

King Saud University

CCIS- CS Dept.

First Semester 1447

[CSC 212]



E-Commerce Inventory & Order Management System

CSC 212 project

Prepared group 6

(44126)

Fall 2025

Name	ID number	Work
Dana Alsaidan	445200044	<ul style="list-style-type: none"> • Write products • Write reviews • Write order • Uml diagram • Write report
Shams almashjari	444200193	<ul style="list-style-type: none"> • Write main • Write product • Write review
Deema alamri	445200438	<ul style="list-style-type: none"> • Write orders • Write customer • Write customers • Write frequency

Introduction

This system is a console-based e-commerce application written in Java. It allows management of products, customers, orders, and reviews. The system supports features such as adding, updating, searching, and displaying entities, along with top-rated products and filtering orders by date. Data is persisted in CSV files.

1. Fundamental Features

- **Products Management:** Add, remove, update, display all products, and display out-of-stock products.
- **Customer Management:** Add customers, display all customers, and link orders and reviews to customers.
- **Order Management:** Create new orders, display all orders, filter orders by date, and remove orders by ID.
- **Review Management:** Add reviews, update reviews, assign reviews to products and customers, and display reviews.
- **Reporting Features:**
 - Top 3 products by average rating.
 - Common high-rated products reviewed by two customers

2. Data Structures Used

- **LinkedList<T>:** Custom generic linked list implementation used for storing products, customers, orders, and reviews.
- Supports operations like, insert, remove, retrieve, update, exists, and traversal (findfirst, findnext).
- **Node<T>:** Inner class for LinkedList nodes, storing data and pointer to the next node.

System Classes

1. Node<T>

Represents a single node in a linked list. Stores data of generic type T and pointer next.

2. LinkedList<T>

Generic singly linked list supporting basic operations: insertion, deletion, traversal, update, search, and size calculation.

3. Product

Represents a product in the system with the following properties:

- productId, name, price, stock
- Holds a linked list of Review objects.
- Methods: addReview, getAverageRating, displayReviews, updateProduct, getters/setters.

4. Products

Manages a list of Product objects and persists them in CSV files.

- Methods: addProduct, removeProduct, updateProduct, displayAllProducts, displayOutOfStock, loadProducts, saveAll.

5. Review

Represents a customer review for a product:

- reviewID, productID, customerID, rating, comment
- Methods: updateReview, getters/setters, toString.

6. Reviews

Manages a linked list of reviews and their assignment to products and customers.

- Methods: addReview, updateReview, getReviewsByCustomer, displayAllReviews, loadReviews, saveAll, assign_to_product, assign_to_customer.

7. Order

Represents a purchase order:

- orderID, customerID, prod_IDs, totalPrice, orderDate, status
- Holds linked list of product IDs.

- Methods: addIds, addId, updateOrder, getters/setters, toString.

8. Orders

Manages a linked list of orders and associates them with customers.

- Methods: addOrder, removeOrderById, searchOrderById, assign (to customer), displayAllOrders, loadOrders, saveAll, convert_String_to_order.

9. Customer

Represents a customer with ID, name, email, and linked lists of orders and reviews.

10. Customers

Manages a linked list of Customer objects with methods to add, search, update, remove, and display all customers.

11. Main / E_commerce

Console interface for user interaction, input validation, and feature execution.

- Handles safe input, unique ID checks, flexible date parsing, and rating validation.
- Features include adding products, customers, orders, reviews, and displaying reports.

3. Data Structures Used

- **LinkedList<T> (Custom Implementation)**
 - **Used for storing:**
 - **Customers (LinkedList<Customer>)**
 - **Products (LinkedList<Product>)**
 - **Orders (LinkedList<Order>)**
 - **Reviews (LinkedList<Review>)**
 - **Provides methods: addLast, insert, remove, findfirst, findnext, retrieve, update, size, exists.**
 - **Chosen for dynamic size and easy insertion/removal at arbitrary positions.**
 - **Primitive Data Types**
 - **int → IDs, quantities, ratings.**
 - **double → Product prices, total order price.**

- **String** → Names, comments, product ID lists (semicolon-separated).
 - **LocalDate** → Order dates.
- **Object**
 - **Product** → Contains product info and linked list of reviews.
 - **Customer** → Contains customer info and linked lists of orders/reviews.
 - **Order** → Contains order info and linked list of product IDs.
 - **Review** → Contains review info (rating, comment) and links to product/customer.
- **CSV Files (Persistent Storage)**
 - Products, Customers, Orders, Reviews stored in CSV.
 - Parsed into objects and loaded into LinkedLists at runtime.
- **Scanner / PrintWriter**

4. System Classes

- **main**
 - Entry point of the application.
 - Manages user interaction via console menus.
 - Handles input validation, uniqueness checks, and date/rating parsing.
 - Calls relevant manager classes to add, display, or update data.
- **LinkedList<T>**
 - Generic linked list implementation.
 - Supports dynamic insertion, removal, traversal, and retrieval.
 - Core data structure used to store all entities.
- **Customer**
 - Represents a customer with ID, name, email.

- Contains a linked list of orders and reviews associated with the customer.

- **Product**

- Represents a product with ID, name, price, and stock quantity.
- Contains a linked list of reviews associated with the product.
- Calculates average rating from reviews.

- **Order**

- Represents an order with order ID, customer ID, list of product IDs, total price, date, and status.
- Converts semicolon-separated product ID strings into linked list of integers.

- **Review**

- Represents a review with review ID, product ID, customer ID, rating (1–5), and comment.

- **Products**

- Manages all product objects.
- Provides search, add, remove, update, display, and CSV loading/saving functionality.

- **Customers**

- Manages all customer objects.
- Provides search, add, remove, update, display, and CSV loading/saving functionality.

- **Orders**

- Manages all order objects.
- Provides search, add, remove, assign orders to customers, display, and CSV loading/saving functionality.

- **Reviews**

- Manages all review objects.

- Provides search, add, update, assign to product/customer, display, and CSV loading/saviScanner → Read CSV files and user input.
- PrintWriter → Save objects back to CSV

5. Time & Space Complexity

Class/method	operation	Time complexity	Space complexity	In-place/ Out of place
Linked list <code><T></code>	empty()	O(1)	O(1)	In place
	last()	O(1)	O(1)	In place
	full()	O(1)	O(1)	In place
	findfiert()	O(1)	O(1)	In place
	findnext()	O(1)	O(1)	In place
	retrieve()	O(1)	O(1)	In place
	update(T val)	O(1)	O(1)	In place
	insert(T val)	O(1)	O(1)	In place
	remove()	O(n)	O(1)	In place
	exists(T e)	O(n)	O(1)	In place
	size()	O(n)	O(1)	In place
Product	addReview()	O(1)	O(1)	In place

	getAverageRating()	O(n)	O(1)	In place
	displayReviews()	O(n)	O(1)	In place
Order	addIds(String)	O(n)	O(n)	Out of place
	addId(int)	O(1)	O(1)	In place
	UpdateOrder(Order)	O(1)	O(1)	In place
Products	SearchProductById(int)	O(n)	O(1)	In place
	addProduct(Product)	O(n)	O(1)	In place
	removeProduct(Product)	O(n)	O(1)	In place
	updateProduct(int,Product)	O(n)	O(1)	In place
	displayAllProducts()	O(n)	O(1)	In place
	loadProducts(String)	O(n)	O(n)	Out of place
	saveAll()	O(n)	O(1)	Out of place
Customers	searchById(int)	O(n)	O(1)	In place
	addCustomer(Customer)	O(n)	O(1)	In place
	removeCustomer(int)	O(n)	O(1)	In place
	updataCusomer(int,Custo mer)	O(n)	O(1)	In place
	displayAll()	O(n)	O(1)	In place
	loadCustomers(Sting)	O(n)	O(n)	Out of place

	saveAll()	O(n)	O(1)	Out of place
Orders	searchOrderById(int)	O(n)	O(1)	In place
	Assing(Order)	O(n)	O(1)	In place
	addOrder(Order)	O(n)	O(1)	In place
	removeOrderById(int)	O(n)	O(1)	In place
	displayAllOrders()	O(n)	O(1)	In place
	loadOrders(String)	O(n)	O(n)	Out of place
	saveAll()	O(n)	O(1)	Out of place
Review	UpdateReview(Review)	O(1)	O(1)	In place
Reviews	SearschReviewById(int)	O(n)	O(1)	In place
	assing_to_product(Review)	O(n)	O(1)	In place
	assing_to_customer(Review)	O(n)	O(1)	In place
	addReview(Review)	O(n)	O(1)	In place
	updateReview(int,Review)	O(n)	O(1)	In place
	getReviewsByCostimer(int)	O(n)	O(n)	Out of place
	displayAllReviews()	O(n)	O(1)	In place
	Load-reviews(Sting)	O(n)	O(n)	Out of place
	saveAll()	O(n)	O(1)	Out of place

6. Method Specifications

- **LinkedList<T>**

- addLast(T val) — Add element at end.
- insert(T val) — Insert after current node.
- remove() — Remove current node.
- findfirst() / findnext() — Traverse list.
- retrieve() — Return current data.
- exists(T e) — Check existence.

