GIT Department of Computer Engineering
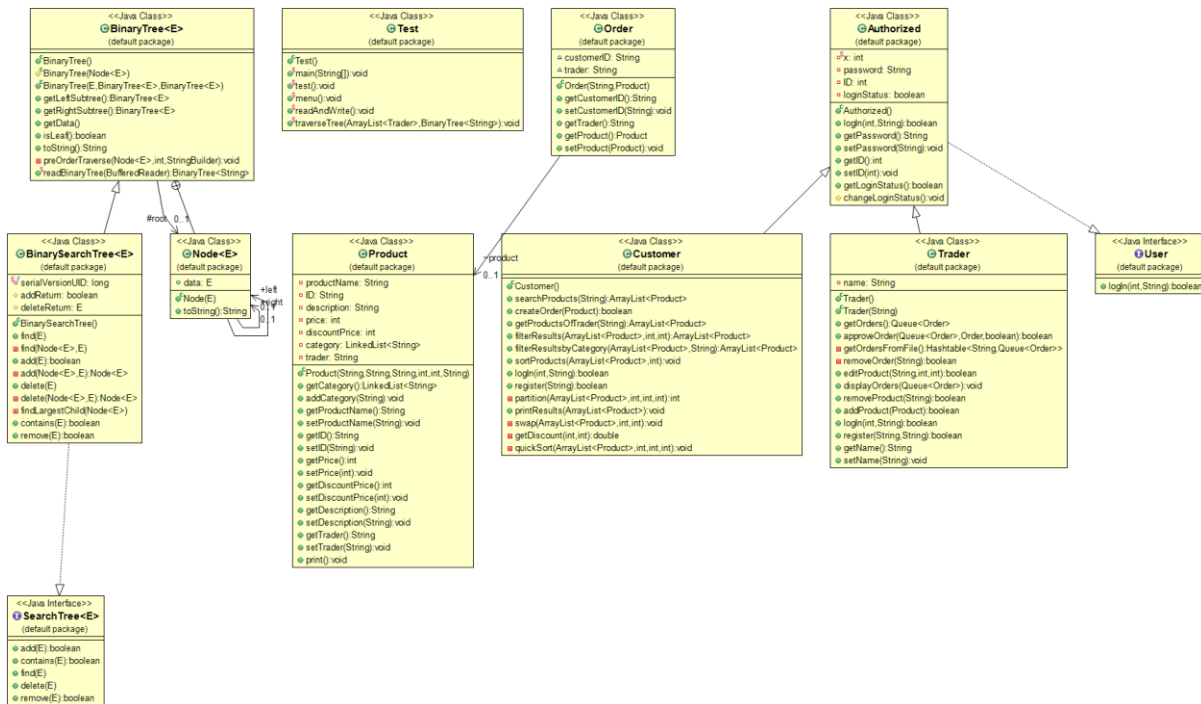## CSE 222/505 - Spring 2021
Homework 6 Report

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1. CLASS DIAGRAM

<<Java Class>> BinaryTree<E> (default package)
- BinaryTree()
- BinaryTree(Node<E>)
- BinaryTree(E,BinaryTree<E>,BinaryTree<E>)
- getLeftSubtree():BinaryTree<E>
- getRightSubtree():BinaryTree<E>
- getData()
- isLeaf():boolean
- toString():String
- preOrderTraverse(Node<E>,int,StringBuilder):void
- readBinaryTree(BufferedReader):BinaryTree<String>

<<Java Class>> Test (default package)
- Test()
- main(String[]):void
- test():void
- menu():void
- readAndWrite():void
- traverseTree(ArrayList<Trader>,BinaryTree<String>):void

<<Java Class>> Order (default package)
- customerID: String
- trader: String
- Order(String,Product)
- getCustomerID():String
- setCustomerID(String):void
- getTrader():String
- getProduct():Product
- setProduct(Product):void

