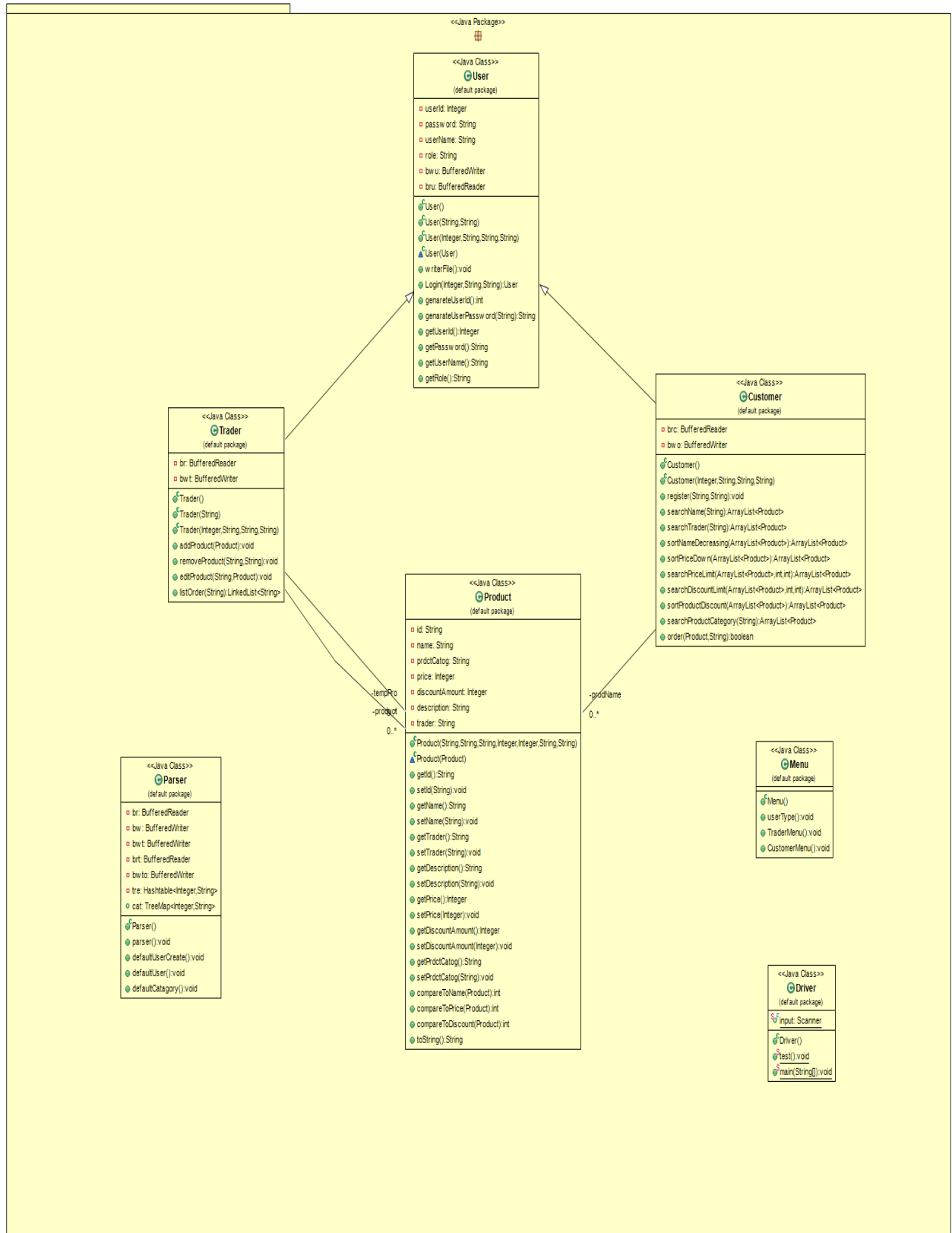


**GTU DEPARTMENT OF COMPUTER
ENGINEERING
CSE 222/505 – Spring 2021 Homework 6
REPORT**

**OZAN GEÇKİN
1801042103**

1. CLASS DIAGRAM



2.Problem Solution Approach

My Problem solution steps are;

- Specify the problem requirements
- Analyze the problem
- Design an algorithm and Program
- Implement the algorithm
- Test and verify the program

2.1) Specify the problem requirements: I understand the problem.