- **Product**

- addReview(Review r) — Add a review to the product.
- getAverageRating() — Return average of all ratings.
- displayReviews() — Print all reviews for product.

- **Customer**

- addOrder(Order o) — Attach order to customer.
- addReview(Review r) — Attach review to customer.

- **Order**

- addIds(String ids) — Parse semicolon-separated product IDs.
- UpdateOrder(Order o) — Copy all fields from another order.
- toString() — String representation for display.

- **Review**

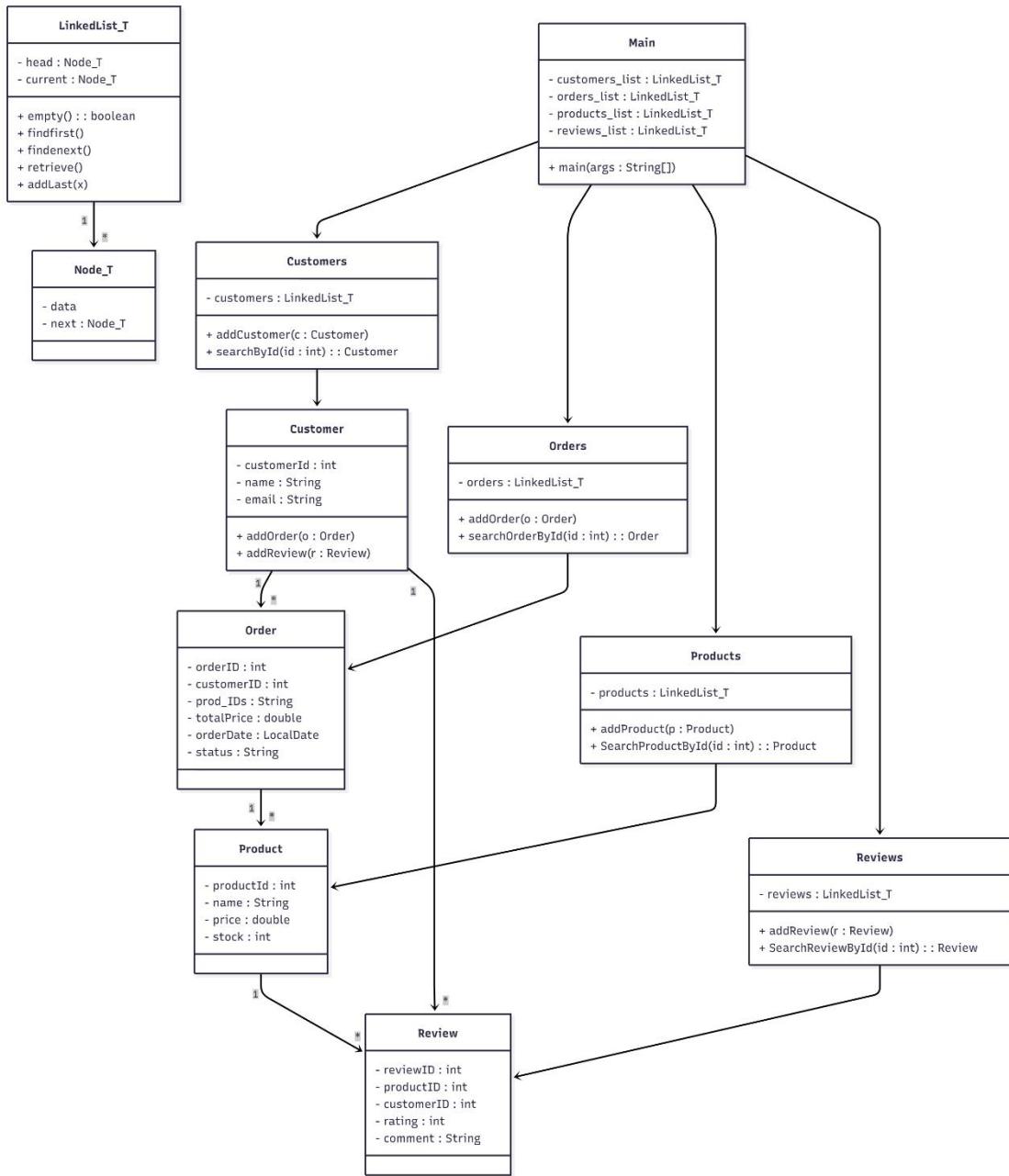
- UpdateReview(Review r) — Update fields of the review.
- toString() — String representation for display.

- **Products / Orders / Reviews / Customers**

- add*() — Add element if ID is unique.
- remove*() — Remove element by ID.
- update*() — Update element fields.
- displayAll*() — Show all elements.

- `load*()` — Load from CSV file.
- `saveAll()` — Save to CSV file.
- **main**
 - Handles menu system, input validation (IDs, names, dates, ratings).
 - Integrates all features and ensures **data consistency**

7.uml diagram



- 1: Load all files**
- 2: Add Product**
- 3: Add Customer**
- 4: Add Order**
- 5: Add Review**
- 6: List all customers**
- 7: Show top 3 products by average rating**
- 8: Display all orders**
- 9: Display all orders between 2 dates**
- 10: Show common high-rated products for 2 customers**
- 11: Exit**

Enter your choice: 1

Reading file: C:\Users\danam\Desktop\project212\prodcuts.csv

File loaded successfully!

Reading file: C:\Users\danam\Desktop\project212\customers.csv

Customers loaded successfully!

Reading file: C:\Users\danam\Desktop\project212\orders.csv

File loaded successfully!

Reading file: C:\Users\danam\Desktop\project212\reviews.csv

File loaded successfully!

Files loaded from:

Products : C:\Users\danam\Desktop\project212\prodcuts.csv

Customers: C:\Users\danam\Desktop\project212\customers.csv

Orders : C:\Users\danam\Desktop\project212\orders.csv

Reviews : C:\Users\danam\Desktop\project212\reviews.csv

- 1: Load all files**
- 2: Add Product**
- 3: Add Customer**
- 4: Add Order**
- 5: Add Review**
- 6: List all customers**
- 7: Show top 3 products by average rating**
- 8: Display all orders**
- 9: Display all orders between 2 dates**
- 10: Show common high-rated products for 2 customers**
- 11: Exit**

Enter your choice: 2

Enter NEW Product ID (<101 OR >150; if 101–150 it must NOT exist now): 180

Enter Product Name: csc212

Invalid name. Use letters only (Arabic/English). Spaces, '-' and ' ' are allowed.

Enter Product Name: csc

Enter Price: 300

Enter Quantity: 5

Product added: csc

Product added successfully.

- 1: Load all files**
- 2: Add Product**
- 3: Add Customer**
- 4: Add Order**
- 5: Add Review**

- 6: List all customers**
- 7: Show top 3 products by average rating**
- 8: Display all orders**
- 9: Display all orders between 2 dates**
- 10: Show common high-rated products for 2 customers**

11: Exit

Enter your choice: 3

Enter Customer ID [new]: 999

Enter Customer Name: csc

Enter Customer Email: csc@kus.edu.sa

Added customer: csc

Customer added successfully.

