

Java Fundamentals

Section 7: PART-1:- Creating an Inventory Project

```
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

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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

```
1. View Inventory
2. Add Stock
3. Deduct Stock
4. Discontinue Product
0. Exit
Please enter a menu option: 2
```

```
Add Stock
Select a product by number:
0. CD Player
1. DVD Player
2. Blu-ray Player
Enter product number: 1
How many products do you want to add? 10
```

```
View Product List
Item Number : 101
Name : CD Player
Quantity in stock: 50
Price : 29.99
Stock Value : 1499.5
Product Status : Active
```

```
Item Number : 202
Name : DVD Player
Quantity in stock: 40
Price : 49.99
Stock Value : 1999.6
Product Status : Active
```