2.2) Analyze the problem: I identify; input data, output data, Additional requirements and constraints

2.3) Design an algorithm and program: My solution approach is completely based on OOP. I divide the problem into sub-problems. I listed major steps (subproblems). I break down each step into a more detailed list. To do these We have to divide this big project into small pieces. First of all I started with user type we need divide them with seperate classes. And then to handle all data we need to write a class that manipulate the data. And lastly if we combine all these we can complete the project

3.4) Implement the algorithm:

I have to make a shopping site in my project. I kept the data in order.txt, product.txt, user.txt files. I read and pars the file in csv format you provided. And I created and assigned files that I was going to need and saw fit. I set the data directly to the Product.txt file. I assigned id, password with my generic methods to the trader names in the csv formatted file you provided, and saved them to the User.txt file. In order to do certain operations, I pulled the data from these database source files and put them in some data structures. These are ArrayList, LinkList, TreeMap, HashTable and Queue. While using data structures, I chose them according to my needs. In order not to tire the memo, did I usually read the data from the database and search it? I avoided using static arrays.

User.java:

I have defined and implemented the common methods and data fields of the user types I use in the system in this class.

Customer.java:

In this class, I added data fields and methods to meet the needs of the customers in the system, and I used bubble sort, selection sort algorithms for the filters here. I kept the productions of the customer in the Array List. Here, too, I used my databases to avoid memory. My reason for keeping customerin products in the Array List was to be able to access them at constant time with the get method. It was very useful for me in sorting algorithms.

Trader.java:

In this class, I added data fields and methods to meet the needs of the vendors in the system. While performing transactions on Trader's products, I used LinkedList when performing transactions on ArrayList orders.

Parse.java:

In this class, I initially used it to parse the source codes. Here I extracted the product categories using the Tree structure. Using HashTable I kept the users in the csv file. I used it to export to user.txt file.

Product.java:

This class is the class where information and methods about products are kept.

Menu.java:

There are menu functions in this class, which helped my program work interactively. I have kept the menu structure in one place.

Driver.java:

The test method is a driver method in the class I do the tests of the program. It allows me to test many methods in the program. The Main method, on the other hand, enables the program to work interactively.

Not: User IDs occur as generic and unique. Therefore, you can access my program by accessing these codes from the user.txt file. Example file path "data / e-commerce-samples.csv" So there is a data file next to the src code and there must be a csv file for it.

3.Test Case

Test Id	Test Cases	Test Steps	Expected Result	Actual Results	Pass/Fail
T1	parser	Call method	Create product.txt	As expected	Pass
T2	defaultUserCreate	Call method	Create user.txt	As expected	Pass
T3	defaultCatagory	Call method	Parse category	As expected	Pass
T4	addProduct	Call method with parameter New Product	Adding new product	As expected	Pass
T5	removeProduct	Call method with parameter Product	Removing product	As expected	Pass
T6	editProduct	Call method with parameter New Product	Change product	As expected	Pass
T7	listOrder	Call method with parameter Trader name	List order	As expected	Pass

T8	searchName	Call method with parameter Product name	Return Product list by product name	As expected	Pass
T9	sortNameDecreasing	Call method with parameter Product name	Sort product by name	As expected	Pass
T10	searchTrader	Call method with parameter Trader name	Return Product list by trader name	As expected	Pass
T11	sortPriceDown	Call method with parameter Product name	Sort product by price	As expected	Pass
T12	searchPriceLimit	Call method with parameter Product name,Upper and down limit	Search product by price(Upper and down)	As expected	Pass
T13	searchDiscountLimit	Call method with parameter Product name,Upper and down limit	Search product by discount (Upper and down)	As expected	Pass
T14	sortProductDiscount	Call method with parameter Product name	Sort product by product name	As expected	Pass
T15	searchProductCategory	Call method with parameter category name	Search product by category	As expected	Pass
T16	order	Call method with parameter new product, trader name	Remove product in product.txt and adding order.txt	As expected	Pass
T17	Customer Login	Call Method with parameter user id, password, role	Show Customer menu	As expected	Pass
T18	Trader Login	Call Method with parameter user id, password, role	Show Trader menu	As expected	Pass
T19	Customer Register	Call Method with parameter user name and password	Succes register	As expected	Pass

Test method result:

Trader Login and add Product and remove Product:

The screenshot displays the Eclipse IDE environment with two main windows: 'dataHw6 - Eclipse IDE' and 'product - Notepad'.