- 1: Load all files**
- 2: Add Product**
- 3: Add Customer**
- 4: Add Order**
- 5: Add Review**
- 6: List all customers**
- 7: Show top 3 products by average rating**
- 8: Display all orders**
- 9: Display all orders between 2 dates**
- 10: Show common high-rated products for 2 customers**

11: Exit

Enter your choice: 4

Enter Order ID [new]: 889

Enter Customer ID [existing]: 999

Enter Product IDs (semicolon-separated, must exist): 101

Enter Total Price: 1499.99

Invalid input. Please enter a decimal number (e.g., 12.5).

Enter Total Price: 14

Enter Order Date (e.g., 2025-2-3): 2025-2-5

**Enter Status (Pending/Processing/Shipped/Delivered/Cancelled/Returned):
Shipped**

Order added successfully.

1: Load all files

2: Add Product

3: Add Customer

4: Add Order

5: Add Review

6: List all customers

7: Show top 3 products by average rating

8: Display all orders

9: Display all orders between 2 dates

10: Show common high-rated products for 2 customers

11: Exit

Enter your choice: 5

Enter Review ID [new]: 2

Enter Product ID [existing]: 205

⚠ Product ID 205 موجود. أدخل رقم منتج موجود.

Enter Product ID [existing]: 101

Enter Customer ID [existing]: 204

Enter Rating (1-5): 3

Enter Comment: nice

Review added: 2

Review added successfully.

1: Load all files

2: Add Product

3: Add Customer

- 4: Add Order**
- 5: Add Review**
- 6: List all customers**
- 7: Show top 3 products by average rating**
- 8: Display all orders**
- 9: Display all orders between 2 dates**
- 10: Show common high-rated products for 2 customers**

11: Exit

Enter your choice: 6

==== All Customers ===

Customer ID: 201

Name: Alice Johnson

Email: alice.johnson@example.com

No orders for customer Alice Johnson

Reviews for Alice Johnson:

Review ID:787

Product ID:101

Customer ID:201

Rating:5

Comment:nice

Customer ID: 202

Name: Bob Smith

Email: bob.smith@example.com

No orders for customer Bob Smith

Reviews for Bob Smith:

No reviews yet.

Customer ID: 203

Name: Charlie Brown

Email: charlie.brown@example.com

No orders for customer Charlie Brown

Reviews for Charlie Brown:

No reviews yet.

Customer ID: 204

Name: Diana Evans

Email: diana.evans@example.com

No orders for customer Diana Evans

Reviews for Diana Evans:

Review ID:2

Product ID:101

Customer ID:204

Rating:3

Comment:nice

Customer ID: 205

Name: Edward Wilson

Email: edward.wilson@example.com

No orders for customer Edward Wilson

Reviews for Edward Wilson:

No reviews yet.

Customer ID: 206

Name: Fiona Carter

Email: fiona.carter@example.com

No orders for customer Fiona Carter

Reviews for Fiona Carter:

No reviews yet.

Customer ID: 207

Name: George Miller

Email: george.miller@example.com

No orders for customer George Miller

Reviews for George Miller:

No reviews yet.

Customer ID: 208

Name: Hannah Scott

Email: hannah.scott@example.com

No orders for customer Hannah Scott

Reviews for Hannah Scott:

No reviews yet.

Customer ID: 209

Name: Ian Thompson

Email: ian.thompson@example.com

No orders for customer Ian Thompson

Reviews for Ian Thompson:

No reviews yet.

Customer ID: 210

Name: Jane Foster

Email: jane.foster@example.com

No orders for customer Jane Foster

Reviews for Jane Foster:

No reviews yet.

Customer ID: 211

Name: Kevin Turner

Email: kevin.turner@example.com

No orders for customer Kevin Turner

Reviews for Kevin Turner:

No reviews yet.

Customer ID: 212

Name: Linda Adams

Email: linda.adams@example.com

No orders for customer Linda Adams

Reviews for Linda Adams:

No reviews yet.

Customer ID: 213

Name: Michael Harris

Email: michael.harris@example.com

No orders for customer Michael Harris

Reviews for Michael Harris:

No reviews yet.

Customer ID: 214

Name: Nora Clark

Email: nora.clark@example.com

No orders for customer Nora Clark

Reviews for Nora Clark:

No reviews yet.

Customer ID: 215

Name: Oscar Lewis

Email: oscar.lewis@example.com

No orders for customer Oscar Lewis

Reviews for Oscar Lewis:

No reviews yet.

Customer ID: 216

Name: Paula Walker

Email: paula.walker@example.com

No orders for customer Paula Walker

Reviews for Paula Walker:

No reviews yet.

Customer ID: 217

Name: Quentin Hall

Email: quentin.hall@example.com

No orders for customer Quentin Hall

Reviews for Quentin Hall:

No reviews yet.

Customer ID: 218

Name: Rachel Allen

Email: rachel.allen@example.com

No orders for customer Rachel Allen

Reviews for Rachel Allen:

No reviews yet.

Customer ID: 219

Name: Sam Wright

Email: sam.wright@example.com

No orders for customer Sam Wright

Reviews for Sam Wright:

No reviews yet.

Customer ID: 220

Name: Tina Young

Email: tina.young@example.com

No orders for customer Tina Young

Reviews for Tina Young:

No reviews yet.

Customer ID: 221

Name: Uma King

Email: uma.king@example.com

No orders for customer Uma King

Reviews for Uma King:

No reviews yet.

Customer ID: 222

Name: Victor Green

Email: victor.green@example.com

No orders for customer Victor Green

Reviews for Victor Green:

No reviews yet.

Customer ID: 223

Name: Wendy Baker

Email: wendy.baker@example.com

No orders for customer Wendy Baker

Reviews for Wendy Baker:

No reviews yet.

Customer ID: 224

Name: Xavier Perez

Email: xavier.perez@example.com

No orders for customer Xavier Perez

Reviews for Xavier Perez:

No reviews yet.

Customer ID: 225

Name: Yvonne Campbell

Email: yvonne.campbell@example.com

No orders for customer Yvonne Campbell

Reviews for Yvonne Campbell:

No reviews yet.

Customer ID: 226

Name: Zachary Reed

Email: zachary.reed@example.com

No orders for customer Zachary Reed

Reviews for Zachary Reed:

No reviews yet.

Customer ID: 227

Name: Clara Mitchell

Email: clara.mitchell@example.com

No orders for customer Clara Mitchell

Reviews for Clara Mitchell:

No reviews yet.

Customer ID: 228

Name: David Phillips

Email: david.phillips@example.com

No orders for customer David Phillips

Reviews for David Phillips:

No reviews yet.

Customer ID: 229

Name: Eva Torres

Email: eva.torres@example.com

No orders for customer Eva Torres

Reviews for Eva Torres:

No reviews yet.

Customer ID: 230

Name: Frank Howard

Email: frank.howard@example.com

No orders for customer Frank Howard

Reviews for Frank Howard:

No reviews yet.

Customer ID: 292929

Name: shams

Email: shosho

No orders for customer shams

Reviews for shams:

No reviews yet.

Customer ID: 201

Name: Alice Johnson

Email: alice.johnson@example.com

No orders for customer Alice Johnson

Reviews for Alice Johnson:

No reviews yet.

Customer ID: 202

Name: Bob Smith

Email: bob.smith@example.com

No orders for customer Bob Smith

Reviews for Bob Smith:

No reviews yet.

Customer ID: 203

Name: Charlie Brown

Email: charlie.brown@example.com

No orders for customer Charlie Brown

Reviews for Charlie Brown:

No reviews yet.

Customer ID: 204

Name: Diana Evans

Email: diana.evans@example.com

No orders for customer Diana Evans

Reviews for Diana Evans:

No reviews yet.

Customer ID: 205

Name: Edward Wilson

Email: edward.wilson@example.com

No orders for customer Edward Wilson

Reviews for Edward Wilson:

No reviews yet.

Customer ID: 206

Name: Fiona Carter

Email: fiona.carter@example.com

No orders for customer Fiona Carter

Reviews for Fiona Carter:

No reviews yet.

Customer ID: 207

Name: George Miller

Email: george.miller@example.com

No orders for customer George Miller

Reviews for George Miller:

No reviews yet.