<<Java Class>> Authorized (default package)
- x: int
- password: String
- ID: int
- loginStatus: boolean
- Authorized()
- login(int,String):boolean
- getPassword():String
- setPassword(String):void
- getID():int
- setID(int):void
- getLoginStatus():boolean
- changeLoginStatus():void

<<Java Class>> BinarySearchTree<E> (default package)
- serialVersionUID: long
- addReturn: boolean
- deleteReturn: E
- BinarySearchTree()
- find(E)
- find(Node<E>,E)
- add(E):boolean
- add(Node<E>,E):Node<E>
- delete(E)
- delete(Node<E>,E):Node<E>
- findLargestChild(Node<E>)
- contains(E):boolean
- remove(E):boolean

<<Java Class>> Node<E> (default package)
- data: E
- Node(E)
- toString():String
- left
- right
- #root 0..1
- 0..1

<<Java Class>> Product (default package)
- productName: String
- ID: String
- description: String
- price: int
- discountPrice: int
- category: LinkedList<String>
- trader: String
- Product(String,String,String,int,int,String)
- getCategory():LinkedList<String>
- addCategory(String):void
- getProductName():String
- setProductName(String):void
- getID():String
- setID(String):void
- getPrice():int
- setPrice(int):void
- getDiscountPrice():int
- setDiscountPrice(int):void
- getDescription():String
- setDescription(String):void
- getTrader():String
- setTrader(String):void
- print():void

<<Java Class>> Customer (default package)
- Customer()
- searchProducts(String):ArrayList<Product>
- createOrder(Product):boolean
- getProductsOfTrader(String):ArrayList<Product>
- filterResults(ArrayList<Product>,int,int):ArrayList<Product>
- filterResultsbyCategory(ArrayList<Product>,String):ArrayList<Product>
- sortProducts(ArrayList<Product>,int):void
- login(int,String):boolean
- register(String):boolean
- partition(ArrayList<Product>,int,int,int):int
- printResults(ArrayList<Product>):void
- swap(ArrayList<Product>,int,int):void
- getDiscount(int,int):double
- quickSort(ArrayList<Product>,int,int,int):void

<<Java Class>> Trader (default package)
- name: String
- Trader()
- Trader(String)
- getOrders():Queue<Order>
- approveOrder(Queue<Order>,Order,boolean):boolean
- getOrdersFromFile():Hashtable<String,Queue<Order>>
- removeOrder(String):boolean
- editProduct(String,int,int):boolean
- displayOrders(Queue<Order>):void
- removeProduct(String):boolean
- addProduct(Product):boolean
- login(int,String):boolean
- register(String,String):boolean
- getName():String
- setName(String):void

<<Java Interface>> User (default package)
- login(int,String):boolean

<<Java Interface>> SearchTree<E> (default package)
- add(E):boolean
- contains(E):boolean
- find(E)
- delete(E)
- remove(E):boolean

2. PROBLEM SOLUTION APPROACH

Authorized class is created which implements user interface. After it's done Customer and Trader classes created which are extends authorized class. Then the order and product classes created. After the basically classes are created without data fields, global function created to read csv file from moodle page to create my own data files. I decide to use binary search tree to hold the traders. So this way one trader couldn't be in there more than one and the binary search tree find method is very efficient to checks whether there is or not and the users are sorted alphabetticaly. For the products create products.txt created and placed products from csv file. To write the traders from binary search to users.txt , another global function is created to traverse tree. After the writing file is done, product class is designed. To be able to hold the categories to in hierarchy Linked List of string is created. I split the string from products.txt and add the category to linked list. After the necessary functions implemented, customer class is designed. To hold the search results of products, I prefer Array List because I will need to random access to implement other functions and Array List could be sorted so easily. I prefer the quick sort for the sorting processes. It could be very efficient on big data and sorting time is very quick. For the login function I decided to use boolean variable to be able to check whether customer logged in or not. To use the other customer's function customer's log in function must be call. For the trader class, Hash Table used when reading orders from file, which it's key is Trader ID and value is a queue of orders. So, hash table give me an opportunity to get orders of trader constant time. Orders hold in queue. So I add orders in constant

time. Login system works like the customer's class. After that, order class is created. Driver function and menu function created.

