

## Assignment2 - Patricia Organ(01110489)

```
import java.util.Scanner;

public class DiscountCoffee {

    /**
     * Patricia Organ - 0110489
     * an application that accepts the number of bags
     * ordered and displays the number of bags ordered, the
     * discount given and the total cost of the order.
     */
    public static void main(String[] args) {
        // main method
        //declare and set variable for the calculation of
discount
        final double greater25 = 0.05;
        final double greater50 = 0.1;
        final double greater100 = 0.15;
        final double greater150 = 0.20;
        final double greater200 = 0.25;
        final double greater300 = 0.30;
        final double bagCost = 5.50;
        //declare variables for holding the discount percent
and amount
        double discPerc;
        double discAmt;

        Scanner input = new Scanner(System.in); // crate a
scanner to receive the input value
        System.out.print("This program computes the amount of
discount\n" +
                        "given to the customers of IT125 Coffee
Company.\n" +
                        "Discounts are listed below.\n" +
                        " Order Volumn    Discount\n" +
                        "-----\n" +
                        ">= 25 Bags        5%\n" +
                        ">= 50 Bags        10%\n" +
                        ">= 100 Bags       15%\n" +
                        ">= 150 Bags       20%\n" +
                        ">= 200 Bags       25%\n" +
                        ">= 300 Bags       30%\n" +
                        "\n" +
                        "Enter number of coffee bags purchased: ");

        // set the input value int to the variable orderAmt
        int orderAmt = input.nextInt();

        //If statements to check what discount applies and to
calculate the amount
```

```

        if (orderAmt >= 25 && orderAmt < 50){
            discAmt = orderAmt*greater25;
            discPerc = greater25 *100;
        }
        else if (orderAmt >= 50 && orderAmt< 100){
            discAmt = orderAmt*greater50;
            discPerc = greater50 *100;
        }
        else if (orderAmt >= 100 && orderAmt< 150){
            discAmt = orderAmt*greater100;
            discPerc = greater100 *100;
        }
        else if (orderAmt >= 150 && orderAmt< 200){
            discAmt = orderAmt*greater150;
            discPerc = greater150 *100;
        }
        else if (orderAmt >= 200 && orderAmt< 300){
            discAmt = orderAmt*greater200;
            discPerc = greater200 *100;
        }
        else if (orderAmt >= 300){
            discAmt = orderAmt*greater300;
            discPerc = greater300 *100;
        }
        else{
            discAmt = 0;
            discPerc = 0;
        }

        //print out the final result saying the discount
percentage and amount applied and total
        System.out.printf("Number of bags ordered : %d - €
%.2f\n", orderAmt , (orderAmt * bagCost) );
        System.out.printf("                Discount : %.0f%% - €
%.2f\n", discPerc,discAmt);
        System.out.printf("        Your total cost is : € %.2f" ,
((orderAmt *bagCost) - discAmt));
    } // end main method
} // end class

```

#### OUTPUT

This program computes the amount of discount given to the customers of IT125 Coffee Company. Discounts are listed below.

Order Volume	Discount
-----	
>= 25 Bags	5%
>= 50 Bags	10%
>= 100 Bags	15%
>= 150 Bags	20%
>= 200 Bags	25%
>= 300 Bags	30%

Enter number of coffee bags purchased: 100  
Number of bags ordered : 100 - € 550.00  
Discount : 15% - € 15.00  
Your total cost is : € 535.00

```
import java.util.Scanner; //import scanner
public class LeapYear {
    /*
     * Patricia Organ (01110489)
     * a program that replies either Leap Year or Not a
     * Leap Year when given a year. It is a leap year if
     * the year is divisible by 4 but not by 100 (i.e. 1796
     * is a leap year because it is divisible by 4 but not
     * by 100). A year that is divisible by both 4 and 100
     * is a leap year if it is also divisible by 400 (i.e.
     * 2000 is a leap year but 1800 is not).*/

    public static void main(String[] args) {
        // main method
        //create a scanner object for receiving the input
        Scanner input = new Scanner(System.in);
        System.out.print("Enter a year: ");
        int year = input.nextInt();

        //calculate in IF statements if year is a leap year
        and output the results
        if (year%4 == 0 && year%100 != 0){
            System.out.println("Leap year");
        }
        else if (year%4 == 0 && year%100 == 0 && year%400 ==
0){
            System.out.println("Leap year");
        }
        else
            System.out.println("Not a Leap year");

    } //end method

} //end class
```

OUTPUT

Enter a year: 2000  
Leap year