Customer ID: 208

Name: Hannah Scott

Email: hannah.scott@example.com

No orders for customer Hannah Scott

Reviews for Hannah Scott:

No reviews yet.

Customer ID: 209

Name: Ian Thompson

Email: ian.thompson@example.com

No orders for customer Ian Thompson

Reviews for Ian Thompson:

No reviews yet.

Customer ID: 210

Name: Jane Foster

Email: jane.foster@example.com

No orders for customer Jane Foster

Reviews for Jane Foster:

No reviews yet.

Customer ID: 211

Name: Kevin Turner

Email: kevin.turner@example.com

No orders for customer Kevin Turner

Reviews for Kevin Turner:

No reviews yet.

Customer ID: 212

Name: Linda Adams

Email: linda.adams@example.com

No orders for customer Linda Adams

Reviews for Linda Adams:

No reviews yet.

Customer ID: 213

Name: Michael Harris

Email: michael.harris@example.com

No orders for customer Michael Harris

Reviews for Michael Harris:

No reviews yet.

Customer ID: 214

Name: Nora Clark

Email: nora.clark@example.com

No orders for customer Nora Clark

Reviews for Nora Clark:

No reviews yet.

Customer ID: 215

Name: Oscar Lewis

Email: oscar.lewis@example.com

No orders for customer Oscar Lewis

Reviews for Oscar Lewis:

No reviews yet.

Customer ID: 216

Name: Paula Walker

Email: paula.walker@example.com

No orders for customer Paula Walker

Reviews for Paula Walker:

No reviews yet.

Customer ID: 217

Name: Quentin Hall

Email: quentin.hall@example.com

No orders for customer Quentin Hall

Reviews for Quentin Hall:

No reviews yet.

Customer ID: 218

Name: Rachel Allen

Email: rachel.allen@example.com

No orders for customer Rachel Allen

Reviews for Rachel Allen:

No reviews yet.

Customer ID: 219

Name: Sam Wright

Email: sam.wright@example.com

No orders for customer Sam Wright

Reviews for Sam Wright:

No reviews yet.

Customer ID: 220

Name: Tina Young

Email: tina.young@example.com

No orders for customer Tina Young

Reviews for Tina Young:

No reviews yet.

Customer ID: 221

Name: Uma King

Email: uma.king@example.com

No orders for customer Uma King

Reviews for Uma King:

No reviews yet.

Customer ID: 222

Name: Victor Green

Email: victor.green@example.com

No orders for customer Victor Green

Reviews for Victor Green:

No reviews yet.

Customer ID: 223

Name: Wendy Baker

Email: wendy.baker@example.com

No orders for customer Wendy Baker

Reviews for Wendy Baker:

No reviews yet.

Customer ID: 224

Name: Xavier Perez

Email: xavier.perez@example.com

No orders for customer Xavier Perez

Reviews for Xavier Perez:

No reviews yet.

Customer ID: 225

Name: Yvonne Campbell

Email: yvonne.campbell@example.com

No orders for customer Yvonne Campbell

Reviews for Yvonne Campbell:

No reviews yet.

Customer ID: 226

Name: Zachary Reed

Email: zachary.reed@example.com

No orders for customer Zachary Reed

Reviews for Zachary Reed:

No reviews yet.

Customer ID: 227

Name: Clara Mitchell

Email: clara.mitchell@example.com

No orders for customer Clara Mitchell

Reviews for Clara Mitchell:

No reviews yet.

Customer ID: 228

Name: David Phillips

Email: david.phillips@example.com

No orders for customer David Phillips

Reviews for David Phillips:

No reviews yet.

Customer ID: 229

Name: Eva Torres

Email: eva.torres@example.com

No orders for customer Eva Torres

Reviews for Eva Torres:

No reviews yet.

Customer ID: 230

Name: Frank Howard

Email: frank.howard@example.com

No orders for customer Frank Howard

Reviews for Frank Howard:

No reviews yet.

Customer ID: 292929

Name: shams

Email: shosho

No orders for customer shams

Reviews for shams:

No reviews yet.

Customer ID: 999

Name: csc

Email: csc@kus.edu.sa

Orders for csc:

Order ID: 889

Customer ID: 999

Product IDs: project212.LinkedList@39ed3c8d

Total Price: \$14.0

Date: 2025-02-05

Status: Shipped

Reviews for csc:

No reviews yet.

1: Load all files

2: Add Product

3: Add Customer

4: Add Order

5: Add Review

6: List all customers

7: Show top 3 products by average rating

8: Display all orders

9: Display all orders between 2 dates

10: Show common high-rated products for 2 customers

11: Exit

Enter your choice: 7

Top Products by Average Rating:

