CSA-0963 JAVA P ROGRAMMING FOR SYSTEM INTERFACES

Java Fundamentals

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Section 4: Creating an Inventory Project

PROJECT 01:

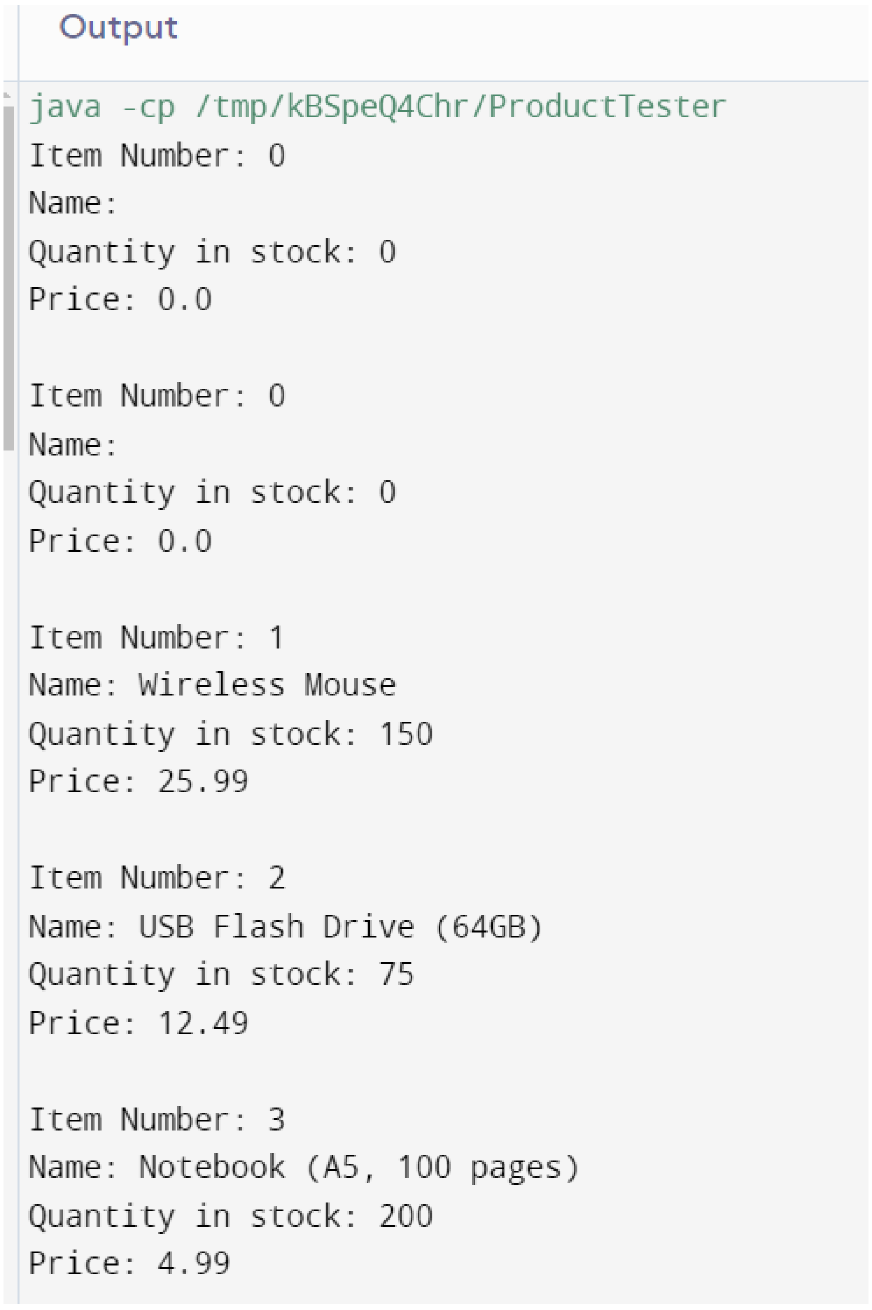
PROGRAM:

```
Product {
  // Instance field declarations
  private int itemNumber;        // Unique identifier for the product
  private String name;           // Name of the product
  private int numberOfUnitsInStock; // Number of units currently in stock
  private double price;          // Price of each unit

  // Default constructor
  // This constructor initializes the fields to their default values
  public Product() {
    this.itemNumber = 0;
    this.name = "";
    this.numberOfUnitsInStock = 0;
    this.price = 0.0;
  }

  // Overloaded constructor with parameters
  // This constructor initializes the fields with the provided values
  public Product(int number, String name, int qty, double price) {
    this.itemNumber = number;
    this.name = name;
    this.numberOfUnitsInStock = qty;
    this.price = price;
  }
```

```
// Getter for itemNumber
// Returns the item number of the product
public int getItemNumber() {
   return itemNumber;
}

// Setter for itemNumber
// Sets the item number of the product
public void setItemNumber(int itemNumber) {
   this.itemNumber = itemNumber;
}

// Getter for name
// Returns the name of the product
public String getName() {
   return name;
}

// Setter for name
// Sets the name of the product
public void setName(String name) {
   this.name = name;
}

// Getter for numberOfUnitsInStock
// Returns the quantity of the product in stock
public int getNumberOfUnitsInStock() {
   return numberOfUnitsInStock;
}

// Setter for numberOfUnitsInStock
// Sets the quantity of the product in stock
```

