Martin Hynes

16390836

OrderInterface.java

```
interface OrderInterface{//open interface
	//abstract methods to be implemented
	void numberOfItems(int number);
	void unitWeight(int weight);
}//close interface
```

Sales.java

```
interface Sales{//open interface
	//abstract methods to be implemented
	double calculateSalesBeforeTax();
	double calculateSalesTax();
	double calculateTotalSales();
}//close interface
```

Order.java

```
public class Order implements OrderInterface{//open class

	//instance variables
	final static double SALES_TAX = 0.1;
	int unitWeight, numberOfUnits;

	//setter methods
	public void numberOfItems(int number){//open numberOfItems setter
		numberOfUnits = number;
```

```
	}//close numberOfItems setter

	public void unitWeight(int weight){//open unitWeight setter
		this.unitWeight = weight;
	}//close unitWeight setter
}//close class
```

CoffeeBagOrder.java

```
public class CoffeeBagOrder extends Order implements Sales{//open class

	//instance variables
	final static double PRICE_PER_KG = 5.55;

	public double calculateSalesBeforeTax(){//open method
		return PRICE_PER_KG * this.getNumberOfUnits() * this.getUnitWeight();
	}//close method

	public double calculateSalesTax(){//open method
		return calculateSalesBeforeTax() * SALES_TAX;
	}//close method

	public double calculateTotalSales(){//open method
		return calculateSalesBeforeTax() + calculateSalesTax();
	}//close method

	public void setUnitWeight(int weight){//open setter
		this.unitWeight = weight;
```

```
	}//close setter


	public int getUnitWeight(){//open getter
		return this.unitWeight;
	}//close getter


	public void setNumberOfUnits(int number){//open setter
		this.numberOfUnits = number;
	}//close setter


	public int getNumberOfUnits(){//open getter
		return this.numberOfUnits;
	}//close getter




	//toString override
	public String toString(){
		return "Weight per unit: "+this.getUnitWeight()+", Number of Units:
"+this.getNumberOfUnits()+", Total Cost: "+this.calculateTotalSales();
	}
}//close class


Tester.java

import java.util.*;

public class Tester{//open class


	public static void main(String[] args){//open main method
		//create CoffeeBagOrder object
```

```
        CoffeeBagOrder coffeeorder = new CoffeeBagOrder();

        //create Scanner object for inputs

        Scanner scan = new Scanner(System.in);

        //Take inputs for number of bags sold, weight of bags, convert to integer, and call
setter methods

        System.out.print("Enter Number of Bags sold: ");

        coffeeorder.setNumberOfUnits(Integer.parseInt(scan.nextLine()));

        System.out.print("Enter Weight of a Bag: ");

        coffeeorder.setUnitWeight(Integer.parseInt(scan.nextLine()));


        //Print out number of units, unit weight, price per kg, cost before tax, tax rate, sales
tax, total sales.

        System.out.println("Number of Bags Sold: "+coffeeorder.getNumberOfUnits());

        System.out.println("Weight per Bag: "+coffeeorder.getUnitWeight());

        System.out.println("Price Per Kilo: "+coffeeorder.PRICE_PER_KG);

        System.out.println("Sales Price: "+coffeeorder.calculateSalesBeforeTax());

        System.out.println("Sales Tax Rate: "+(coffeeorder.SALES_TAX*100) + "%");

        System.out.println("Sales Tax: "+coffeeorder.calculateSalesTax());

        System.out.println("Total Price: "+coffeeorder.calculateTotalSales());

    }//close main method

}//close class
```

```
D:\Users\marti\Files\Programming\Java\OOP2\Assignment4>java Tester
Enter Number of Bags sold: 10
Enter Weight of a Bag: 5
Number of Bags Sold: 10
Weight per Bag: 5
Price Per Kilo: 5.55
Sales Price: 277.5
Sales Tax Rate: 10.0%
Sales Tax: 27.75
Total Price: 305.25
```