1. Product ID: 101 | Name: Laptop Pro 15 | Avg Rating: 4.8

2. Product ID: 102 | Name: Wireless Mouse X1 | Avg Rating: 4.5

3. Product ID: 103 | Name: Mechanical Keyboard K200 | Avg Rating: 4.2

1: Load all files

2: Add Product

3: Add Customer

4: Add Order

5: Add Review

6: List all customers

7: Show top 3 products by average rating

8: Display all orders

9: Display all orders between 2 dates

10: Show common high-rated products for 2 customers

11: Exit

Enter your choice: 8

OrderID	CustomerID	ProductIDs	TotalPrice	Date
Status				

Order ID: 301

Customer ID: 201

Product IDs: project212.LinkedList@3fb4f649

Total Price: \$1529.98

Date: 2025-01-12

Status: Pending

Order ID: 302

Customer ID: 202

Product IDs: project212.LinkedList@33833882

Total Price: \$102.49

Date: 2025-01-14

Status: Shipped

Order ID: 303

Customer ID: 203

Product IDs: project212.LinkedList@200a570f

Total Price: \$999.0

Date: 2025-01-16

Status: Delivered

Order ID: 304

Customer ID: 204

Product IDs: project212.LinkedList@16b3fc9e

Total Price: \$55.97

Date: 2025-01-20

Status: Cancelled

Order ID: 305

Customer ID: 205

Product IDs: project212.LinkedList@e2d56bf

Total Price: \$1589.49

Date: 2025-01-21

Status: Pending

Order ID: 306

Customer ID: 206

Product IDs: project212.LinkedList@244038d0

Total Price: \$409.98

Date: 2025-01-22

Status: Shipped

Order ID: 307

Customer ID: 207

Product IDs: project212.LinkedList@5680a178

Total Price: \$149.0

Date: 2025-01-23

Status: Delivered

Order ID: 308

Customer ID: 208

Product IDs: project212.LinkedList@5fdef03a

Total Price: \$99.98

Date: 2025-01-24

Status: Pending

Order ID: 309

Customer ID: 209

Product IDs: project212.LinkedList@3b22cdd0

Total Price: \$224.5

Date: 2025-01-25

Status: Shipped

Order ID: 310

Customer ID: 210

Product IDs: project212.LinkedList@1e81f4dc

Total Price: \$299.0

Date: 2025-01-25

Status: Delivered

Order ID: 311

Customer ID: 211

Product IDs: project212.LinkedList@4d591d15

Total Price: \$428.0

Date: 2025-01-26

Status: Pending

Order ID: 312

Customer ID: 212

Product IDs: project212.LinkedList@65ae6ba4

Total Price: \$119.98

Date: 2025-01-26

Status: Shipped

Order ID: 313

Customer ID: 213

Product IDs: project212.LinkedList@48cf768c

Total Price: \$508.99

Date: 2025-01-27

Status: Delivered

Order ID: 314

Customer ID: 214

Product IDs: project212.LinkedList@59f95c5d

Total Price: \$449.99

Date: 2025-01-28

Status: Pending

Order ID: 315

Customer ID: 215

Product IDs: project212.LinkedList@5ccd43c2

Total Price: \$848.99

Date: 2025-01-28

Status: Shipped

Order ID: 316

Customer ID: 216

Product IDs: project212.LinkedList@4aa8f0b4

Total Price: \$129.99

Date: 2025-01-29

Status: Delivered

Order ID: 317

Customer ID: 217

Product IDs: project212.LinkedList@7960847b

Total Price: \$518.0

Date: 2025-01-30

Status: Pending

Order ID: 318

Customer ID: 218

Product IDs: project212.LinkedList@6a6824be

Total Price: \$193.99

Date: 2025-01-30

Status: Shipped

Order ID: 319

Customer ID: 219

Product IDs: project212.LinkedList@5c8da962

Total Price: \$64.99

Date: 2025-02-01

Status: Delivered

Order ID: 320

Customer ID: 220

Product IDs: project212.LinkedList@512ddf17

Total Price: \$89.99

Date: 2025-02-02

Status: Pending

Order ID: 321

Customer ID: 221

Product IDs: project212.LinkedList@2c13da15

Total Price: \$149.98

Date: 2025-02-02

Status: Shipped

Order ID: 322

Customer ID: 222

Product IDs: project212.LinkedList@77556fd

Total Price: \$129.0

Date: 2025-02-03

Status: Delivered

Order ID: 323

Customer ID: 223

Product IDs: project212.LinkedList@368239c8

Total Price: \$548.0

Date: 2025-02-04

Status: Pending

Order ID: 324

Customer ID: 224

Product IDs: project212.LinkedList@9e89d68

Total Price: \$288.99

Date: 2025-02-05

Status: Shipped

Order ID: 325

Customer ID: 225

Product IDs: project212.LinkedList@3b192d32

Total Price: \$69.99

Date: 2025-02-05

Status: Delivered

Order ID: 326

Customer ID: 226

Product IDs: project212.LinkedList@16f65612

Total Price: \$139.98

Date: 2025-02-06

Status: Pending

Order ID: 327

Customer ID: 227

Product IDs: project212.LinkedList@311d617d

Total Price: \$228.99

Date: 2025-02-06

Status: Shipped

Order ID: 328

Customer ID: 228

Product IDs: project212.LinkedList@7c53a9eb

Total Price: \$299.0

Date: 2025-02-07

Status: Delivered

Order ID: 329

Customer ID: 229

Product IDs: project212.LinkedList@ed17bee

Total Price: \$1598.0

Date: 2025-02-08

Status: Pending

Order ID: 330

Customer ID: 230

Product IDs: project212.LinkedList@2a33fae0

Total Price: \$748.0

Date: 2025-02-08

Status: Shipped

Order ID: 331

Customer ID: 201

Product IDs: project212.LinkedList@707f7052

Total Price: \$109.98

Date: 2025-02-09

Status: Delivered

Order ID: 332

Customer ID: 202

Product IDs: project212.LinkedList@11028347

Total Price: \$1829.98

Date: 2025-02-10

Status: Pending

Order ID: 333

Customer ID: 203

Product IDs: project212.LinkedList@14899482

Total Price: \$228.99

Date: 2025-02-10

Status: Shipped

Order ID: 334

Customer ID: 204

Product IDs: project212.LinkedList@21588809

Total Price: \$59.99

Date: 2025-02-11

Status: Delivered

Order ID: 335

Customer ID: 205

Product IDs: project212.LinkedList@2aae9190

Total Price: \$238.99

Date: 2025-02-12

Status: Pending

Order ID: 336

Customer ID: 206

Product IDs: project212.LinkedList@2f333739

Total Price: \$324.5

Date: 2025-02-12

Status: Shipped

Order ID: 337

Customer ID: 207

Product IDs: project212.LinkedList@77468bd9

Total Price: \$249.0

Date: 2025-02-13

Status: Delivered

Order ID: 338

Customer ID: 208

Product IDs: project212.LinkedList@12bb4df8

Total Price: \$228.99

Date: 2025-02-13

Status: Pending

Order ID: 339

Customer ID: 209

Product IDs: project212.LinkedList@4cc77c2e

Total Price: \$229.0

Date: 2025-02-14

Status: Shipped

Order ID: 340

Customer ID: 210

Product IDs: project212.LinkedList@7a7b0070

Total Price: \$349.99

Date: 2025-02-14

Status: Delivered

Order ID: 341

Customer ID: 211

Product IDs: project212.LinkedList@39a054a5

Total Price: \$1048.99

Date: 2025-02-15

Status: Pending

Order ID: 342

Customer ID: 212

Product IDs: project212.LinkedList@71bc1ae4

Total Price: \$379.98

Date: 2025-02-15

Status: Shipped

Order ID: 343

Customer ID: 213

Product IDs: project212.LinkedList@6ed3ef1

Total Price: \$399.0

Date: 2025-02-16

Status: Delivered

Order ID: 344

Customer ID: 214

Product IDs: project212.LinkedList@2437c6dc

Total Price: \$164.0

Date: 2025-02-16

Status: Pending

Order ID: 345

Customer ID: 215

Product IDs: project212.LinkedList@1f89ab83

Total Price: \$148.99

Date: 2025-02-17

Status: Shipped

Order ID: 346

Customer ID: 216

Product IDs: project212.LinkedList@e73f9ac

Total Price: \$64.99

Date: 2025-02-17

Status: Delivered

Order ID: 347

Customer ID: 217

Product IDs: project212.LinkedList@61064425

Total Price: \$189.98

Date: 2025-02-18

Status: Pending

Order ID: 348

Customer ID: 218

Product IDs: project212.LinkedList@7b1d7fff

Total Price: \$178.99

Date: 2025-02-18

Status: Shipped

Order ID: 349

Customer ID: 219

Product IDs: project212.LinkedList@299a06ac

Total Price: \$149.0

Date: 2025-02-19

Status: Delivered

Order ID: 350

Customer ID: 220

Product IDs: project212.LinkedList@383534aa

Total Price: \$598.0

Date: 2025-02-19

Status: Pending