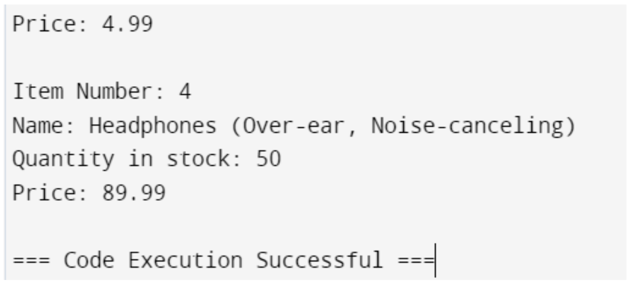
```
    public void setNumberOfUnitsInStock(int numberOfUnitsInStock) {
        this.numberOfUnitsInStock = numberOfUnitsInStock;
    }

    // Getter for price
    // Returns the price of the product
    public double getPrice() {
        return price;
    }

    // Setter for price
    // Sets the price of the product
    public void setPrice(double price) {
        this.price = price;
    }

    // Overrides the toString method to provide product details
    @Override
    public String toString() {
        return "Item Number: " + itemNumber +
                "\nName: " + name +
                "\nQuantity in stock: " + numberOfUnitsInStock +
                "\nPrice: " + price;
    }
}
// ProductTester.java
public class ProductTester {
    public static void main(String[] args) {
        // Creating Product objects
        Product product1 = new Product();  // Default constructor
        Product product2 = new Product();  // Default constructor
        Product product3 = new Product(1, "Wireless Mouse", 150, 25.99);
        Product product4 = new Product(2, "USB Flash Drive (64GB)", 75, 12.49);
        Product product5 = new Product(3, "Notebook (A5, 100 pages)", 200, 4.99);
        Product product6 = new Product(4, "Headphones (Over-ear, Noise-canceling)", 50, 89.99);

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

OUTPUT:



Output

```
java -cp /tmp/kBSpeQ4Chr/ProductTester
Item Number: 0
Name:
Quantity in stock: 0
Price: 0.0

Item Number: 0
Name:
Quantity in stock: 0
Price: 0.0

Item Number: 1
Name: Wireless Mouse
Quantity in stock: 150
Price: 25.99

Item Number: 2
Name: USB Flash Drive (64GB)
Quantity in stock: 75
Price: 12.49

Item Number: 3
Name: Notebook (A5, 100 pages)
Quantity in stock: 200
Price: 4.99
```



```
Price: 4.99

Item Number: 4
Name: Headphones (Over-ear, Noise-canceling)
Quantity in stock: 50
Price: 89.99

=== Code Execution Successful ===
```

PROJECT 02

SECTION 5

PROGRAM:

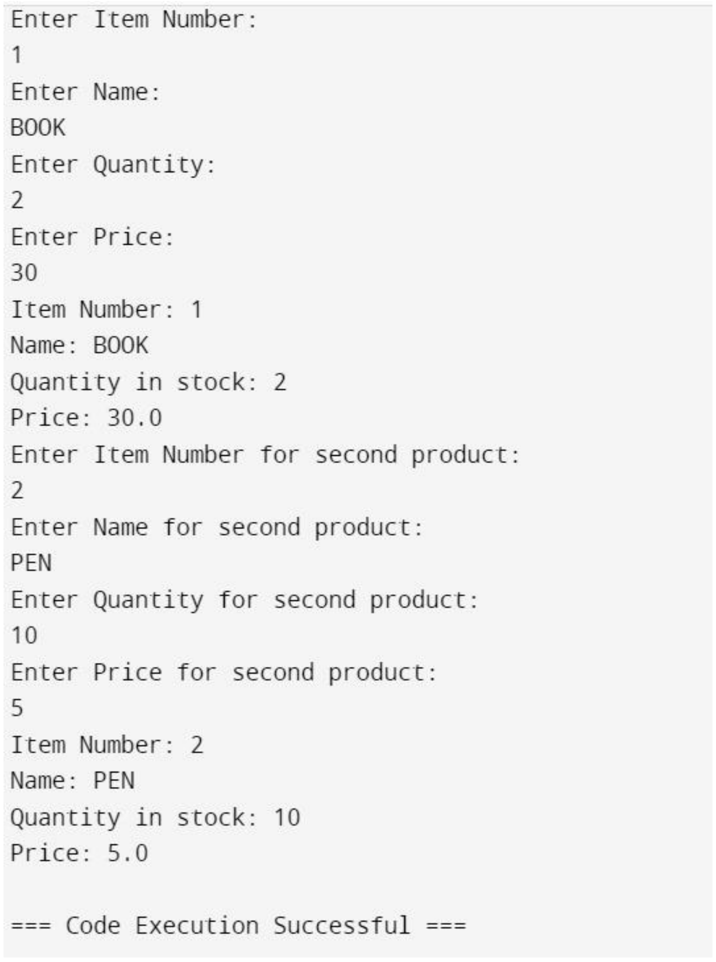
Import java.util.Scanner;

```
public class Product {
    private int itemNumber;
    private String name;
    private int qty;
    private double price;
    private boolean active = true; // Default value is true

    // Constructor with parameters
    public Product(int itemNumber, String name, int qty, double price) {
        this.itemNumber = itemNumber;
        this.name = name;
        this.qty = qty;
        this.price = price;
    }

    // Getter and setter for active
    public boolean isActive() {
        return active;
    }

    public void setActive(boolean active) {
        this.active = active;
    }

    // Calculate inventory value
    public double getInventoryValue() {
        return price * qty;
    }

    // String representation of the Product
    @Override
    public String toString() {
        return "Item Number : " + itemNumber + "\n" +
            "Name : " + name + "\n" +
            "Quantity in stock: " + qty + "\n" +
            "Price : " + price + "\n" +
            "Stock Value : " + getInventoryValue() + "\n" +
            "Product Status : " + (active ? "Active (true)" : "Discontinued (false)");
    }
}


public class ProductTester {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);

        // Temporary variables for product attributes
        int tempNumber;
        String tempName;
        int tempQty;
        double tempPrice;

        // Input for p1
        System.out.println("Enter Item Number: ");
        tempNumber = in.nextInt();

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

        System.out.println("Enter Name: ");
        tempName = in.nextLine();

        System.out.println("Enter Quantity: ");
        tempQty = in.nextInt();

        System.out.println("Enter Price: ");
```

```
tempPrice = in.nextDouble();

// Create p1
Product p1 = new Product(tempNumber, tempName, tempQty, tempPrice);
System.out.println(p1); // Display p1 information

// Clear the input buffer before getting values for p2
in.nextLine();

// Input for p2
System.out.println("Enter Item Number for second product: ");
tempNumber = in.nextInt();

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

System.out.println("Enter Name for second product: ");
tempName = in.nextLine();

System.out.println("Enter Quantity for second product: ");
tempQty = in.nextInt();

System.out.println("Enter Price for second product: ");
tempPrice = in.nextDouble();

