**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 Volumn Discount

---------------------------

>= 25 Bags 5%

>= 50 Bags 10%

>= 100 Bags 15%

>= 150 Bags 20%

>= 200 Bags 25%

>= 300 Bags 30%

Enter number of coffee dags 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)

\* 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