Order ID: 351

Customer ID: 221

Product IDs: project212.LinkedList@6bc168e5

Total Price: \$159.98

Date: 2025-02-20

Status: Shipped

Order ID: 352

Customer ID: 222

Product IDs: project212.LinkedList@7b3300e5

Total Price: \$59.99

Date: 2025-02-20

Status: Delivered

Order ID: 353

Customer ID: 223

Product IDs: project212.LinkedList@2e5c649

Total Price: \$179.98

Date: 2025-02-21

Status: Pending

Order ID: 354

Customer ID: 224

Product IDs: project212.LinkedList@136432db

Total Price: \$428.0

Date: 2025-02-22

Status: Shipped

Order ID: 355

Customer ID: 225

Product IDs: project212.LinkedList@7382f612

Total Price: \$899.0

Date: 2025-02-22

Status: Delivered

Order ID: 356

Customer ID: 226

Product IDs: project212.LinkedList@1055e4af

Total Price: \$948.0

Date: 2025-02-23

Status: Pending

Order ID: 357

Customer ID: 227

Product IDs: project212.LinkedList@3caeaf62

Total Price: \$558.99

Date: 2025-02-23

Status: Shipped

Order ID: 358

Customer ID: 228

Product IDs: project212.LinkedList@e6ea0c6

Total Price: \$1549.98

Date: 2025-02-24

Status: Delivered

Order ID: 359

Customer ID: 229

Product IDs: project212.LinkedList@6a38e57f

Total Price: \$119.49

Date: 2025-02-25

Status: Pending

Order ID: 360

Customer ID: 230

Product IDs: project212.LinkedList@5577140b

Total Price: \$1008.99

Date: 2025-02-25

Status: Shipped

Order ID: 361

Customer ID: 201

Product IDs: project212.LinkedList@1c6b6478

Total Price: \$558.98

Date: 2025-02-26

Status: Delivered

Order ID: 362

Customer ID: 202

Product IDs: project212.LinkedList@67f89fa3

Total Price: \$298.98

Date: 2025-02-27

Status: Pending

Order ID: 363

Customer ID: 203

Product IDs: project212.LinkedList@4ac68d3e

Total Price: \$324.5

Date: 2025-02-27

Status: Shipped

Order ID: 364

Customer ID: 204

Product IDs: project212.LinkedList@277c0f21

Total Price: \$477.99

Date: 2025-02-28

Status: Delivered

Order ID: 365

Customer ID: 205

Product IDs: project212.LinkedList@6073f712

Total Price: \$69.99

Date: 2025-02-28

Status: Pending

Order ID: 366

Customer ID: 206

Product IDs: project212.LinkedList@43556938

Total Price: \$508.99

Date: 2025-03-01

Status: Shipped

Order ID: 367

Customer ID: 207

Product IDs: project212.LinkedList@3d04a311

Total Price: \$449.99

Date: 2025-03-01

Status: Delivered

Order ID: 368

Customer ID: 208

Product IDs: project212.LinkedList@7a46a697

Total Price: \$978.98

Date: 2025-03-02

Status: Pending

Order ID: 369

Customer ID: 209

Product IDs: project212.LinkedList@5f205aa

Total Price: \$399.0

Date: 2025-03-02

Status: Shipped

Order ID: 370

Customer ID: 210

Product IDs: project212.LinkedList@6d86b085

Total Price: \$338.0

Date: 2025-03-03

Status: Delivered

Order ID: 371

Customer ID: 211

Product IDs: project212.LinkedList@75828a0f

Total Price: \$69.98

Date: 2025-03-03

Status: Pending

Order ID: 372

Customer ID: 212

Product IDs: project212.LinkedList@3abfe836

Total Price: \$124.99

Date: 2025-03-04

Status: Shipped

Order ID: 373

Customer ID: 213

Product IDs: project212.LinkedList@2ff5659e

Total Price: \$278.97

Date: 2025-03-04

Status: Delivered

Order ID: 374

Customer ID: 214

Product IDs: project212.LinkedList@77afea7d

Total Price: \$548.0

Date: 2025-03-05

Status: Pending

Order ID: 375

Customer ID: 215

Product IDs: project212.LinkedList@161cd475

Total Price: \$288.99

Date: 2025-03-05

Status: Shipped

Order ID: 376

Customer ID: 216

Product IDs: project212.LinkedList@532760d8

Total Price: \$209.97

Date: 2025-03-06

Status: Delivered

Order ID: 377

Customer ID: 217

Product IDs: project212.LinkedList@57fa26b7

Total Price: \$99.99

Date: 2025-03-06

Status: Pending

Order ID: 378

Customer ID: 218

Product IDs: project212.LinkedList@5f8ed237

Total Price: \$428.0

Date: 2025-03-07

Status: Shipped

Order ID: 379

Customer ID: 219

Product IDs: project212.LinkedList@2f410acf

Total Price: \$899.0

Date: 2025-03-07

Status: Delivered

Order ID: 380

Customer ID: 220

Product IDs: project212.LinkedList@47089e5f

Total Price: \$1446.0

Date: 2025-03-08

Status: Pending

Order ID: 381

Customer ID: 221

Product IDs: project212.LinkedList@4141d797

Total Price: \$109.98

Date: 2025-03-08

Status: Shipped

Order ID: 382

Customer ID: 222

Product IDs: project212.LinkedList@68f7aae2

Total Price: \$1529.98

Date: 2025-03-09

Status: Delivered

Order ID: 383

Customer ID: 223

Product IDs: project212.LinkedList@4f47d241

Total Price: \$89.5

Date: 2025-03-09

Status: Pending

Order ID: 384

Customer ID: 224

Product IDs: project212.LinkedList@4c3e4790

Total Price: \$1021.98

Date: 2025-03-10

Status: Shipped

Order ID: 385

Customer ID: 225

Product IDs: project212.LinkedList@38cccef

Total Price: \$228.99

Date: 2025-03-10

Status: Delivered

Order ID: 386

Customer ID: 226

Product IDs: project212.LinkedList@5679c6c6

Total Price: \$99.98

Date: 2025-03-11

Status: Pending

Order ID: 387

Customer ID: 227

Product IDs: project212.LinkedList@27ddd392

Total Price: \$524.5

Date: 2025-03-11

Status: Shipped

Order ID: 388

Customer ID: 228

Product IDs: project212.LinkedList@19e1023e

Total Price: \$249.0

Date: 2025-03-12

Status: Delivered

Order ID: 389

Customer ID: 229

Product IDs: project212.LinkedList@7cef4e59

Total Price: \$228.99

Date: 2025-03-12

Status: Pending

Order ID: 390

Customer ID: 230

Product IDs: project212.LinkedList@64b8f8f4

Total Price: \$229.0

Date: 2025-03-13

Status: Shipped

Order ID: 391

Customer ID: 201

Product IDs: project212.LinkedList@2db0f6b2

Total Price: \$349.99

Date: 2025-03-13

Status: Delivered

Order ID: 392

Customer ID: 202

Product IDs: project212.LinkedList@3cd1f1c8

Total Price: \$1048.99

Date: 2025-03-14

Status: Pending

Order ID: 393

Customer ID: 203

Product IDs: project212.LinkedList@3a4afd8d

Total Price: \$379.98

Date: 2025-03-14

Status: Shipped

Order ID: 394

Customer ID: 204

Product IDs: project212.LinkedList@1996cd68

Total Price: \$399.0

Date: 2025-03-15

Status: Delivered

Order ID: 395

Customer ID: 205

Product IDs: project212.LinkedList@3339ad8e

Total Price: \$338.0

Date: 2025-03-15

Status: Pending

Order ID: 396

Customer ID: 206

Product IDs: project212.LinkedList@555590

Total Price: \$69.98

Date: 2025-03-16

Status: Shipped

Order ID: 397

Customer ID: 207

Product IDs: project212.LinkedList@6d1e7682

Total Price: \$124.99

Date: 2025-03-16

Status: Delivered

Order ID: 398

Customer ID: 208

Product IDs: project212.LinkedList@424c0bc4

Total Price: \$278.97

Date: 2025-03-17

Status: Pending

Order ID: 399

Customer ID: 209

Product IDs: project212.LinkedList@3c679bde

Total Price: \$548.0

Date: 2025-03-17

Status: Shipped

Order ID: 400

Customer ID: 210

Product IDs: project212.LinkedList@16b4a017

Total Price: \$308.98

Date: 2025-03-18

Status: Delivered

Order ID: 7

Customer ID: 201

Product IDs: project212.LinkedList@8807e25

Total Price: \$555.0

Date: 2025-02-02

Status: ddkd

Order ID: 301

Customer ID: 201

Product IDs: project212.LinkedList@2a3046da

Total Price: \$1529.98

Date: 2025-01-12

Status: Pending

Order ID: 302

Customer ID: 202

Product IDs: project212.LinkedList@2a098129

Total Price: \$102.49

Date: 2025-01-14

Status: Shipped

Order ID: 303

Customer ID: 203

Product IDs: project212.LinkedList@198e2867

Total Price: \$999.0

Date: 2025-01-16

Status: Delivered