// Create p2
Product p2 = new Product(tempNumber, tempName, tempQty, tempPrice);
System.out.println(p2); // Display p2 information

// Set active status for p2 to false
p2.setActive(false);
System.out.println(p2); // Display p2 with updated active status
```

```
        // Close Scanner
        in.close();
    }
}
```

OUTPUT:



```
Enter Item Number:
1
Enter Name:
BOOK
Enter Quantity:
2
Enter Price:
30
Item Number: 1
Name: BOOK
Quantity in stock: 2
Price: 30.0
Enter Item Number for second product:
2
Enter Name for second product:
PEN
Enter Quantity for second product:
10
Enter Price for second product:
5
Item Number: 2
Name: PEN
Quantity in stock: 10
Price: 5.0

=== Code Execution Successful ===
```

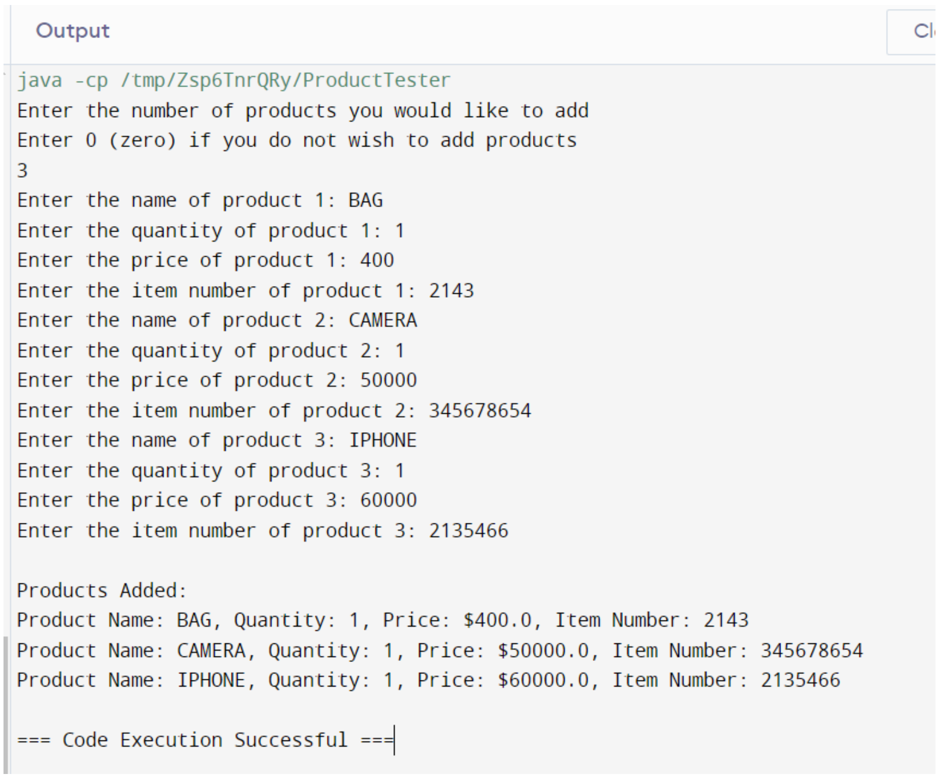
PROJECT-03

SECTION-06 CREATE ANA INVENTORY PROJECT

PROGRAM:

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


class Product {
    private String name;
    private int quantity;
    private double price;
    private int itemNumber;

    // Constructor
    public Product(String name, int quantity, double price, int itemNumber) {
        this.name = name;
        this.quantity = quantity;
        this.price = price;
        this.itemNumber = itemNumber;
    }

    @Override
    public String toString() {
        return "Product Name: " + name + ", Quantity: " + quantity +
               ", Price: $" + price + ", Item Number: " + itemNumber;
    }
}

public class ProductTester {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int maxSize = -1; // Initializing with a value to force a correct input later

        // Prompt for the number of products
        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");

        // Input loop
        do {
            try {
                maxSize = scanner.nextInt();

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

            } catch (InputMismatchException e) {
                System.out.println("Incorrect data type entered!");
                scanner.next(); // Clear the input buffer
                // Continue the loop after clearing the buffer
            }
        } while (maxSize < 0); // Exit on 0 or greater

        // Handle the case of no products
        if (maxSize == 0) {
            System.out.println("No products required!");
        } else { // Handle positive maxSize
            // Create an array to store Product objects
            Product[] products = new Product[maxSize];

            // Populate the array with product details
            for (int i = 0; i < maxSize; i++) {
                scanner.nextLine(); // Clear the input buffer

                System.out.print("Enter the name of product " + (i + 1) + ": ");
                String name = scanner.nextLine();

                System.out.print("Enter the quantity of product " + (i + 1) + ": ");
                int quantity = scanner.nextInt();

                System.out.print("Enter the price of 2) + ": ");
                double price = scanner.nextDouble();

                System.out.print("Enter the item number of product " + (i + 1) + ": ");
                int itemNumber = scanner.nextInt();

                // Create a new product object and place it in the array
            products[i] = new Product(name, quantity, price, itemNumber);
          }

          // Display the products using a for-each loop
          System.out.println("\nProducts Added:");
          for (Product product : products) {
            System.out.println(product);
          }
        }

        // Close the scanner
        scanner.close();
      }
    }
```

OUTPUT:



```
java -cp /tmp/Zsp6TnrQRy/ProductTester
Enter the number of products you would like to add
Enter 0 (zero) if you do not wish to add products
3
Enter the name of product 1: BAG
Enter the quantity of product 1: 1
Enter the price of product 1: 400
Enter the item number of product 1: 2143
Enter the name of product 2: CAMERA
Enter the quantity of product 2: 1
Enter the price of product 2: 50000
Enter the item number of product 2: 345678654
Enter the name of product 3: IPHONE
Enter the quantity of product 3: 1
Enter the price of product 3: 60000
Enter the item number of product 3: 2135466

Products Added:
Product Name: BAG, Quantity: 1, Price: $400.0, Item Number: 2143
Product Name: CAMERA, Quantity: 1, Price: $50000.0, Item Number: 345678654
Product Name: IPHONE, Quantity: 1, Price: $60000.0, Item Number: 2135466

=== Code Execution Successful ===
```

PROJECT-04

PART-01

SECTION-07

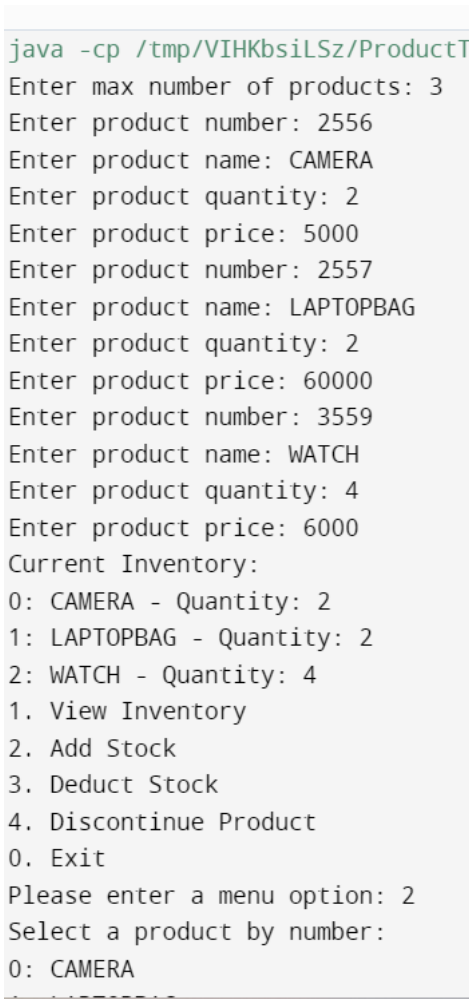
PROGRAM:

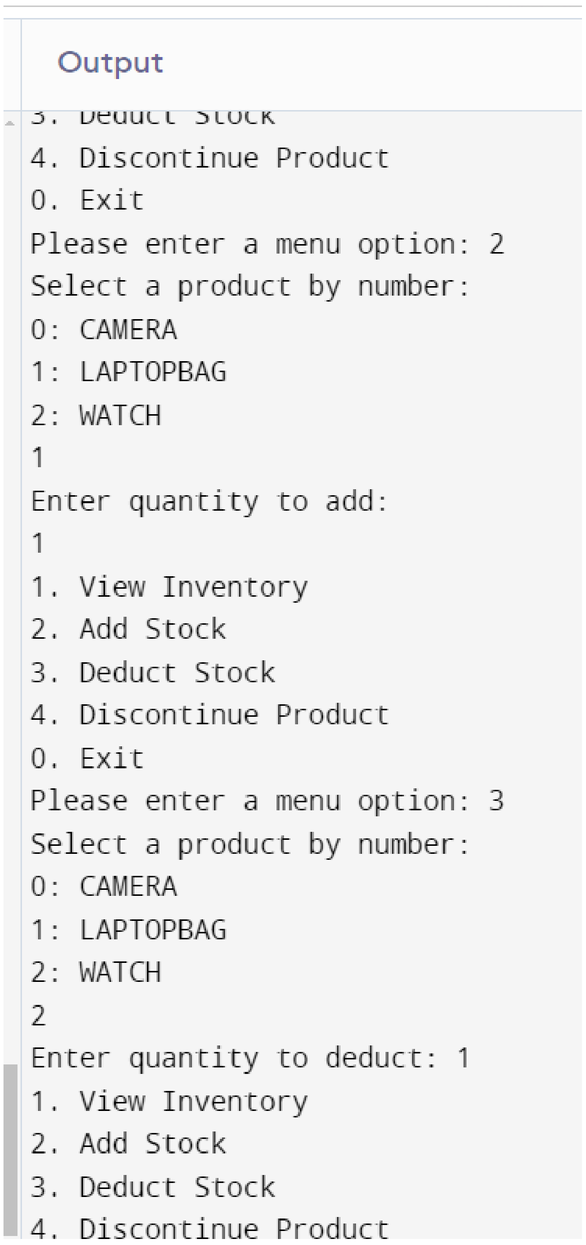
```
import java.util.Scanner;

class Product {
    private int number;
    private String name;
    private int quantity;
    private double price;

    // Constructor
    public Product(int number, String name, int quantity, double price) {
        this.number = number;
        this.name = name;
        this.quantity = quantity;
        this.price = price;
    }

    // Getters
    public String getName() {
        return name;
    }

    public int getQuantity() {
        return quantity;
    }

    // Method to add quantity
    public void addToInventory(int quantity) {
        if (quantity > 0) {
            this.quantity += quantity;
        } else {
            System.out.println("Quantity must be greater than zero.");
        }
    }

    // Method to deduct quantity
    public void deductFromInventory(int quantity) {
        if (quantity > 0 && quantity <= this.quantity) {
            this.quantity -= quantity;
        } else {
            System.out.println("Invalid quantity for deduction.");
        }
    }
}

public class ProductTester {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int maxSize = getNumProducts(scanner);
        Product[] products = new Product[maxSize];

        addToInventory(products, scanner);
        displayInventory(products);

        int option;
        do {
            option = getMenuOption(scanner);
            switch (option) {
                case 1:
                    displayInventory(products);
                    break;
                case 2:
                    addInventory(products, scanner);
                    break;
                case 3:
```

```
            deductInventory(products, scanner);
            break;
          case 4:
            discontinueProduct(products, scanner);
            break;
        }
      } while (option != 0);

      scanner.close();
    }

    public static void displayInventory(Product[] products) {
      System.out.println("Current Inventory:");
      for (int i = 0; i < products.length; i++) {
        if (products[i] != null) {
          System.out.println(i + ": " + products[i].getName() + " - Quantity: " + products[i].getQuantity());
        }
      }
    }

    public static void addToInventory(Product[] products, Scanner scanner) {
      int tempNumber;
      String tempName;
      int tempQty;
      double tempPrice;

      for (int i = 0; i < products.length; i++) {
        System.out.print("Enter product number: ");
        tempNumber = scanner.nextInt();

        System.out.print("Enter product name: ");
        tempName = scanner.next();
```

```
            System.out.print("Enter product quantity: ");
            tempQty = scanner.nextInt();

            System.out.print("Enter product price: ");
            tempPrice = scanner.nextDouble();

            products[i] = new Product(tempNumber, tempName, tempQty, tempPrice);
        }
    }

    public static int getNumProducts(Scanner scanner) {
        int maxSize;
        do {
            System.out.print("Enter max number of products: ");
            maxSize = scanner.nextInt();
        } while (maxSize <= 0);
        return maxSize;
    }

    public static int getMenuOption(Scanner scanner) {
        int option = -1;
        while (option < 0 || option > 4) {
            System.out.println("1. View Inventory");
            System.out.println("2. Add Stock");
            System.out.println("3. Deduct Stock");
            System.out.println("4. Discontinue Product");
            System.out.println("0. Exit");
            System.out.print("Please enter a menu option: ");
            try {
                option = scanner.nextInt();
            } catch (Exception e) {
                System.out.println("Invalid input. Please enter a number between 0 and 4.");
                scanner.next(); // Clear the invalid input
            }
        }
        return option;
    }

    public static int getProductNumber(Product[] products, Scanner scanner) {
        int productChoice = -1;
        while (productChoice < 0 || productChoice >= products.length) {
            System.out.println("Select a product by number:");
            for (int i = 0; i < products.length; i++) {
                if (products[i] != null) {
                    System.out.println(i + ": " + products[i].getName());
                }
            }
            try {
                productChoice = scanner.nextInt();
            } catch (Exception e) {
                System.out.println("Invalid input. Please enter a valid product number.");
                scanner.next(); // Clear the invalid input
            }
        }
        return productChoice;
    }

    public static void addInventory(Product[] products, Scanner scanner) {
        int productChoice;
        int updateValue = -1;

        productChoice = getProductNumber(products, scanner);

        while (updateValue < 0) {
            System.out.print("Enter quantity to add: ");
            updateValue = scanner.nextInt();
        }

        products[productChoice].addToInventory(updateValue);
    }

    public static void deductInventory(Product[] products, Scanner scanner) {
        int productChoice;
        int updateValue = -1;

        productChoice = getProductNumber(products, scanner);

        while (updateValue < 0) {
            System.out.print("Enter quantity to deduct: ");
            updateValue = scanner.nextInt();
        }

        products[productChoice].deductFromInventory(updateValue);
    }

    public static void discontinueProduct(Product[] products, Scanner scanner) {
        int productChoice = getProductNumber(products, scanner);
        products[productChoice] = null; // Setting the product to null to discontinue it
        System.out.println("Product discontinued.");
    }
}
```