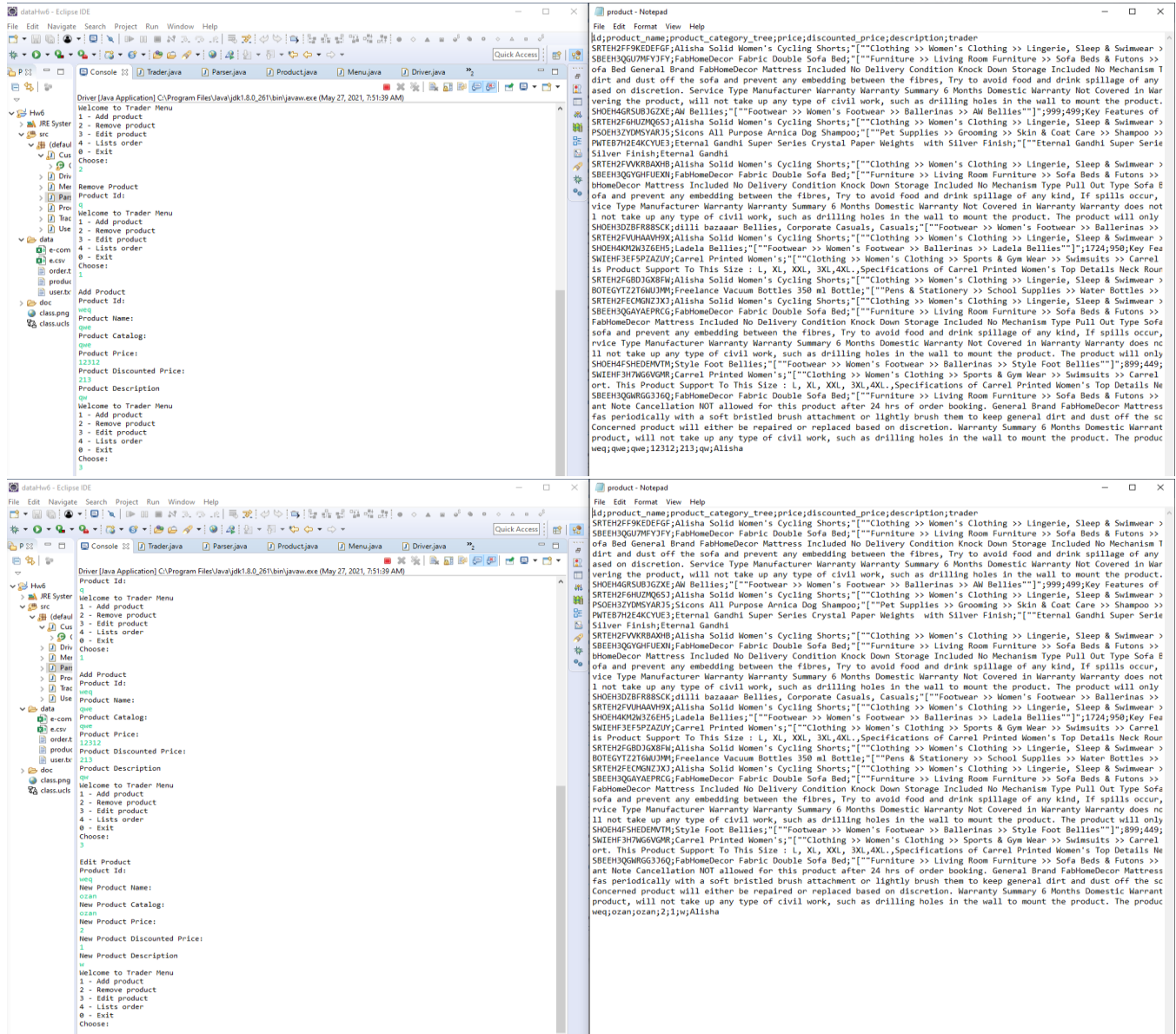
dataHw6 - Eclipse IDE:

- Console:** Shows the execution of the 'Trader.java' program. The output includes a welcome message, a login prompt, and a menu for adding, removing, or editing products. The user 'Alisha' is logged in, and the 'Add product' option is selected.
- Product Catalog:** A table listing products with columns for Product Name, Product Catalog, Product Price, Product Discounted Price, and Product Description. The table contains one entry: 'FahomeDecor Fabric Double Sofa Bed' with a price of 123 and a discounted price of 123.
- Product Description:** A detailed description of the 'FahomeDecor Fabric Double Sofa Bed' is displayed, including its features and warranty information.

product - Notepad:

The 'product - Notepad' window shows the JSON representation of the product data, including the product name, category, price, discounted price, description, and trader information.

