JAVA FUNDAMENTALS SECTION-4:

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Step 1: List of Products

Here are six products that could be stored in the inventory system:

1. HP Laptop
2. Office Chair
3. LED Monitor
4. Wireless Mouse
5. Mechanical Keyboard
6. Desk Lamp

Step 2: Product Attributes Table

Attribute	Sample Data	Data Type
Name of the product	HP Laptop	String
Price	799.99	Double
Number of units in stock	15	Int
Item number	1001	Int

Step 3: Create a Project ‘inventory’.

Step 4:Create the Product Class

JAVA

```
public class Inventory {

    // Product class

    public static class Product {

        // Instance field declarations
```

```
private int itemNumber;
private String name;
private int unitsInStock;
private double price;

// Default constructor
public Product() {
    // Initializing fields to default values
    this.itemNumber = 0;
    this.name = "";
    this.unitsInStock = 0;
    this.price = 0.0;
}

// Parameterized constructor
public Product(int number, String name, int qty, double price) {
    this.itemNumber = number;
    this.name = name;
    this.unitsInStock = qty;
    this.price = price;
}
```

```
// 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;
    }

    // Override toString method
    @Override
    public String toString() {
        return "Item Number: " + itemNumber + "\nName: " + name +
"\nQuantity in stock: " + unitsInStock + "\nPrice: " + price;
    }
}

// ProductTester class
```

```
    public static void main(String[] args) {
        // Creating and initializing six Product objects
        Product product1 = new Product();
        Product product2 = new Product();
        Product product3 = new Product(1003, "LED Monitor", 25,
149.99);
        Product product4 = new Product(1004, "Wireless Mouse", 50,
29.99);
        Product product5 = new Product(1005, "Mechanical Keyboard",
40, 99.99);
        Product product6 = new Product(1006, "Desk Lamp", 20, 49.99);

        // Displaying the details of each product to the console
        System.out.println(product1);
        System.out.println(product2);
        System.out.println(product3);
        System.out.println(product4);
        System.out.println(product5);
        System.out.println(product6);
    }
}
```

OUTPUT:

Output

```
java -cp /tmp/mKrYo2MKPl/Inventory
Item Number: 0
Name:
Quantity in stock: 0
Price: 0.0
Item Number: 0
Name:
Quantity in stock: 0
Price: 0.0
Item Number: 1003
Name: LED Monitor
Quantity in stock: 25
Price: 149.99
Item Number: 1004
Name: Wireless Mouse
Quantity in stock: 50
Price: 29.99
Item Number: 1005
Name: Mechanical Keyboard
Quantity in stock: 40
Price: 99.99
Item Number: 1006
Name: Desk Lamp
Quantity in stock: 20
Price: 49.99
```

Save the Project

Ensure that both Product.java and ProductTester.java are saved in the same directory or within the appropriate package structure if using an IDE like Eclipse or IntelliJ IDEA.

Final Notes

This code creates an inventory system with six products, displaying their details in the console. Make sure to compile and run the ProductTester class to verify everything works as expected.