OUTPUT:


```
java -cp /tmp/VIHKbsiLSz/ProductT
Enter max number of products: 3
Enter product number: 2556
Enter product name: CAMERA
Enter product quantity: 2
Enter product price: 5000
Enter product number: 2557
Enter product name: LAPTOPBAG
Enter product quantity: 2
Enter product price: 60000
Enter product number: 3559
Enter product name: WATCH
Enter product quantity: 4
Enter product price: 6000
Current Inventory:
0: CAMERA - Quantity: 2
1: LAPTOPBAG - Quantity: 2
2: WATCH - Quantity: 4
1. View Inventory
2. Add Stock
3. Deduct Stock
4. Discontinue Product
0. Exit
Please enter a menu option: 2
Select a product by number:
0: CAMERA
```


Output

```
3. Deduct Stock
4. Discontinue Product
0. Exit
Please enter a menu option: 2
Select a product by number:
0: CAMERA
1: LAPTOPBAG
2: WATCH
1
Enter quantity to add:
1
1. View Inventory
2. Add Stock
3. Deduct Stock
4. Discontinue Product
0. Exit
Please enter a menu option: 3
Select a product by number:
0: CAMERA
1: LAPTOPBAG
2: WATCH
2
Enter quantity to deduct: 1
1. View Inventory
2. Add Stock
3. Deduct Stock
4. Discontinue Product
```

PROJECT

SECTION 7 PART -02

PROGRAM:

```
import java.util.ArrayList;
import java.util.Scanner;

class Product {
   protected String name;
   protected double price;
   protected int quantity;
   protected int itemNumber;
```

