**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:

* HP Laptop
* Office Chair
* LED Monitor
* Wireless Mouse
* Mechanical Keyboard
* 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:



**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.