3. TEST CASES

Csv file readed.

```java
try {
    readAndWrite();
} catch (NumberFormatException e) {
    System.out.println("CSV file is not suitable!");
    e.printStackTrace();
} catch (IOException e) {
    System.out.println("File couldn't open!");
    e.printStackTrace();
}
```

Customer created and registered in to system and try it one more time to check customer already registered or not.

```java
System.out.println("Customer created and It's registered with this password : 123456");
Customer samet = new Customer();
System.out.println(samet.register("123456"));
System.out.println("--------------");
System.out.println("Customer trying to register to system again:");
System.out.println(samet.register("123456"));
```

Customer loged in and search and prints the results to terminal.

```java
System.out.println("Customer logging to system!");
System.out.println(samet.logIn(samet.getID(), "123456"));
System.out.println("--------------");
System.out.println("--------------\n\n");
System.out.println("Customer searcing products which is given word as a Shorts.\nSearch results are printing to terminal as a sorted way!");
searchResults = samet.searchProducts("Shorts");
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
```

Results filtered by category than print the results to terminal.

```java
System.out.println("--------------\n\n");
System.out.println("Products which are searched filtering by category name as an Jeans & Shorts!");
searchResults = samet.filterResultsbyCategory(searchResults, "Jeans & Shorts");
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
```

Search results displayed according to their price increasing order.

```
   ]
  System.out.println("--------------\n\n");
  System.out.println("Search results are sorting acording to their prices to increasing order");
  samet.sortProducts(searchResults, 0);
  for(int i=0;i<searchResults.size();i++) {
      searchResults.get(i).print();
  }
```

Search results displayed according to their price decreasing order.

```
System.out.println("--------------\n\n");
System.out.println("Search results are sorting acording to their prices to decreasing order");
samet.sortProducts(searchResults, 1);
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
System.out.println("--------------\n\n");
```

Search results displayed according to their name decreasing order.

```
System.out.println("Search results are sorting acording to their names to decreasing order");
samet.sortProducts(searchResults, 2);
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
System.out.println("--------------\n\n");
```

Search results displayed according to their name increasing order.

```
  System.out.println("--------------\n\n");
  System.out.println("Search results are sorting acording to their names to increasing order");
  samet.sortProducts(searchResults, 3);
  for(int i=0;i<searchResults.size();i++) {
      searchResults.get(i).print();
  }
  System.out.println("--------------\n\n");
```

Search results displayed according to discount amount increasing order.

```
System.out.println("--------------\n\n");
System.out.println("Search results are sorting acording to their discount amount increasing order");
samet.sortProducts(searchResults, 4);
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
System.out.println("--------------\n\n");
```

Search results displayed according to discount amount decreasing order.

```
System.out.println("Search results are sorting acording to their discount amount decreasing order");
samet.sortProducts(searchResults, 5);
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
System.out.println("--------------\n\n");
```

Search results displayed with both lower bound, upper bound or one of them.

```java
System.out.println("-------------\n\n");
System.out.println("Search results are filtering by lower bound 250");
searchResults = samet.filterResults(searchResults, 250, -1);
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
System.out.println("-------------\n\n");
System.out.println("Search results are filtering by upper bound 1000");
searchResults = samet.filterResults(searchResults, -1, 1000);
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
System.out.println("-------------\n\n");
System.out.println("Search results are filtering by lower bound 250 and upper bound 750");
searchResults = samet.filterResults(searchResults, 250, 750);
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
```

Orders created from search results.

```java
System.out.println("Customer creating order by first of search results and the second one:");
System.out.println(samet.createOrder(searchResults.get(0)));
System.out.println(samet.createOrder(searchResults.get(1)));
```

