Name		**QUID**	

Quiz instructions: <u>Answer all questions.</u>

Q.1 *[100 POINTS] [Students' average needed time to solve and review is 15 MINUTES]*

Write a program that repeatedly receives the price and quantity of items until the user has no more items. Each time it gets a valid price and a valid quantity of an item, it displays the price, the quantity, the amount before tax, the tax, the amount after tax. When the user has no more items, the program displays the total before tax, the total tax, and the total after tax for all items. The tax is a fixed percentage, 15%. The program should validate user input of the price and quantity to be positive numbers and insists that they should be by asking the user to reenter the value of any if invalid.

Sample run of the program

Enter the price of the item >0: -10
You entered an invalid price.
Enter the price of the item >0: 50
Enter the quantity of the item >0: 0
You have entered an invalid quantity.
Enter the quantity of the item >0: 2
Price: 50.0 quantity: 2 Amount before tax: 100.0 Tax: 15.0 Amount after tax: 115.0
Do have more items (y/n)?y
Enter the price of the item >0: 100
Enter the quantity of the item >0: 4
Price: 100.0 quantity: 4 Amount before tax: 400.0 Tax: 60.0 Amount after tax: 460.0
Do have more items (y/n)?n
Total amount before tax: 500.0
Total tax: 75.0
Total amount after tax: 575.0

Name		QUID	

```java
package l02;
import java.util.Scanner;
public class Quiz1v2 {
    public Quiz1v2() {
        Scanner kb = new Scanner(System.in);
        final float TAX = 0.15f;
        int quantity=0;
        float price,amountBeforeTax=0,tax=0,amountAfterTax=0;
        float totalAmountBeforeTax=0, totalTax=0,totalAmountAfterTax=0;
        while(true) {
        System.out.print("Enter the price of the item >0: ");
        price=kb.nextFloat();
        while(price<=0) {
                System.out.print("Enter the price of the item >0: ");
                price=kb.nextFloat();
        }
        System.out.print("Enter the quantity of the item >0: ");
        quantity=kb.nextInt();
        while(quantity<=0) {
                System.out.print("Enter the quantity of the item >0: ");
                quantity=kb.nextInt();
        }
        amountBeforeTax=price*quantity;
        tax=amountBeforeTax*TAX;
        amountAfterTax=amountBeforeTax+tax;
        System.out.printf("Price: %.2f Quantity: %d Amount before tax: %.2f Tax: %.2f
Amount after tax: $.2f\n", price,quantity,amountBeforeTax,tax,amountAfterTax);
        System.out.print("Do have more items (y/n)? ");
        totalAmountBeforeTax += amountBeforeTax;
        totalTax += tax;
        totalAmountAfterTax += amountAfterTax;
        if(kb.next().equals("n"))
                break;
        }
        System.out.printf("Total amount before tax: %.2f\n",totalAmountBeforeTax);
        System.out.printf("Total tax: %.2f\n",totalTax);
        System.out.printf("Total amount after tax: %.2f\n",totalAmountAfterTax);
    }
    public static void main(String[] args) {
        new Quiz1v2();
    }
}
```