

Java Fundamentals

```
package inventory;
public class Product {
    private int itemNumber;
    private String name;
    private int quantityInStock;
    private double price;
    private boolean active;
    // Default constructor
    public Product() {
        this.active = true; // Default value for active
    }
    // Parameterized constructor
    public Product(int itemNumber, String name, int quantityInStock, double price) {
        this.itemNumber = itemNumber;
        this.name = name;
        this.quantityInStock = quantityInStock;
        this.price = price;
        this.active = true; // Default value for active
    } // 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 getQuantityInStock() { return quantityInStock; }
    public void setQuantityInStock(int quantityInStock) { this.quantityInStock =
        quantityInStock; }
    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 * quantityInStock;
    }
    // Add stock
    public void addToInventory(int quantity) {
        this.quantityInStock += quantity;
    }
    // Deduct stock
    public void deductFromInventory(int quantity) {
        if (quantity <= this.quantityInStock) {
            this.quantityInStock -= quantity;
        } else { System.out.println("Cannot deduct more than available stock.");
        }
    }
    // toString method
    @Override
    public String toString() {
        return "Item Number : " + itemNumber + "\n" +
```

```
"Name : " + name + "\n" +  
"Quantity in stock: " + quantityInStock + "\n" +  
"Price : " + price + "\n" +  
"Stock Value : " + getInventoryValue() + "\n" +  
"Product Status : " + (active ? "Active" : "Discontinued") + "\n";  
}  
}
```

OUTPUT

```
Enter the number of products you would like to add  
Enter 0 (zero) if you do not wish to add products  
3  
Enter details for product 1:  
Enter item number: 101  
Enter product name: CD Player  
Enter quantity in stock: 50  
Enter price: 29.99  
  
Enter details for product 2:  
Enter item number: 202  
Enter product name: DVD Player  
Enter quantity in stock: 30  
Enter price: 49.99  
  
Enter details for product 3:  
Enter item number: 303  
Enter product name: Blu-ray Player  
Enter quantity in stock: 20  
Enter price: 79.99  
  
View Product List  
Item Number : 101  
Name : CD Player  
Quantity in stock: 50  
Price : 29.99  
Stock Value : 1499.5  
Product Status : Active
```