break;
default: System.out.println("Invalid input");
    }
}
```