

# CSE1007 - Java Programming

## Lab Assessment 2

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18BCE0715

Lab - L5 + L6

Time: 11.30AM - 1PM

Date: 22/02/2021

Dr. ANITHA A

### Question Allotted: 3

3. Write an abstract class with an abstract method double Process (double P, double R). Create a subclass Discount and implement the Process() method with the following formula:  $\text{net} = P - P \times R / 100$ . Return the net value. Create another subclass Tax and implement the Process() method with the following formula:  $\text{total} = P + P \times R / 100$ . Return the total.

### Source Code

```
import java.util.Scanner;

abstract class my_abstract_class{
    abstract double process(double P, double R);
}

class Discount extends my_abstract_class{

    double process(double P, double R){
        double net;
        net = P-P*R/100;
        return net;
    }
}

class Tax extends my_abstract_class{
    double process(double P, double R){
        double total;
        total = P+P*R/100;
        return total;
    }
}

public class assessment2 {
    public static void main(String[] args) {
        double A,B;
        Scanner s = new Scanner(System.in);
```

```

        System.out.println("Enter the Principle and Rate:");
        A = s.nextDouble();
        B = s.nextDouble();
        s.close();
        // A = 100.55D;
        // B = 200.55D;
        Discount dis = new Discount();
        Tax tax = new Tax();
        System.out.println("So the Discount is:");
        System.out.println(Math.floor(dis.process(A, B) * 100) / 100);
        System.out.println("So the Tax is:");
        System.out.println(Math.floor(tax.process(A, B) * 100) / 100);
        System.out.println("(Note that decimal values are limited to 2
decimal places)");
    }
}

```

## Output Screenshots

For P = 50.5555 and R = 7.72312

```

sanjitkumar@Sanjits-MacBook-Air java-programming % cd "/Users/sanjitkumar/Documents/VIT_DOC/vit_semester_6/C2 - Java Programming/java-programming" ; /usr/bin/env /Library/Java/JavaVirtualMachines/jdk-14.0.1.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/sanjitkumar/Library/Application Support/Code/User/workspaceStorage/eda6a1a68a038b6c9c81a267fdf133f4/redhat.java/jdt_ws/java-programming_bc1b874e/bin" assessment2
Enter the Principle and Rate:
50.5555
7.72312
So the Discount is:
46.65
So the Tax is:
54.45
(Note that decimal values are limited to 2 decimal places)

```

For P = 610000.423 and R = 12.5222322

```

sanjitkumar@Sanjits-MacBook-Air java-programming % cd "/Users/sanjitkumar/Documents/VIT_DOC/vit_semester_6/C2 - Java Programming/java-programming" ; /usr/bin/env /Library/Java/JavaVirtualMachines/jdk-14.0.1.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/sanjitkumar/Library/Application Support/Code/User/workspaceStorage/eda6a1a68a038b6c9c81a267fdf133f4/redhat.java/jdt_ws/java-programming_bc1b874e/bin" assessment2
Enter the Principle and Rate:
610000.423
12.5222322
So the Discount is:
533614.75
So the Tax is:
686386.09
(Note that decimal values are limited to 2 decimal places)
sanjitkumar@Sanjits-MacBook-Air java-programming % █

```