Add Product and Edit Product:



The screenshot displays the Eclipse IDE environment with the 'product - Notepad' editor open. The editor shows the 'Add Product' and 'Edit Product' methods in the 'Product.java' file. The 'Add Product' method prompts the user for product details (ID, Name, Catalog, Price, Discounted Price, and Description) and adds the product to the 'products' list. The 'Edit Product' method prompts the user for the product ID and the new details, then updates the product in the 'products' list. The console output shows the program's execution, including the product details and the success message.

```
File Edit Format View Help
product - Notepad
[Id;product_name;product_category_tree;price;discounted_price;description;trader
SRTEH2FFKDEFGF;Alisha Solid Women's Cycling Shorts;["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >>
SBEH3QGUF7MFYFY;FahomeDecor Fabric Double Sofa Bed;["Furniture >> Living Room Furniture >> Sofa Beds & Futons >>
ofa Bed General Brand FahomeDecor Mattress Included No Delivery Condition Knock Down Storage Included No Mechanism T
SRTEHFGHJQKGS;Alisha Solid Women's Cycling Shorts;["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >
PSOEH3ZVMYSYARJ3;Sicoms All Purpose Arnica Dog Shampoo;["Pet Supplies >> Grooming >> Skin & Coat Care >> Shampoo >>
PWTEB7H2E4KCYUE3;Eternal Gandhi Super Series Crystal Paper Weights with Silver Finish;["Eternal Gandhi Super Serie
Silver Finish;Eternal Gandhi
SRTEHFGHJQKGS;Alisha Solid Women's Cycling Shorts;["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >>
SBEH3QGUF7MFYFY;FahomeDecor Fabric Double Sofa Bed;["Furniture >> Living Room Furniture >> Sofa Beds & Futons >>
IbhomeDecor Mattress Included No Delivery Condition Knock Down Storage Included No Mechanism Type Pull Out Type Sofa B
ofa and prevent any embedding between the fibres, Try to avoid food and drink spillage of any kind, If spills occur,
vice Type Manufacturer Warranty Warranty Summary 6 Months Domestic Warranty Not Covered In Warranty Warranty does not
1 not take up any type of civil work, such as drilling holes in the wall to mount the product. The product will only
SHOEH3DZBFR88SK;Dillil bazaar Bellies, Corporate Casuals, Casuals;["Footwear >> Women's Footwear >> Ballerinas >>
SHOEH3DZBFR88SK;Dillil bazaar Bellies, Corporate Casuals, Casuals;["Footwear >> Women's Footwear >> Ballerinas >>
SHOEH3DZBFR88SK;Dillil bazaar Bellies, Corporate Casuals, Casuals;["Footwear >> Women's Footwear >> Ballerinas >>
SHOEH3DZBFR88SK;Dillil bazaar Bellies, Corporate Casuals, Casuals;["Footwear >> Women's Footwear >> Ballerinas >>
SWIEHF3EF5PZADU;Carrel Printed Women's;["Clothing >> Women's Clothing >> Sports & Gym Wear >> Swimsuits >> Carrel
Is Product Support To This Size : L, XL, XXL, 3XL,4XL, Specifications of Carrel Printed Women's Top Details Neck Rou
SRTEHFGHJQKGS;Alisha Solid Women's Cycling Shorts;["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >>
BOTEH2T2TGJQJ3;Freelance Vacuum Bottles 350 ml Bottle;["Pens & Stationery >> School Supplies >> Water Bottles >>
SRTEHFGHJQKGS;Alisha Solid Women's Cycling Shorts;["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >>
SBEH3QGUF7MFYFY;FahomeDecor Fabric Double Sofa Bed;["Furniture >> Living Room Furniture >> Sofa Beds & Futons >>
FahomeDecor Mattress Included No Delivery Condition Knock Down Storage Included No Mechanism Type Pull Out Type Sofa
ofa and prevent any embedding between the fibres, Try to avoid food and drink spillage of any kind, If spills occur,
vice Type Manufacturer Warranty Warranty Summary 6 Months Domestic Warranty Not Covered In Warranty Warranty does nc
11 not take up any type of civil work, such as drilling holes in the wall to mount the product. The product will only
SHOEH3DZBFR88SK;Dillil bazaar Bellies, Corporate Casuals, Casuals;["Footwear >> Women's Footwear >> Ballerinas >>
SWIEHF3EF5PZADU;Carrel Printed Women's;["Clothing >> Women's Clothing >> Sports & Gym Wear >> Swimsuits >> Carrel
ort. This Product Support To This Size : L, XL, XXL, 3XL,4XL, Specifications of Carrel Printed Women's Top Details Ne
SBEH3QGUF7MFYFY;FahomeDecor Fabric Double Sofa Bed;["Furniture >> Living Room Furniture >> Sofa Beds & Futons >>
ant Note Cancellation NOT allowed for this product after 24 hrs of order booking. General Brand FahomeDecor Mattress
fas periodically with a soft bristled brush attachment or lightly brush them to keep general dirt and dust off the sc
Concerned product will either be repaired or replaced based on discretion. Warranty Summary 6 Months Domestic Warrant
product, will not take up any type of civil work, such as drilling holes in the wall to mount the product. The produc
weq;weq;weq;12312;213;qw;Alisha
```