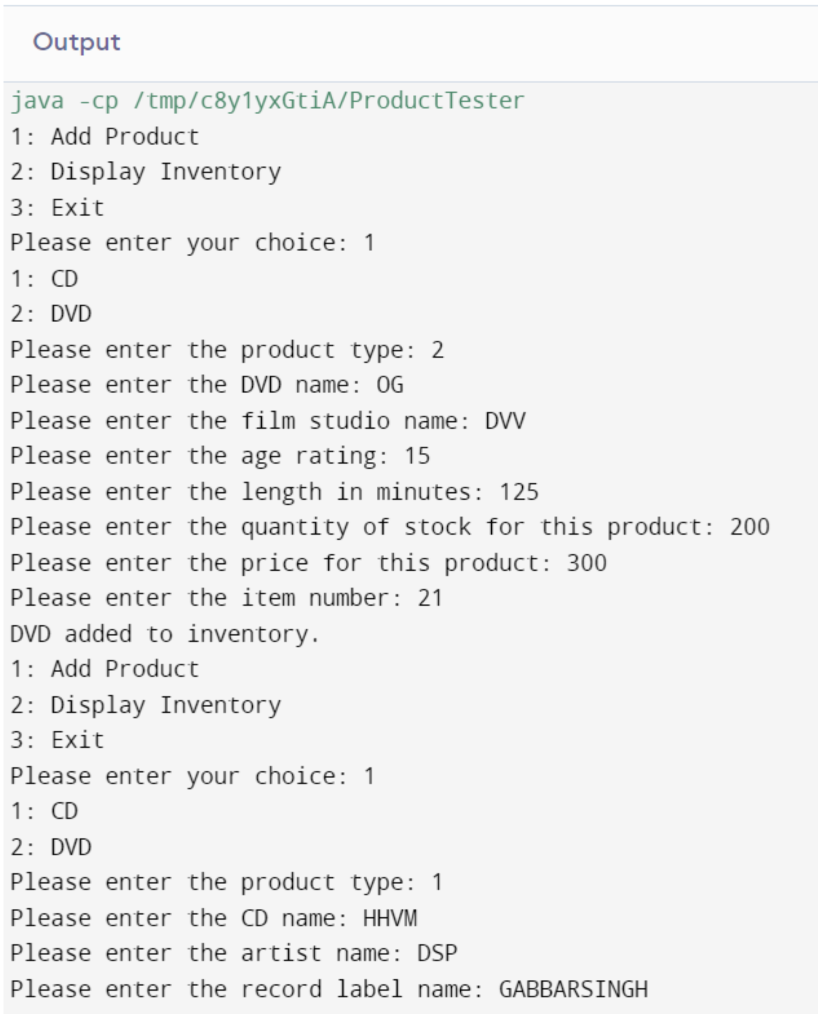
```
    protected String status = "Available";

    public Product(String name, double price, int quantity, int itemNumber) {
        this.name = name;
        this.price = price;
        this.quantity = quantity;
        this.itemNumber = itemNumber;
    }

    public double calculateInventoryValue() {
        return price * quantity;
    }

    @Override
    public String toString() {
        return "Item Number: " + itemNumber + "\n" +
               "Name: " + name + "\n" +
               "Quantity in stock: " + quantity + "\n" +
               "Price: " + price + "\n" +
               "Stock Value: " + String.format("%.2f", calculateInventoryValue()) + "\n" +
               "Product Status: " + status;
    }
}

class DVD extends Product {
    private int length;
    private int ageRating;
    private String filmStudio;

    public DVD(String name, double price, int quantity, int itemNumber, int length, int ageRating, String
filmStudio) {
        super(name, price, quantity, itemNumber);
        this.length = length;
        this.ageRating = ageRating;
        this.filmStudio = filmStudio;
    }

    @Override
    public String toString() {
        return super.toString() + "\n" +
               "Movie Length: " + length + " minutes\n" +
               "Age Rating: " + ageRating + "\n" +
               "Film Studio: " + filmStudio;
    }
}

class CD extends Product {
    private String artist;
    private int numSongs;
    private String label;

    public CD(String name, double price, int quantity, int itemNumber, String artist, int numSongs, String label) {
        super(name, price, quantity, itemNumber);
        this.artist = artist;
        this.numSongs = numSongs;
        this.label = label;
    }

    @Override
    public String toString() {
        return super.toString() + "\n" +
               "Artist: " + artist + "\n" +
               "Songs on Album: " + numSongs + "\n" +
               "Record Label: " + label;
    }
}
```

```
class ProductTester {
    private ArrayList<Product> products = new ArrayList<>();
    private Scanner scanner = new Scanner(System.in);

    public void addToInventory() {
        int stockChoice = -1;

        while (stockChoice != 1 && stockChoice != 2) {
            System.out.println("1: CD\n2: DVD");
            System.out.print("Please enter the product type: ");
            stockChoice = scanner.nextInt();
            scanner.nextLine(); // Consume newline

            if (stockChoice != 1 && stockChoice != 2) {
                System.out.println("Only numbers 1 or 2 allowed!");
            }
        }

        if (stockChoice == 1) {
            addCDToInventory();
        } else {
            addDVDToInventory();
        }
    }

    private void addCDToInventory() {
        System.out.print("Please enter the CD name: ");
        String name = scanner.nextLine();

        System.out.print("Please enter the artist name: ");
        String artist = scanner.nextLine();
        System.out.print("Please enter the record label name: ");
        String label = scanner.nextLine();

        System.out.print("Please enter the number of songs: ");
        int numSongs = scanner.nextInt();

        System.out.print("Please enter the quantity of stock for this product: ");
        int quantity = scanner.nextInt();

        System.out.print("Please enter the price for this product: ");
        double price = scanner.nextDouble();

        System.out.print("Please enter the item number: ");
        int itemNumber = scanner.nextInt();

        CD cd = new CD(name, price, quantity, itemNumber, artist, numSongs, label);
        products.add(cd);
        System.out.println("CD added to inventory.");
    }

    private void addDVDToInventory() {
        System.out.print("Please enter the DVD name: ");
        String name = scanner.nextLine();

        System.out.print("Please enter the film studio name: ");
        String filmStudio = scanner.nextLine();

        System.out.print("Please enter the age rating: ");
        int ageRating = scanner.nextInt();

        System.out.print("Please enter the length in minutes: ");
        int length = scanner.nextInt();
```

```
        System.out.print("Please enter the quantity of stock for this product: ");
        int quantity = scanner.nextInt();

        System.out.print("Please enter the price for this product: ");
        double price = scanner.nextDouble();

        System.out.print("Please enter the item number: ");
        int itemNumber = scanner.nextInt();

        DVD dvd = new DVD(name, price, quantity, itemNumber, length, ageRating, filmStudio);
        products.add(dvd);
        System.out.println("DVD added to inventory.");
    }

    public void displayInventory() {
        for (Product product : products) {
            System.out.println(product);
            System.out.println("\n" + "=".repeat(40) + "\n");
        }
    }

    public static void main(String[] args) {
        ProductTester tester = new ProductTester();

        while (true) {
            System.out.println("1: Add Product\n2: Display Inventory\n3: Exit");
            System.out.print("Please enter your choice: ");
            int choice = tester.scanner.nextInt();
            tester.scanner.nextLine(); // Consume newline

            if (choice == 1) {
                tester.addToInventory();
            } else if (choice == 2) {
```