Customer search products of trader is done.

```java
System.out.println("Customer searching products of trader Alisha");
searchResults = samet.getProductsOfTrader("Alisha");
for(int i=0;i<searchResults.size();i++) {
    searchResults.get(i).print();
}
```

Trader created and loged in.

```java
System.out.println("-------------\n\n");
System.out.println("Trader is creating named as Alisha from csv file and logging In");
Trader alisha = new Trader("Alisha");
System.out.println(alisha.logIn(10000001, "123456"));
System.out.println("-------------\n\n");
```

Trader create product and added to system and product tried to add twice.

```java
Product product = new Product("Table", "12324241", "Metal Tables", 750, 400,"Alisha");
product.addCategory("Furniture");
product.addCategory("Tables");
System.out.println("Alisha adding product named as table");
System.out.println(alisha.addProduct(product));
System.out.println("-------------\n\n");
System.out.println("Alisha trying to add same product again");
System.out.println(alisha.addProduct(product));
System.out.println("-------------\n\n");
```

Trader edit the product price and edit the product which is not exist.

```
System.out.println("Alisha trying to edit table prices");
System.out.println(alisha.editProduct("12324241", 0, 0));
System.out.println("-------------\n\n");
System.out.println("Alisha trying to edit product which is not in the storage prices");
System.out.println(alisha.editProduct("34343", 0, 0));
System.out.println("-------------\n\n");
```

Trader remove product and try to remove it again.

```
System.out.println("Alisha trying to remove table product");
System.out.println(alisha.removeProduct(product.getID()));
System.out.println("-------------\n\n");
System.out.println("Alisha trying to remove table product again");
System.out.println(alisha.removeProduct(product.getID()));
System.out.println("-------------\n\n");
```

Another trader created to checks the functionality of orders.

```
Trader bigCompany = new Trader("Big Company");
System.out.println(bigCompany.logIn(10000154, "123456"));
System.out.println("-------------\n\n");
Queue<Order> orders = bigCompany.getOrders();
bigCompany.displayOrders(orders);
System.out.println("-------------\n\n");
```

Trader approve the first order and cancel the second order.

```
System.out.println("Big company meets first order.");
System.out.println(bigCompany.approveOrder(orders, orders.peek(), true));
System.out.println("Big company cancel second order.");
System.out.println(bigCompany.approveOrder(orders, orders.peek(), false));
```

4. RUNNING AND RESULTS

There is the results of driver. Menu functions are tested and worked fine.

```
---Test Started---
CSV file readed and 'products.txt' is created!
Trader's pasword is 123456
Customer created and It's registered with this password : 123456
Your customer ID: 10003181
true
-------------
Customer trying to register to system again:
false
-------------
Customer logging to system!
true
```

ID: SRTEGWKKRXZ5FEKN NAME: Mynte Solid Women's Cycling Shorts, Gym Shorts, Swim Shorts PRICE: 1499 DISCOUNTED PRICE: 649DESCRIBTION: Key Feat
CATEGORY: Clothing>>Women's Clothing>>Sports & Gym Wear>>Shorts>>Mynte Shorts>>Mynte Solid Women's Cycling Shorts, Gym Shorts, ..>>
ID: SRTEGWKHHVRW6WAF NAME: Mynte Solid Women's Cycling Shorts, Gym Shorts, Swim Shorts PRICE: 2495 DISCOUNTED PRICE: 949DESCRIBTION: Key Feat
CATEGORY: Clothing>>Women's Clothing>>Sports & Gym Wear>>Shorts>>Mynte Shorts>>Mynte Solid Women's Cycling Shorts, Gym Shorts, ..>>
ID: SRTEGWKHYZ7FTDBG NAME: Mynte Solid Women's Cycling Shorts, Gym Shorts, Swim Shorts PRICE: 1995 DISCOUNTED PRICE: 849DESCRIBTION: Key Feat
CATEGORY: Clothing>>Women's Clothing>>Sports & Gym Wear>>Shorts>>Mynte Shorts>>Mynte Solid Women's Cycling Shorts, Gym Shorts, ..>>
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ID: SRTEGWKKZTUGHFZ6 NAME: Mynte Solid Women's Cycling Shorts, Gym Shorts, Swim Shorts PRICE: 1499 DISCOUNTED PRICE: 649DESCRIBTION: Specific

