Project 5:

# 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.

# 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.

# 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.

# 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.

# 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.

# 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**.

# 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.

# 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);

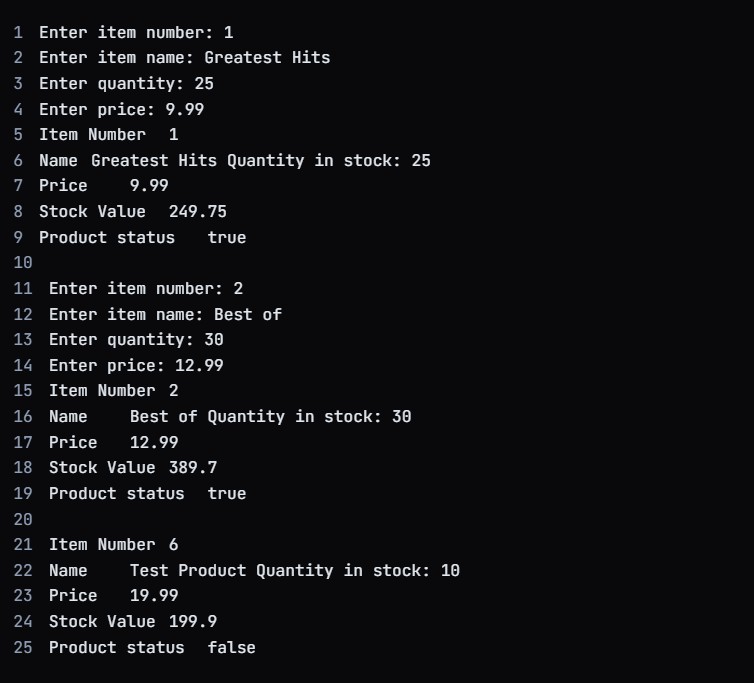
System.out.println(p2.toString());

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

System.out.println(p6.toString());

in.close();

}

}