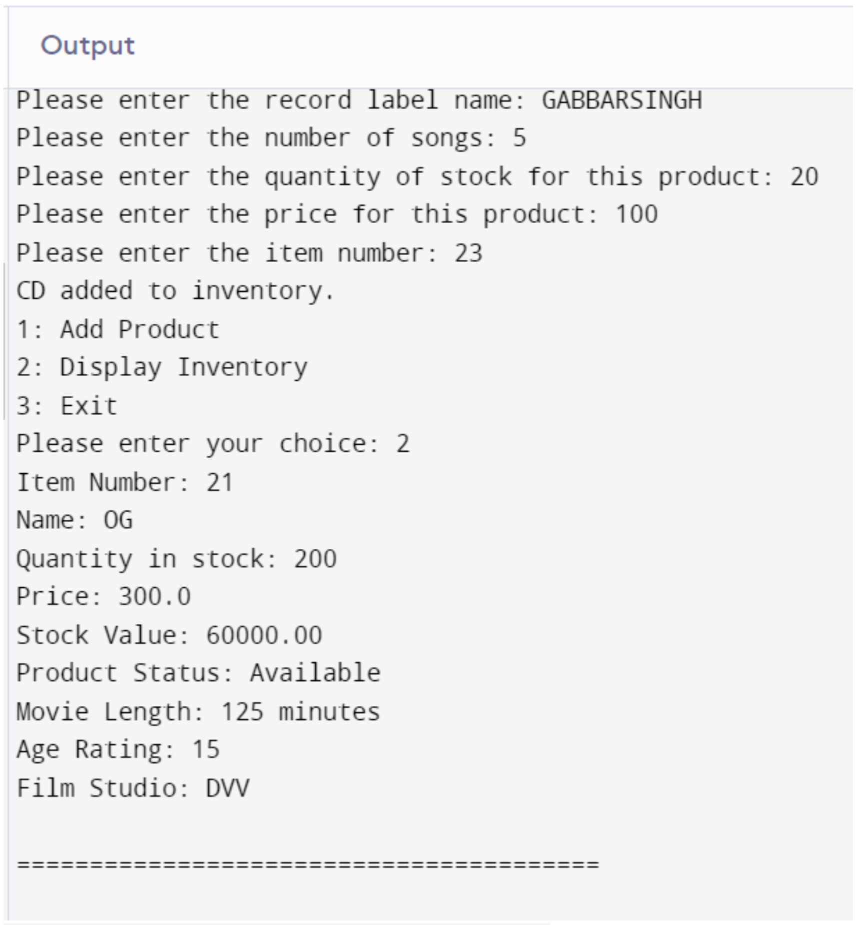
```
            tester.displayInventory();
          } else if (choice == 3) {
            break;
          } else {
            System.out.println("Invalid choice. Please try again.");
          }
        }
        tester.scanner.close();
      }
    }
```

OUTPUT:

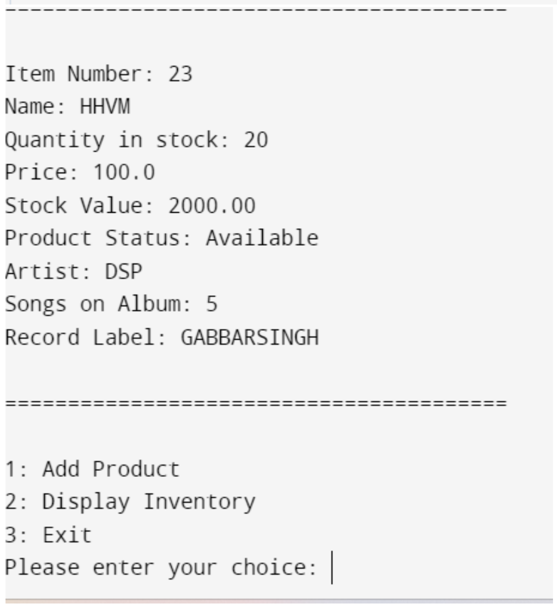


Output

```
java -cp /tmp/c8y1yxGtiA/ProductTester
1: Add Product
2: Display Inventory
3: Exit
Please enter your choice: 1
1: CD
2: DVD
Please enter the product type: 2
Please enter the DVD name: OG
Please enter the film studio name: DVV
Please enter the age rating: 15
Please enter the length in minutes: 125
Please enter the quantity of stock for this product: 200
Please enter the price for this product: 300
Please enter the item number: 21
DVD added to inventory.
1: Add Product
2: Display Inventory
3: Exit
Please enter your choice: 1
1: CD
2: DVD
Please enter the product type: 1
Please enter the CD name: HHVM
Please enter the artist name: DSP
Please enter the record label name: GABBARSINGH
```


Output

```
Please enter the record label name: GABBARSINGH
Please enter the number of songs: 5
Please enter the quantity of stock for this product: 20
Please enter the price for this product: 100
Please enter the item number: 23
CD added to inventory.
1: Add Product
2: Display Inventory
3: Exit
Please enter your choice: 2
Item Number: 21
Name: OG
Quantity in stock: 200
Price: 300.0
Stock Value: 60000.00
Product Status: Available
Movie Length: 125 minutes
Age Rating: 15
Film Studio: DVV

========================================
```



```
----------------------------------------

Item Number: 23
Name: HHVM
Quantity in stock: 20
Price: 100.0
Stock Value: 2000.00
Product Status: Available
Artist: DSP
Songs on Album: 5
Record Label: GABBARSINGH

========================================

1: Add Product
2: Display Inventory
3: Exit
Please enter your choice:
```

FINAL PROJECT IN JAVA FUOUNDATIONS:

PROGRAM:

```
import java.util.ArrayList;

import java.util.Scanner;


class Task {
```

