

# Rajalakshmi Engineering College

Name: Gayathri Boopathy  
Email: 240701141@rajalakshmi.edu.in  
Roll no: 240701141  
Phone: 9363837860  
Branch: REC  
Department: CSE - Section 10  
Batch: 2028  
Degree: B.E - CSE

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;

class Subscription {
    protected double baseMonthlyCost;
    protected double serviceTax;

    public Subscription(double baseMonthlyCost, double serviceTax) {
        this.baseMonthlyCost = baseMonthlyCost;
        this.serviceTax = serviceTax;
    }

    public double calculateMonthlyCost() {
        return baseMonthlyCost + serviceTax;
    }
}

// Derived class
class PremiumSubscription extends Subscription {
    private double extraFeatureCost;

    public PremiumSubscription(double baseMonthlyCost, double serviceTax,
        double extraFeatureCost) {
        super(baseMonthlyCost, 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