

```

Code :
import java.util.Scanner;
abstract class Shape {
    protected double base;
    protected double height;
    Scanner sc = new Scanner(System.in);

    Shape(){
        base = 0;
        height = 0;
    }
    abstract void getDim();
    abstract void computArea();
}

public class Triangle extends Shape{
    void getDim(){
        System.out.println("Enter Triangle's Dimension : ");
        System.out.print("Enter Base : ");
        base = sc.nextDouble();
        System.out.print("Enter Height : ");
        height = sc.nextDouble();
        System.out.println();
    }
    @Override
    void computArea(){
        System.out.println("Area of Triangle : " + (this.base*this.height)/2 + "
sq. units "+ "\n\n" );
    }
}

public class Rectangle extends Shape{
    void getDim(){
        System.out.println("Enter Rectangle's Dimension : ");
        System.out.print("Enter Width : ");
        base = sc.nextDouble();
        System.out.print("Enter Height : ");
        height = sc.nextDouble();
        System.out.println();
    }
    @Override
    void computArea(){
        System.out.println("Area of Rectangle : " + this.base*this.height + " sq.
units " + "\n\n");
    }
}

import java.util.Scanner;
public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        Triangle t = new Triangle();
        Rectangle r = new Rectangle();

        while (true){
            System.out.println("-----Area Calculator-----\n");
            System.out.println("Enter");
            System.out.println("1.Calculate Area of Triangle.");
            System.out.println("2.Calculate Area of Reactangle.");

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        System.out.println("3.Exit.\n");

        int choice;
        System.out.print("Enter Your choice : ");
        choice = sc.nextInt();
        System.out.println();

        switch (choice){
            case 1 :
                t.getDim();
                t.computArea();
                break;
            case 2 :
                r.getDim();
                r.computArea();
                break;
            case 3 :
                System.out.println("Exiting The Program..");
                System.exit(0);
            default:
                System.out.println("Invalid Input..\n\n");
        }
    }
}

```

Output :

-----Area Calculator-----

Enter

1.Calculate Area of Triangle.
 2.Calculate Area of Reactangle.
 3.Exit.

Enter Your choice : 1

Enter Triangle's Dimension :

Enter Base : 10

Enter Height : 10

Area of Triangle : 50.0 sq. units

-----Area Calculator-----

Enter

1.Calculate Area of Triangle.
 2.Calculate Area of Reactangle.
 3.Exit.

Enter Your choice : 2

Enter Rectangle's Dimension :

Enter Width : 10

Enter Height : 10

Area of Rectangle : 100.0 sq. units

-----Area Calculator-----

Enter

- 1.Calculate Area of Triangle.
- 2.Calculate Area of Rectangle.
- 3.Exit.

Enter Your choice : 3

Exiting The Program..