

# Rajalakshmi Engineering College

Name: Prathiksha S  
Email: 241801210@rajalakshmi.edu.in  
Roll no: 241801210  
Phone: 9003117693  
Branch: REC  
Department: AI & DS - Section 5  
Batch: 2028  
Degree: B.E - AI & DS

Scan to verify results



## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 6\_Q1

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

Elsa subscribes to a premium service with a base monthly cost, a service tax and an extra feature cost. Assist her in writing an inheritance program that takes input for these values and calculates the total monthly cost.

Refer to the below class diagram:

##### ***Input Format***

The first line of input consists of a double value, representing the base monthly cost.

The second line consists of a double value, representing the service tax.

The third line consists of a double value, representing the extra feature cost.

### **Output Format**

The output prints "Rs. X" where X is a double value, rounded off to two decimal places.

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: 10.0

2.5

5.0

Output: Rs. 17.50

### **Answer**

```
import java.util.Scanner;
```

```
// You are using Java
```

```
import java.util.*;
```

```
// Base class for subscription
```

```
class Subscription {
```

```
    protected double baseCost;
```

```
    protected double serviceTax;
```

```
    public Subscription(double baseCost, double serviceTax) {
```

```
        this.baseCost = baseCost;
```

```
        this.serviceTax = serviceTax;
```

```
    }
```

```
    public double calculateMonthlyCost() {
```

```
        return baseCost + serviceTax;
```

```
    }
```

```
}
```

```
// Derived class for premium subscription with extra features
```

```
class PremiumSubscription extends Subscription {
```

```
    private double extraFeatureCost;
```

```
    public PremiumSubscription(double baseCost, double serviceTax, double  
extraFeatureCost) {
```

```
        super(baseCost, serviceTax);
        this.extraFeatureCost = extraFeatureCost;
    }

    @Override
    public double calculateMonthlyCost() {
        return super.calculateMonthlyCost() + extraFeatureCost;
    }
}

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

        double baseMonthlyCost = scanner.nextDouble();
        double serviceTax = scanner.nextDouble();
        double extraFeatureCost = scanner.nextDouble();

        PremiumSubscription premiumSubscription = new
PremiumSubscription(baseMonthlyCost, serviceTax, extraFeatureCost);

        double totalMonthlyCost = premiumSubscription.calculateMonthlyCost();

        System.out.printf("Rs. %.2f%n", totalMonthlyCost);

        scanner.close();
    }
}
```

**Status : Correct**

**Marks : 10/10**