Order ID: 304

Customer ID: 204

Product IDs: project212.LinkedList@12f40c25

Total Price: \$55.97

Date: 2025-01-20

Status: Cancelled

Order ID: 305

Customer ID: 205

Product IDs: project212.LinkedList@3ada9e37

Total Price: \$1589.49

Date: 2025-01-21

Status: Pending

Order ID: 306

Customer ID: 206

Product IDs: project212.LinkedList@5cbc508c

Total Price: \$409.98

Date: 2025-01-22

Status: Shipped

Order ID: 307

Customer ID: 207

Product IDs: project212.LinkedList@3419866c

Total Price: \$149.0

Date: 2025-01-23

Status: Delivered

Order ID: 308

Customer ID: 208

Product IDs: project212.LinkedList@63e31ee

Total Price: \$99.98

Date: 2025-01-24

Status: Pending

Order ID: 309

Customer ID: 209

Product IDs: project212.LinkedList@68fb2c38

Total Price: \$224.5

Date: 2025-01-25

Status: Shipped

Order ID: 310

Customer ID: 210

Product IDs: project212.LinkedList@567d299b

Total Price: \$299.0

Date: 2025-01-25

Status: Delivered

Order ID: 311

Customer ID: 211

Product IDs: project212.LinkedList@2eafffde

Total Price: \$428.0

Date: 2025-01-26

Status: Pending

Order ID: 312

Customer ID: 212

Product IDs: project212.LinkedList@59690aa4

Total Price: \$119.98

Date: 2025-01-26

Status: Shipped

Order ID: 313

Customer ID: 213

Product IDs: project212.LinkedList@6842775d

Total Price: \$508.99

Date: 2025-01-27

Status: Delivered

Order ID: 314

Customer ID: 214

Product IDs: project212.LinkedList@574caa3f

Total Price: \$449.99

Date: 2025-01-28

Status: Pending

Order ID: 315

Customer ID: 215

Product IDs: project212.LinkedList@64cee07

Total Price: \$848.99

Date: 2025-01-28

Status: Shipped

Order ID: 316

Customer ID: 216

Product IDs: project212.LinkedList@1761e840

Total Price: \$129.99

Date: 2025-01-29

Status: Delivered

Order ID: 317

Customer ID: 217

Product IDs: project212.LinkedList@6c629d6e

Total Price: \$518.0

Date: 2025-01-30

Status: Pending

Order ID: 318

Customer ID: 218

Product IDs: project212.LinkedList@5ecddf8f

Total Price: \$193.99

Date: 2025-01-30

Status: Shipped

Order ID: 319

Customer ID: 219

Product IDs: project212.LinkedList@3f102e87

Total Price: \$64.99

Date: 2025-02-01

Status: Delivered

Order ID: 320

Customer ID: 220

Product IDs: project212.LinkedList@27abe2cd

Total Price: \$89.99

Date: 2025-02-02

Status: Pending

Order ID: 321

Customer ID: 221

Product IDs: project212.LinkedList@5f5a92bb

Total Price: \$149.98

Date: 2025-02-02

Status: Shipped

Order ID: 322

Customer ID: 222

Product IDs: project212.LinkedList@6fdb1f78

Total Price: \$129.0

Date: 2025-02-03

Status: Delivered

Order ID: 323

Customer ID: 223

Product IDs: project212.LinkedList@51016012

Total Price: \$548.0

Date: 2025-02-04

Status: Pending

Order ID: 324

Customer ID: 224

Product IDs: project212.LinkedList@29444d75

Total Price: \$288.99

Date: 2025-02-05

Status: Shipped

Order ID: 325

Customer ID: 225

Product IDs: project212.LinkedList@2280cdac

Total Price: \$69.99

Date: 2025-02-05

Status: Delivered

Order ID: 326

Customer ID: 226

Product IDs: project212.LinkedList@1517365b

Total Price: \$139.98

Date: 2025-02-06

Status: Pending

Order ID: 327

Customer ID: 227

Product IDs: project212.LinkedList@4fccd51b

Total Price: \$228.99

Date: 2025-02-06

Status: Shipped

Order ID: 328

Customer ID: 228

Product IDs: project212.LinkedList@44e81672

Total Price: \$299.0

Date: 2025-02-07

Status: Delivered

Order ID: 329

Customer ID: 229

Product IDs: project212.LinkedList@60215eee

Total Price: \$1598.0

Date: 2025-02-08

Status: Pending

Order ID: 330

Customer ID: 230

Product IDs: project212.LinkedList@4ca8195f

Total Price: \$748.0

Date: 2025-02-08

Status: Shipped

Order ID: 331

Customer ID: 201

Product IDs: project212.LinkedList@65e579dc

Total Price: \$109.98

Date: 2025-02-09

Status: Delivered

Order ID: 332

Customer ID: 202

Product IDs: project212.LinkedList@61baa894

Total Price: \$1829.98

Date: 2025-02-10

Status: Pending

Order ID: 333

Customer ID: 203

Product IDs: project212.LinkedList@b065c63

Total Price: \$228.99

Date: 2025-02-10

Status: Shipped

Order ID: 334

Customer ID: 204

Product IDs: project212.LinkedList@768debd

Total Price: \$59.99

Date: 2025-02-11

Status: Delivered

Order ID: 335

Customer ID: 205

Product IDs: project212.LinkedList@490d6c15

Total Price: \$238.99

Date: 2025-02-12

Status: Pending

Order ID: 336

Customer ID: 206

Product IDs: project212.LinkedList@7d4793a8

Total Price: \$324.5

Date: 2025-02-12

Status: Shipped

Order ID: 337

Customer ID: 207

Product IDs: project212.LinkedList@449b2d27

Total Price: \$249.0

Date: 2025-02-13

Status: Delivered

Order ID: 338

Customer ID: 208

Product IDs: project212.LinkedList@5479e3f

Total Price: \$228.99

Date: 2025-02-13

Status: Pending

Order ID: 339

Customer ID: 209

Product IDs: project212.LinkedList@27082746

Total Price: \$229.0

Date: 2025-02-14

Status: Shipped

Order ID: 340

Customer ID: 210

Product IDs: project212.LinkedList@66133adc

Total Price: \$349.99

Date: 2025-02-14

Status: Delivered

Order ID: 341

Customer ID: 211

Product IDs: project212.LinkedList@7bfcd12c

Total Price: \$1048.99

Date: 2025-02-15

Status: Pending

Order ID: 342

Customer ID: 212

Product IDs: project212.LinkedList@42f30e0a

Total Price: \$379.98

Date: 2025-02-15

Status: Shipped

Order ID: 343

Customer ID: 213

Product IDs: project212.LinkedList@24273305

Total Price: \$399.0

Date: 2025-02-16

Status: Delivered

Order ID: 344

Customer ID: 214

Product IDs: project212.LinkedList@5b1d2887

Total Price: \$164.0

Date: 2025-02-16

Status: Pending

Order ID: 345

Customer ID: 215

Product IDs: project212.LinkedList@46f5f779

Total Price: \$148.99

Date: 2025-02-17

Status: Shipped

Order ID: 346

Customer ID: 216

Product IDs: project212.LinkedList@1c2c22f3

Total Price: \$64.99

Date: 2025-02-17

Status: Delivered

Order ID: 347

Customer ID: 217

Product IDs: project212.LinkedList@18e8568

Total Price: \$189.98

Date: 2025-02-18

Status: Pending

Order ID: 348

Customer ID: 218

Product IDs: project212.LinkedList@33e5ccce

Total Price: \$178.99

Date: 2025-02-18

Status: Shipped

Order ID: 349

Customer ID: 219

Product IDs: project212.LinkedList@5a42bbf4

Total Price: \$149.0

Date: 2025-02-19

Status: Delivered

Order ID: 350

Customer ID: 220

Product IDs: project212.LinkedList@270421f5

Total Price: \$598.0

Date: 2025-02-19

Status: Pending

Order ID: 351

Customer ID: 221

Product IDs: project212.LinkedList@52d455b8

Total Price: \$159.98

Date: 2025-02-20

Status: Shipped

Order ID: 352

Customer ID: 222

Product IDs: project212.LinkedList@4f4a7090

Total Price: \$59.99

Date: 2025-02-20

Status: Delivered

Order ID: 353

Customer ID: 223

Product IDs: project212.LinkedList@18ef96

Total Price: \$179.98

Date: 2025-02-21

Status: Pending

Order ID: 354

Customer ID: 224

Product IDs: project212.LinkedList@6956de9

Total Price: \$428.0

Date: 2025-02-22

Status: Shipped

Order ID: 355

Customer ID: 225

Product IDs: project212.LinkedList@769c9116

Total Price: \$899.0

Date: 2025-02-22

Status: Delivered

Order ID: 356

Customer ID: 226

Product IDs: project212.LinkedList@6aceb1a5

Total Price: \$948.0

Date: 2025-02-23

Status: Pending

Order ID: 357

Customer ID: 227

Product IDs: project212.LinkedList@2d6d8735

Total Price: \$558.99

Date: 2025-02-23

Status: Shipped

Order ID: 358