Driver [Java Application] C:\Program Files\Java\jdk1.8.0_261\bin\javaw.exe (May 27, 2021, 7:51:39 AM)

Welcome to Trader Menu

1 - Add product

2 - Remove product

3 - Edit product

4 - Lists order

0 - Exit

Choose:

1

Product Id:

Product Name:

Product Catalog:

Product Price:

Product Discounted Price:

Product Description:

Welcome to Trader Menu

1 - Add product

2 - Remove product

3 - Edit product

4 - Lists order

0 - Exit

Choose:

1

Add Product

Product Id:

Product Name:

Product Catalog:

Product Price:

Product Discounted Price:

Product Description:

Welcome to Trader Menu

1 - Add product

2 - Remove product

3 - Edit product

4 - Lists order

0 - Exit

Choose:

1

Edit Product

Product Id:

New Product Name:

New Product Catalog:

New Product Price:

New Product Discounted Price:

New Product Description:

Welcome to Trader Menu

1 - Add product

2 - Remove product

3 - Edit product

4 - Lists order

0 - Exit

Choose:

1

Customer Register:

Welcome to Shopping Site

Choose User

1 - Trader
2 - Customer
3 - Register Customer
0 - Exit
Choose:

3

Welcome To Customer Register

User name

ozan

Password

ozan

Welcome to Shopping Site

Choose User

1 - Trader
2 - Customer
3 - Register Customer
0 - Exit
Choose:

File Edit Format View Help

id;name;password;role

12849353;Alisha;Alisha;trader

89531950;FabHomeDecor;FabHom;trader

53738915;BigCompany;BigCom;trader

95595579;Sicons;Sicons;trader

27541274;Eternal Gandhi;Eterna;trader

51519913;dilli bazaaar;dilli ;trader

60328370;Ladela;Ladela;trader

15218106;Carrel;Carrel;trader

25970968;Freelance;Freela;trader

54489255;Style Foot;Style ;trader

15821216;ozan;ozan;customer

Customer method check:

Welcome to Customer Menu

1 - Search product by Product Name and Product Description
2 - Search product by Trader name
3 - Search product by decreasing order of the product name
4 - Search product by Product prices (Upper-Down)
5 - Search product by Product prices (Down-Upper)
6 - Search product by Product prices (Upper-Down by Customer input))
7 - Search product by Product of the discount (Upper-Down by Customer input)
8 - Search product by Product category
9 - Product Order
0 - Exit
Choose:

1
Search product by Product Name and Product Description

Enter Product Name:

Alisha Solid Women's Cycling Shorts

Product ID: SRTEH2FF9KEDEFGF Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cycling

Product ID: SRTEH2F6HUZQ65J Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cycling

Product ID: SRTEH2FVKRBAAXB Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cycling

Product ID: SRTEH2FVUHAIVH9X Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cycling

Product ID: SRTEH2F6BDJGX8FW Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cycling

Product ID: SRTEH2FECMGNZJXJ Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cycling

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6 - Search product by Product prices (Upper-Down by Customer input))
7 - Search product by Product of the discount (Upper-Down by Customer input)
8 - Search product by Product category
9 - Product Order
0 - Exit
-

Search product by Trader name

Enter Trader Name:

Alisha

Product ID: SRTEH2FF9KEDEFGF Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cy

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Product ID: weq Product Name: ozan Product Catalog: ozan Product Price: 2 Product Discount Amount: 1 Product Description: w Product Trader: Alisha

Product ID: SRTEH2FF9KEDEFGF Product Name: Alisha Solid Women's Cycling Shorts Product Catalog: ["Clothing >> Women's Clothing >> Lingerie, Sleep & Swimwear >> Shorts >> Alisha Shorts >> Alisha Solid Women's Cy

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6 - Search product by Product prices (Upper-Down by Customer input))
7 - Search product by Product of the discount (Upper-Down by Customer input)
8 - Search product by Product category
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0 - Exit
Choose:

