**Exercise -1**

**InventoryManagementSystem:**

**OUTPUT**

PS D:\Cognizant\Week-1\InventoryManagementSystem> javac Inventory.java

PS D:\Cognizant\Week-1\InventoryManagementSystem> java Inventory

Choose an option:

1. Add a product

2. Update a product

3. Delete a product

4. Display a product

5. Exit

Enter your choice: 1

Enter product ID: 1

Enter product name: Laptop

Enter product quantity: 30

Enter product price: 899.99

Product added successfully.

Choose an option:

1. Add a product

2. Update a product

3. Delete a product

4. Display a product

5. Exit

Enter your choice: 2

Enter product ID to update: 2

Product not found.

Choose an option:

1. Add a product

2. Update a product

3. Delete a product

4. Display a product

5. Exit

Enter your choice: 1

Enter product ID: 2

Enter product name: Phone

Enter product quantity: 20

Enter product price: 799.99

Product added successfully.

Choose an option:

1. Add a product

2. Update a product

3. Delete a product

4. Display a product

5. Exit

Enter your choice: 2

Enter product ID to update: 2

Enter new product name: Phone

Enter new product quantity: 30

Enter new product price: 999.99

Product updated successfully.

Choose an option:

1. Add a product

2. Update a product

3. Delete a product

4. Display a product

5. Exit

Enter your choice: 3

Enter product ID to delete: 2

Product deleted successfully.

Choose an option:

1. Add a product

2. Update a product

3. Delete a product

4. Display a product

5. Exit

Enter your choice: 4

Enter product ID to display: 1

Product ID: 1, Name: Laptop, Quantity: 30, Price: $899.99

Choose an option:

1. Add a product

2. Update a product

3. Delete a product

4. Display a product

5. Exit

Enter your choice: 5

Exiting the system.

**Exercise - 2**

**E-commercePlatformSearchFunction:**

**OUTPUT:**

BINARY SEARCH:

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> javac SearchAlgorithms.java

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> java SearchAlgorithms

Enter the Search Id:

2

Product found: Product ID: 2, Name: Smartphone, Quantity: 25, Price: $499.99

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> javac SearchAlgorithms.java

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> java SearchAlgorithms

Enter the Search Id:

4

Product found: Product ID: 4, Name: Monitor, Quantity: 20, Price: $199.99

LINEAR SEARCH:

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> javac LinearSearch.java

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> java LinearSearch

Enter the Search Id:

3

Product found: Product ID: 3, Name: Tablet, Quantity: 15, Price: $299.99

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> javac LinearSearch.java

PS D:\Cognizant\Week-1\E-commercePlatformSearchFunction> java LinearSearch

Enter the Search Id:

2

Product found: Product ID: 2, Name: Smartphone, Quantity: 25, Price: $499.99

**Exercise - 3:**

**Sorting Customer Orders:**

**OUTPUT:**

PS D:\Cognizant\Week-1\SortingCustomerOrders> javac SortOrders.java

PS D:\Cognizant\Week-1\SortingCustomerOrders> java SortOrders

Original Orders:

Order ID: 1, Customer: Alice, Total Price: $250.75

Order ID: 2, Customer: Bob, Total Price: $99.99

Order ID: 3, Customer: Charlie, Total Price: $450.0

Order ID: 4, Customer: Diana, Total Price: $120.5

Order ID: 5, Customer: Eve, Total Price: $300.25

Orders sorted by Bubble Sort:

Order ID: 2, Customer: Bob, Total Price: $99.99

Order ID: 4, Customer: Diana, Total Price: $120.5

Order ID: 1, Customer: Alice, Total Price: $250.75

Order ID: 5, Customer: Eve, Total Price: $300.25

Order ID: 3, Customer: Charlie, Total Price: $450.0

Orders sorted by Quick Sort:

Order ID: 2, Customer: Bob, Total Price: $99.99

Order ID: 4, Customer: Diana, Total Price: $120.5

Order ID: 1, Customer: Alice, Total Price: $250.75

Order ID: 5, Customer: Eve, Total Price: $300.25

Order ID: 3, Customer: Charlie, Total Price: $450.0

**Exercise - 4:**

**Employee Management System:**

**OUTPUT:**

PS D:\Cognizant\Week-1\EmployeeManagementSystem> javac EmployeeManagementSystem.java

PS D:\Cognizant\Week-1\EmployeeManagementSystem> java EmployeeManagementSystem

Employee Management System

1. Add Employee

2. Search Employee

3. Traverse Employees

4. Delete Employee

5. Exit

Choose an option: 1

Enter Employee ID: 123

Enter Name: yousuf

Enter Position: hr

Enter Salary: 20000

Employee Management System

1. Add Employee

2. Search Employee

3. Traverse Employees

4. Delete Employee

5. Exit

Choose an option: 1

Enter Employee ID: 234

Enter Name: thameem

Enter Position: manager

Enter Salary: 35000

Employee Management System

1. Add Employee

2. Search Employee

3. Traverse Employees

4. Delete Employee

5. Exit

Choose an option: 2

Enter Employee ID to search: 234

Employee found: Employee ID: 234, Name: thameem, Position: manager, Salary: $35000.0

Employee Management System

1. Add Employee

2. Search Employee

3. Traverse Employees

4. Delete Employee

5. Exit

Choose an option: 3

Employee List:

Employee ID: 123, Name: yousuf, Position: hr, Salary: $20000.0

Employee ID: 234, Name: thameem, Position: manager, Salary: $35000.0

Employee Management System

1. Add Employee

2. Search Employee

3. Traverse Employees

4. Delete Employee

5. Exit

Choose an option: 4

Enter Employee ID to delete: 2

Employee not found.

Employee Management System

1. Add Employee

2. Search Employee

3. Traverse Employees

4. Delete Employee

5. Exit

Choose an option: 5

Exiting...

**Exercise - 5:**

**TASK MANAGEMENT SYSTEM:**

**OUTPUT:**

PS D:\Cognizant\Week-1\TaskManagementSystem> javac Main.java

PS D:\Cognizant\Week-1\TaskManagementSystem> java Main

Initial Task List:

Task ID: 1, Task Name: Task 1, Status: Incomplete

Task ID: 2, Task Name: Task 2, Status: Incomplete

Task ID: 3, Task Name: Task 3, Status: Complete

Searching for Task with ID 2:

Found Task - ID: 2, Name: Task 2, Status: Incomplete

Deleting Task with ID 2:

Task deleted successfully.

Task List after Deletion:

Task ID: 1, Task Name: Task 1, Status: Incomplete

Task ID: 3, Task Name: Task 3, Status: Complete

**Exercise - 6:**

**LIBRARY MANAGEMENT SYSTEM:**

**OUTPUT:**

PS D:\Cognizant\Week-1\LibraryManagementSystem> javac Main.java

PS D:\Cognizant\Week-1\LibraryManagementSystem> java Main

All Books:

Book ID: 1, Title: Java Programming, Author: John Doe

Book ID: 2, Title: Data Structures, Author: Jane Smith

Book ID: 3, Title: Algorithms, Author: Emily Johnson

Book ID: 4, Title: Database Systems, Author: Michael Brown

Linear Search for 'Data Structures':

Book ID: 2, Title: Data Structures, Author: Jane Smith

Books Sorted by Title:

Book ID: 3, Title: Algorithms, Author: Emily Johnson

Book ID: 2, Title: Data Structures, Author: Jane Smith

Book ID: 4, Title: Database Systems, Author: Michael Brown

Book ID: 1, Title: Java Programming, Author: John Doe

Binary Search for 'Algorithms':

Book ID: 3, Title: Algorithms, Author: Emily Johnson

Exercise - 7:

FINANCIAL FORECASTING:

OUTPUT:

PS D:\Cognizant\Week-1\FinancialForecasting> javac FinancialForecasting.java

PS D:\Cognizant\Week-1\FinancialForecasting> java FinancialForecasting

The future value of an investment of $1000.00 over 10 years at an annual growth rate of 5.00% is $1628.89