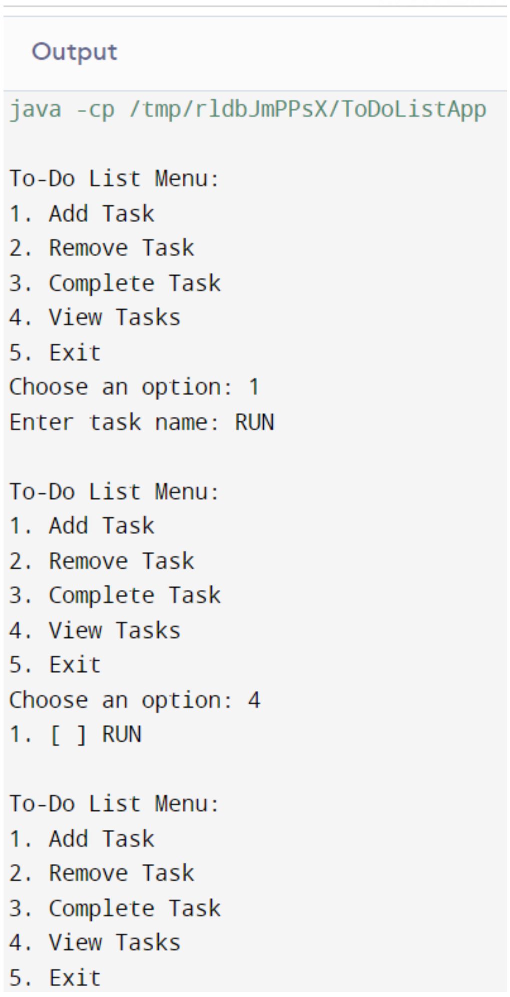
```java
    private String name;
    private boolean isCompleted;

    public Task(String name) {
        this.name = name;
        this.isCompleted = false;
    }

    public String getName() {
        return name;
    }

    public boolean isCompleted() {
        return isCompleted;
    }

    public void completeTask() {
        this.isCompleted = true;
    }

    @Override
    public String toString() {
        return (isCompleted ? "[x] " : "[ ] ") + name;
    }
}

public class ToDoListApp {
    private ArrayList<Task> tasks;

    public ToDoListApp() {
        tasks = new ArrayList<>();
    }
```

```
public void addTask(String taskName) {
    tasks.add(new Task(taskName));
}

public void removeTask(int index) {
    if (index >= 0 && index < tasks.size()) {
        tasks.remove(index);
    } else {
        System.out.println("Invalid task number.");
    }
}

public void completeTask(int index) {
    if (index >= 0 && index < tasks.size()) {
        tasks.get(index).completeTask();
    } else {
        System.out.println("Invalid task number.");
    }
}

public void viewTasks() {
    if (tasks.isEmpty()) {
        System.out.println("No tasks available.");
    } else {
        for (int i = 0; i < tasks.size(); i++) {
            System.out.println((i + 1) + ". " + tasks.get(i));
        }
    }
}

public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    ToDoListApp todoList = new ToDoListApp();
```

```
while (true) {
  System.out.println("\nTo-Do List Menu:");
  System.out.println("1. Add Task");
  System.out.println("2. Remove Task");
  System.out.println("3. Complete Task");
  System.out.println("4. View Tasks");
  System.out.println("5. Exit");
  System.out.print("Choose an option: ");
  int choice = scanner.nextInt();
  scanner.nextLine();  // Consume newline

  switch (choice) {
    case 1:
      System.out.print("Enter task name: ");
      String taskName = scanner.nextLine();
      todoList.addTask(taskName);
      break;
    case 2:
      todoList.viewTasks();
      System.out.print("Enter task number to remove: ");
      int removeIndex = scanner.nextInt() - 1;
      todoList.removeTask(removeIndex);
      break;
    case 3:
      todoList.viewTasks();
      System.out.print("Enter task number to complete: ");
      int completeIndex = scanner.nextInt() - 1;
      todoList.completeTask(completeIndex);
      break;
    case 4:
      todoList.viewTasks();
      break;
```

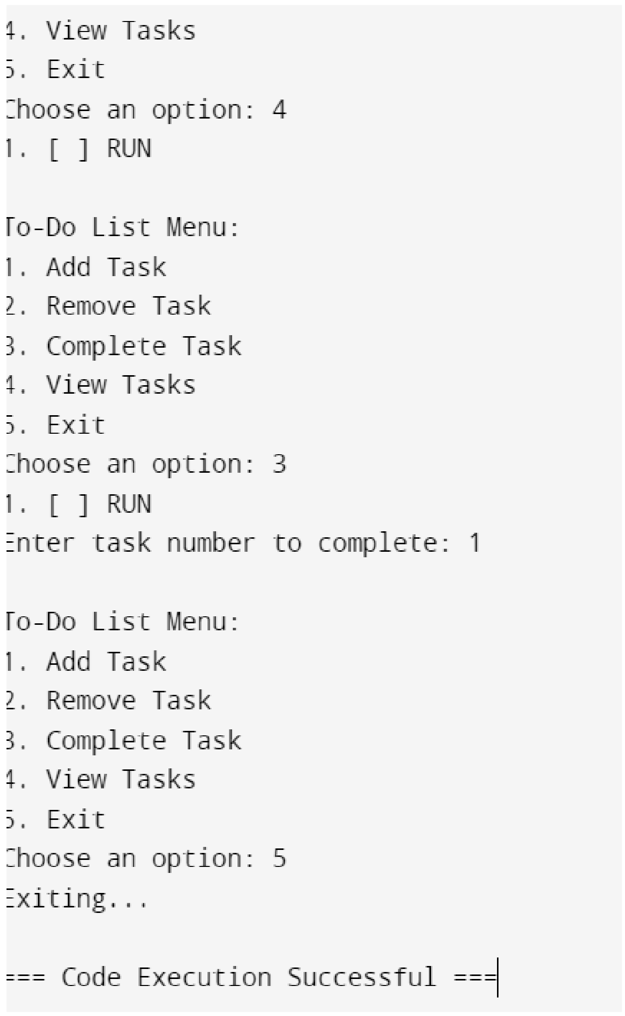
```
            case 5:
              System.out.println("Exiting...");
              scanner.close();
              return;
            default:
              System.out.println("Invalid option. Please try again.");
          }
        }
      }
    }
```

OUTPUT:



Output

```
java -cp /tmp/rldbJmPPsX/ToDoListApp

To-Do List Menu:
1. Add Task
2. Remove Task
3. Complete Task
4. View Tasks
5. Exit
Choose an option: 1
Enter task name: RUN

To-Do List Menu:
1. Add Task
2. Remove Task
3. Complete Task
4. View Tasks
5. Exit
Choose an option: 4
1. [ ] RUN

To-Do List Menu:
1. Add Task
2. Remove Task
3. Complete Task
4. View Tasks
5. Exit
```



```
4. View Tasks
5. Exit
Choose an option: 4
1. [ ] RUN

To-Do List Menu:
1. Add Task
2. Remove Task
3. Complete Task
4. View Tasks
5. Exit
Choose an option: 3
1. [ ] RUN
Enter task number to complete: 1

To-Do List Menu:
1. Add Task
2. Remove Task
3. Complete Task
4. View Tasks
5. Exit
Choose an option: 5
Exiting...

=== Code Execution Successful ===
```