JAVA FUNDAMENTALS SECTION-05

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Step 1: Modify the ProductTester Class

1. Add a Scanner called in to the beginning of your main method.
2. Create local variables tempNumber, tempName, tempQty, and tempPrice.
3. Ask the user to input values for these attributes and store them in the temporary local variables.
4. Use these values to create the p1 object using the parameterized constructor.
5. Repeat the process to create the p2 object, handling input buffer issues.
6. Close the Scanner object when done.

Step 2: Modify the Product Class

1. Add a boolean instance field active with a default value of true.
2. Create getter/setter methods for the active field.
3. Update the toString() method to include the active status.
4. Use a ternary operator to make the output user-friendly.
5. Add a method to calculate the inventory value.

JAVA CODE

import java.util.Scanner;

public class Inventory {

// Product class

public static class Product {

// Instance field declarations

private int itemNumber;

private String name;

private int unitsInStock;

private double price;

private boolean active;

// Default constructor

public Product() {

// Initializing fields to default values

this.itemNumber = 0;

this.name = "";

this.unitsInStock = 0;

this.price = 0.0;

this.active = true;

}

// Parameterized constructor

public Product(int number, String name, int qty, double price) {

this.itemNumber = number;

this.name = name;

this.unitsInStock = qty;

this.price = price;

this.active = true;

}

// Getter and Setter methods

public int getItemNumber() {

return itemNumber;

}

public void setItemNumber(int itemNumber) {

this.itemNumber = itemNumber;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getUnitsInStock() {

return unitsInStock;

}

public void setUnitsInStock(int unitsInStock) {

this.unitsInStock = unitsInStock;

}

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;

}

// Method to calculate inventory value

public double getInventoryValue() {

return price \* unitsInStock;

}

// Override toString method

@Override

public String toString() {

return "Item Number: " + itemNumber +

"\nName: " + name +

"\nQuantity in stock: " + unitsInStock +

"\nPrice: " + price +

"\nStock Value: " + getInventoryValue() +

"\nProduct Status: " + (active ? "Active" : "Discontinued");

}

}

// ProductTester class

public static void main(String[] args) {

Scanner in = new Scanner(System.in);

// Local variables to store user input

int tempNumber;

String tempName;

int tempQty;

double tempPrice;

// Input for p1

System.out.println("Enter the item number for p1: ");

tempNumber = in.nextInt();

in.nextLine(); // Clear buffer

System.out.println("Enter the name for p1: ");

tempName = in.nextLine();

System.out.println("Enter the quantity for p1: ");

tempQty = in.nextInt();

System.out.println("Enter the price for p1: ");

tempPrice = in.nextDouble();

// Creating p1 object

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

// Input for p2

in.nextLine(); // Clear buffer

System.out.println("Enter the item number for p2: ");

tempNumber = in.nextInt();

in.nextLine(); // Clear buffer

System.out.println("Enter the name for p2: ");

tempName = in.nextLine();

System.out.println("Enter the quantity for p2: ");

tempQty = in.nextInt();

System.out.println("Enter the price for p2: ");

tempPrice = in.nextDouble();

// Creating p2 object

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

// Close the scanner

in.close();

// Other product objects

Product p3 = new Product(1003, "LED Monitor", 25, 149.99);

Product p4 = new Product(1004, "Wireless Mouse", 50, 29.99);

Product p5 = new Product(1005, "Mechanical Keyboard", 40, 99.99);

Product p6 = new Product(1006, "Desk Lamp", 20, 49.99);

p6.setActive(false);

// Displaying the details of each product to the console

System.out.println(p1);

System.out.println(p2);

System.out.println(p3);

System.out.println(p4);

System.out.println(p5);

System.out.println(p6);

}

}

OUTPUT



