

Java Fundamentals

Section 6: Creating an Inventory Project

```
package inventory;

import java.util.InputMismatchException;
import java.util.Scanner;

/**
 * The ProductTester class handles the creation, input, and display of Product objects.
 */
public class ProductTester {

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        int maxSize = -1;

        // Input validation for number of products
        do {
            try {
                System.out.println("Enter the number of products you would like to add");
                System.out.println("Enter 0 (zero) if you do not wish to add products");

                maxSize = in.nextInt();

                if (maxSize < 0) {
                    System.out.println("Incorrect Value entered");
                }
            } catch (InputMismatchException e) {
```

```

        System.out.println("Incorrect data type entered!");

        in.nextLine(); // Clear the input buffer
    } catch (Exception e) {

        System.out.println("An error occurred: " + e.getMessage());

        in.nextLine(); // Clear the input buffer

    }
} while (maxSize < 0);

// Handling zero products case
if (maxSize == 0) {

    System.out.println("No products required!");
} else {

    // Creating an array to store Product objects
    Product[] products = new Product[maxSize];

    // Loop to get product details from the user
    for (int i = 0; i < maxSize; i++) {

        in.nextLine(); // Clear the input buffer

        System.out.println("Enter details for product " + (i + 1) + ":");

        // Getting product details
        System.out.print("Enter item number: ");

        int itemNumber = in.nextInt();

        in.nextLine(); // Clear the input buffer

        System.out.print("Enter product name: ");

        String name = in.nextLine();

        System.out.print("Enter quantity in stock: ");

        int quantity = in.nextInt();
    }
}

```

```
System.out.print("Enter price: ");  
  
double price = in.nextDouble();  
  
// Create a new Product object and add it to the array  
products[i] = new Product(itemNumber, name, quantity, price);  
}  
  
// Displaying product details using a for-each loop  
System.out.println("\nProduct Details:");  
for (Product product : products) {  
    System.out.println(product);  
    System.out.println();  
}  
}  
  
// Close the scanner  
in.close();  
}  
}
```

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: Laptop

Enter quantity in stock: 10

Enter price: 999.99

Enter details for product 2:

Enter item number: 102

Enter product name: Mouse

Enter quantity in stock: 50

Enter price: 25.75

Enter details for product 3:

Enter item number: 103

Enter product name: Keyboard

Enter quantity in stock: 30

Enter price: 75.50

Enter details for product 4:

Enter item number: 104

Enter product name: Monitor

Enter quantity in stock: 15

Enter price: 199.99

```
Enter details for product 5:  
Enter item number: 105  
Enter product name: USB Drive  
Enter quantity in stock: 100  
Enter price: 15.99
```

Product Details:

```
Item Number : 101  
Name : Laptop  
Quantity in stock: 10  
Price : 999.99  
Stock Value : 9999.90  
Product Status : true
```

```
Item Number : 102  
Name : Mouse  
Quantity in stock: 50  
Price : 25.75  
Stock Value : 1287.50  
Product Status : true
```

```
Item Number : 103  
Name : Keyboard  
Quantity in stock: 30  
Price : 75.50  
Stock Value : 2265.00  
Product Status : true
```

```
Item Number : 104  
Name : Monitor  
Quantity in stock: 15  
Price : 199.99  
Stock Value : 2999.85  
Product Status : true
```