

## Assignment 04 - OOPL (Code)

//Code performed by Pranit Zambre, Roll Number: 19.

```
import java.util.*;
abstract class Shape {
    float length;
    float height;

    abstract void calculateArea();

    void getData() {
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter length of the shape(in meters): \n");
        length = sc.nextFloat();
        System.out.println("Enter height of the shape(in meters): \n");
        height = sc.nextFloat();
    }
}

class Triangle extends Shape {

    float area;
    @Override
    void calculateArea() {
        float area = (float) (0.5 * length * height);

        System.out.println("The area of given Triangle is: " + area + " square
meter. \n");
    }
}

class Rectangle extends Shape {
    float area;

    @Override
```

```

        void calculateArea() {
            area1 = (float) (height*length);

            System.out.println("The area of given Rectangle is: " + area1 + " square
meter. \n");
        }
    }
}

```

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```

class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int ch;

        switchCaseLoop:
        while (true) {
            System.out.println("Select Shape: \n");
            System.out.println("1.Type 1 for Triangle. \n2.Type 2 for Rectangle.
\n3.Type 3 to Exit. \n");
            ch = sc.nextInt();

            switch (ch) {
                case 1:
                    Triangle T = new Triangle();
                    T.getData();
                    T.calculateArea();
                    break;

                case 2:
                    Rectangle R = new Rectangle();
                    R.getData();
                    R.calculateArea();

                case 3:
                    break switchCaseLoop;
            }
        }
    }
}

```

```
        default: System.out.println("Invalid choice! Please enter a valid
choice. \n");
    }
    }
    }
}
```

## OUTPUT -

Select Shape:

- 1.Type 1 for Triangle.
- 2.Type 2 for Rectangle.
- 3.Type 3 to Exit.

1

Enter length of the shape(in meters):

69

Enter height of the shape(in meters):

420

The area of the given Triangle is: 14490.0 square meter.

Select Shape:

- 1.Type 1 for Triangle.
- 2.Type 2 for Rectangle.
- 3.Type 3 to Exit.

2

Enter length of the shape(in meters):

420

Enter height of the shape(in meters):

69

The area of the given Rectangle is: 28980.0 square meter.

Select Shape:

- 1.Type 1 for Triangle.
- 2.Type 2 for Rectangle.
- 3.Type 3 to Exit.

4

Invalid choice! Please enter a valid choice.

Select Shape:

- 1.Type 1 for Triangle.
- 2.Type 2 for Rectangle.
- 3.Type 3 to Exit.

3

...Program finished with exit code 0