Customer ID: 228

Product IDs: project212.LinkedList@ba4d54

Total Price: \$1549.98

Date: 2025-02-24

Status: Delivered

Order ID: 359

Customer ID: 229

Product IDs: project212.LinkedList@12bc6874

Total Price: \$119.49

Date: 2025-02-25

Status: Pending

Order ID: 360

Customer ID: 230

Product IDs: project212.LinkedList@de0a01f

Total Price: \$1008.99

Date: 2025-02-25

Status: Shipped

Order ID: 361

Customer ID: 201

Product IDs: project212.LinkedList@4c75cab9

Total Price: \$558.98

Date: 2025-02-26

Status: Delivered

Order ID: 362

Customer ID: 202

Product IDs: project212.LinkedList@1ef7fe8e

Total Price: \$298.98

Date: 2025-02-27

Status: Pending

Order ID: 363

Customer ID: 203

Product IDs: project212.LinkedList@6f79caec

Total Price: \$324.5

Date: 2025-02-27

Status: Shipped

Order ID: 364

Customer ID: 204

Product IDs: project212.LinkedList@67117f44

Total Price: \$477.99

Date: 2025-02-28

Status: Delivered

Order ID: 365

Customer ID: 205

Product IDs: project212.LinkedList@5d3411d

Total Price: \$69.99

Date: 2025-02-28

Status: Pending

Order ID: 366

Customer ID: 206

Product IDs: project212.LinkedList@2471cca7

Total Price: \$508.99

Date: 2025-03-01

Status: Shipped

Order ID: 367

Customer ID: 207

Product IDs: project212.LinkedList@5fe5c6f

Total Price: \$449.99

Date: 2025-03-01

Status: Delivered

Order ID: 368

Customer ID: 208

Product IDs: project212.LinkedList@6979e8cb

Total Price: \$978.98

Date: 2025-03-02

Status: Pending

Order ID: 369

Customer ID: 209

Product IDs: project212.LinkedList@763d9750

Total Price: \$399.0

Date: 2025-03-02

Status: Shipped

Order ID: 370

Customer ID: 210

Product IDs: project212.LinkedList@5c0369c4

Total Price: \$338.0

Date: 2025-03-03

Status: Delivered

Order ID: 371

Customer ID: 211

Product IDs: project212.LinkedList@2be94b0f

Total Price: \$69.98

Date: 2025-03-03

Status: Pending

Order ID: 372

Customer ID: 212

Product IDs: project212.LinkedList@d70c109

Total Price: \$124.99

Date: 2025-03-04

Status: Shipped

Order ID: 373

Customer ID: 213

Product IDs: project212.LinkedList@17ed40e0

Total Price: \$278.97

Date: 2025-03-04

Status: Delivered

Order ID: 374

Customer ID: 214

Product IDs: project212.LinkedList@50675690

Total Price: \$548.0

Date: 2025-03-05

Status: Pending

Order ID: 375

Customer ID: 215

Product IDs: project212.LinkedList@31b7dea0

Total Price: \$288.99

Date: 2025-03-05

Status: Shipped

Order ID: 376

Customer ID: 216

Product IDs: project212.LinkedList@3ac42916

Total Price: \$209.97

Date: 2025-03-06

Status: Delivered

Order ID: 377

Customer ID: 217

Product IDs: project212.LinkedList@47d384ee

Total Price: \$99.99

Date: 2025-03-06

Status: Pending

Order ID: 378

Customer ID: 218

Product IDs: project212.LinkedList@2d6a9952

Total Price: \$428.0

Date: 2025-03-07

Status: Shipped

Order ID: 379

Customer ID: 219

Product IDs: project212.LinkedList@22a71081

Total Price: \$899.0

Date: 2025-03-07

Status: Delivered

Order ID: 380

Customer ID: 220

Product IDs: project212.LinkedList@3930015a

Total Price: \$1446.0

Date: 2025-03-08

Status: Pending

Order ID: 381

Customer ID: 221

Product IDs: project212.LinkedList@629f0666

Total Price: \$109.98

Date: 2025-03-08

Status: Shipped

Order ID: 382

Customer ID: 222

Product IDs: project212.LinkedList@1bc6a36e

Total Price: \$1529.98

Date: 2025-03-09

Status: Delivered

Order ID: 383

Customer ID: 223

Product IDs: project212.LinkedList@1ff8b8f

Total Price: \$89.5

Date: 2025-03-09

Status: Pending

Order ID: 384

Customer ID: 224

Product IDs: project212.LinkedList@387c703b

Total Price: \$1021.98

Date: 2025-03-10

Status: Shipped

Order ID: 385

Customer ID: 225

Product IDs: project212.LinkedList@224aed64

Total Price: \$228.99

Date: 2025-03-10

Status: Delivered

Order ID: 386

Customer ID: 226

Product IDs: project212.LinkedList@c39f790

Total Price: \$99.98

Date: 2025-03-11

Status: Pending

Order ID: 387

Customer ID: 227

Product IDs: project212.LinkedList@71e7a66b

Total Price: \$524.5

Date: 2025-03-11

Status: Shipped

Order ID: 388

Customer ID: 228

Product IDs: project212.LinkedList@2ac1fdc4

Total Price: \$249.0

Date: 2025-03-12

Status: Delivered

Order ID: 389

Customer ID: 229

Product IDs: project212.LinkedList@5f150435

Total Price: \$228.99

Date: 2025-03-12

Status: Pending

Order ID: 390

Customer ID: 230

Product IDs: project212.LinkedList@1c53fd30

Total Price: \$229.0

Date: 2025-03-13

Status: Shipped

Order ID: 391

Customer ID: 201

Product IDs: project212.LinkedList@50cbc42f

Total Price: \$349.99

Date: 2025-03-13

Status: Delivered

Order ID: 392

Customer ID: 202

Product IDs: project212.LinkedList@75412c2f

Total Price: \$1048.99

Date: 2025-03-14

Status: Pending

Order ID: 393

Customer ID: 203

Product IDs: project212.LinkedList@282ba1e

Total Price: \$379.98

Date: 2025-03-14

Status: Shipped

Order ID: 394

Customer ID: 204

Product IDs: project212.LinkedList@13b6d03

Total Price: \$399.0

Date: 2025-03-15

Status: Delivered

Order ID: 395

Customer ID: 205

Product IDs: project212.LinkedList@f5f2bb7

Total Price: \$338.0

Date: 2025-03-15

Status: Pending

Order ID: 396

Customer ID: 206

Product IDs: project212.LinkedList@73035e27

Total Price: \$69.98

Date: 2025-03-16

Status: Shipped

Order ID: 397

Customer ID: 207

Product IDs: project212.LinkedList@64c64813

Total Price: \$124.99

Date: 2025-03-16

Status: Delivered

Order ID: 398

Customer ID: 208

Product IDs: project212.LinkedList@3ecf72fd

Total Price: \$278.97

Date: 2025-03-17

Status: Pending

Order ID: 399

Customer ID: 209

Product IDs: project212.LinkedList@483bf400

Total Price: \$548.0

Date: 2025-03-17

Status: Shipped

Order ID: 400

Customer ID: 210

Product IDs: project212.LinkedList@21a06946

Total Price: \$308.98

Date: 2025-03-18

Status: Delivered

Order ID: 7

Customer ID: 201

Product IDs: project212.LinkedList@77f03bb1

Total Price: \$555.0

Date: 2025-02-02

Status: dkdk

Order ID: 889

Customer ID: 999

Product IDs: project212.LinkedList@39ed3c8d

Total Price: \$14.0

Date: 2025-02-05

Status: Shipped

1: Load all files

2: Add Product

3: Add Customer

4: Add Order

5: Add Review

6: List all customers

7: Show top 3 products by average rating

8: Display all orders

9: Display all orders between 2 dates

10: Show common high-rated products for 2 customers

11: Exit

Enter your choice: 9

Orders between 2025-02-01 and 2025-02-09:

319

320

321

322

323

324

325

326

327

328

329

330

331

7

319

320

321

322

323

324

325

326

327

328

329

330

331

7

889

1: Load all files

2: Add Product

3: Add Customer

4: Add Order

5: Add Review

6: List all customers

7: Show top 3 products by average rating

8: Display all orders

9: Display all orders between 2 dates

10: Show common high-rated products for 2 customers

11: Exit

Enter your choice: 10

Enter first customer ID [existing]: 201

Enter second customer ID [existing]: 205

Common Products Reviewed by Both Customers (Avg > 4):

No common high-rated products found.

1: Load all files

2: Add Product

3: Add Customer

4: Add Order

5: Add Review

6: List all customers

7: Show top 3 products by average rating

8: Display all orders

9: Display all orders between 2 dates

10: Show common high-rated products for 2 customers

11: Exit

Enter your choice: 11

Goodbye!