Project 5:
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Step 1: Open the inventory program that was created in Section 4: Creating an inventory Project.

In this step, we're assuming that you have already created a Java project with a **Product** class and a **ProductTester** class. The **Product** class represents an item in an inventory, and the **ProductTester** class is used to test the **Product** class.

Step 2: Modify the ProductTester class.

In this step, we're modifying the **ProductTester** class to get user input for creating **Product** objects.

a. Add a Scanner called in to the beginning of your main method.

We're adding a **Scanner** object called **in** to read input from the user. This is a common way to get user input in Java.

b. Create local variables that will store values for each of the attributes of the Product class.

We're creating local variables to store the values for each attribute of the **Product** class, such as **tempNumber**, **tempName**, **tempQty**, and **tempPrice**. These variables will be used to store the user's input.

c. Ask the user to input values for each of the attributes of the Product class.

We're using the **Scanner** object to ask the user to input values for each attribute of the **Product** class. For example, we're asking the user to enter an item number, item name, quantity, and price.

d. Use the values that were entered by the user to create the p1 object.

We're creating a new **Product** object called **p1** using the values entered by the user.

Step 3: Get the user to provide values for p2.

In this step, we're repeating the process of getting user input to create another **Product** object called **p2**.

Step 4: Add a Boolean instance field to the Product class.

In this step, we're adding a new instance field to the **Product** class called **active** with a default value of **true**. This field will be used to indicate whether a product is active or discontinued.

a. Add a Boolean instance field to the Product class called active that has a default value of true.

We're adding the **active** field to the **Product** class with a default value of **true**.

b. Create getter/setter methods for this new field.

We're creating getter and setter methods for the **active** field to allow other classes to access and modify its value.

c. Add the value of this new field to the toString() method.

We're updating the **toString()** method to include the value of the **active** field.

Step 5: Use a ternary operator in the toString() method.

In this step, we're using a ternary operator to display "Active" or "Discontinued" instead of **true** or **false** for the **active** field.

Step 6: Call the setter from the driver class and set the active value to false for the p6 object before you display the values to screen.

In this step, we're creating a new **Product** object called **p6** and setting its **active** value to **false** using the setter method. We're then displaying the values of **p6** to the screen.

Step 7: Create a method in the Product class that will return the inventory value for each item.

In this step, we're creating a new method in the **Product** class called **getInventoryValue()** that returns the inventory value for each item. The inventory value is calculated by multiplying the price and quantity of the item.

Step 8: Update the toString() method in the Product class.

In this step, we're updating the **toString()** method to include the inventory value returned by the **getInventoryValue()** method.

Step 9: Save your project.

Finally, we're saving the project to ensure that all changes are saved.

Code:

```
public class Product {
    private int number;
    private String name;
    private int quantity;
    private double price;
    private boolean active;

    public Product(int number, String name, int quantity, double price) {
        this.number = number;
        this.name = name;
        this.quantity = quantity;
        this.price = price;
```

```
    this.active = true;
}

public int getNumber() {
    return number;
}

public void setNumber(int number) {
    this.number = number;
}

public String getName() {
    return name;
}

public void setName(String name) {
    this.name = name;
}

public int getQuantity() {
    return quantity;
}

public void setQuantity(int quantity) {
    this.quantity = quantity;
}

public double getPrice() {
    return price;
```

```
    }

    public void setPrice(double price) {
        this.price = price;
    }

    public boolean isActive() {
        return active;
    }

    public void setActive(boolean active) {
        this.active = active;
    }

    public double getInventoryValue() {
        return price * quantity;
    }

    @Override
    public String toString() {
        String status = active ? "Active" : "Discontinued";
        return "Item Number\t" + number + "\n" +
                "Name\t" + name + " Quantity in stock: " + quantity + "\n" +
                "Price\t" + price + "\n" +
                "Stock Value\t" + getInventoryValue() + "\n" +
                "Product status\t" + status;
    }
}
import java.util.Scanner;
```

```
public class ProductTester {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);

        System.out.print("Enter item number: ");
        int tempNumber = in.nextInt();
        System.out.print("Enter item name: ");
        String tempName = in.next();
        System.out.print("Enter quantity: ");
        int tempQty = in.nextInt();
        System.out.print("Enter price: ");
        double tempPrice = in.nextDouble();

        Product p1 = new Product(tempNumber, tempName, tempQty, tempPrice);

        System.out.println(p1.toString());

        in.nextLine(); // clear input buffer

        System.out.print("Enter item number: ");
        tempNumber = in.nextInt();
        System.out.print("Enter item name: ");
        tempName = in.next();
        System.out.print("Enter quantity: ");
        tempQty = in.nextInt();
        System.out.print("Enter price: ");
        tempPrice = in.nextDouble();
```

```
    Product p2 = new Product(tempNumber, tempName, tempQty, tempPrice);


    System.out.println(p2.toString());


    Product p6 = new Product(6, "Test Product", 10, 19.99);
    p6.setActive(false);
    System.out.println(p6.toString());


    in.close();
}
```

}

```
Enter item number: 1
Enter item name: Greatest Hits
Enter quantity: 25
Enter price: 9.99
Item Number  1
Name  Greatest Hits Quantity in stock: 25
Price    9.99
Stock Value  249.75
Product status   true

 Enter item number: 2
 Enter item name: Best of
 Enter quantity: 30
 Enter price: 12.99
 Item Number 2
 Name    Best of Quantity in stock: 30
 Price   12.99
 Stock Value 389.7
 Product status  true

 Item Number 6
 Name    Test Product Quantity in stock: 10
 Price   19.99
 Stock Value 199.9
 Product status  false
```