Products which are searched filtering by category name as an Jeans & Shorts!
ID: SRTEG78F2PFK24ZJ NAME: Ashdan Solid Women's Basic Shorts PRICE: 999 DISCOUNTED PRICE: 549DESCRIBTION: Key Features of Ashdan Solid Women's Basic Shorts 97% Cotto
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Ashdan Shorts>>Ashdan Solid Women's Basic Short>>
ID: SRTEAHH2HK7NQS98 NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Yellow Nuteez P
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWE9A2SGUZ NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez Pri
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CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEJXHYXVAGCYRT NAME: Only Printed Women's Purple Basic Shorts PRICE: 1295 DISCOUNTED PRICE: 1295DESCRIBTION: Key Features of Only Printed Women's Purple Basic
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Only Shorts>>Only Printed Women's Purple Basic Short>>
ID: SRTEGKWYRMVXC7GE NAME: RIPR Self Design Women's Multicolor Basic Shorts PRICE: 4742 DISCOUNTED PRICE: 1897DESCRIBTION: Key Features of RIPR Self Design Women's M
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>RIPR Shorts>>RIPR Self Design Women's Multicolor Basic Short>>

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ID: SRTEJXHYXVAGCYRT NAME: Only Printed Women's Purple Basic Shorts PRICE: 1295 DISCOUNTED PRICE: 1295DESCRIBTION: Key Features of Only Printed Women's Purple Basic S
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Only Shorts>>Only Printed Women's Purple Basic Short>>

Search results are sorting acording to their discount amount decreasing order
ID: SRTEJXHYXVAGCYRT NAME: Only Printed Women's Purple Basic Shorts PRICE: 1295 DISCOUNTED PRICE: 1295DESCRIBTION: Key Features of Only Printed Women's Purple Bas
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Only Shorts>>Only Printed Women's Purple Basic Short>>
ID: SRTEAHH2HK7NQS98 NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Yellow Nutee
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWE9A2SGUZ NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWJ4KHCRXE NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEG78F2PFK24ZJ NAME: Ashdan Solid Women's Basic Shorts PRICE: 999 DISCOUNTED PRICE: 549DESCRIBTION: Key Features of Ashdan Solid Women's Basic Shorts 97% Co
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Ashdan Shorts>>Ashdan Solid Women's Basic Short>>
ID: SRTEGKWYRMVXC7GE NAME: RIPR Self Design Women's Multicolor Basic Shorts PRICE: 4742 DISCOUNTED PRICE: 1897DESCRIBTION: Key Features of RIPR Self Design Women'
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>RIPR Shorts>>RIPR Self Design Women's Multicolor Basic Short>>

Search results are filtering by lower bound 250
ID: SRTEJXHYXVAGCYRT NAME: Only Printed Women's Purple Basic Shorts PRICE: 1295 DISCOUNTED PRICE: 1295DESCRIBTION: Key Features of Only Printed Women's Purple
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Only Shorts>>Only Printed Women's Purple Basic Short>>
ID: SRTEAHH2HK7NQS98 NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Yellow N
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWE9A2SGUZ NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nut
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWJ4KHCRXE NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nut
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEG78F2PFK24ZJ NAME: Ashdan Solid Women's Basic Shorts PRICE: 999 DISCOUNTED PRICE: 549DESCRIBTION: Key Features of Ashdan Solid Women's Basic Shorts 97
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Ashdan Shorts>>Ashdan Solid Women's Basic Short>>
ID: SRTEGKWYRMVXC7GE NAME: RIPR Self Design Women's Multicolor Basic Shorts PRICE: 4742 DISCOUNTED PRICE: 1897DESCRIBTION: Key Features of RIPR Self Design W
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>RIPR Shorts>>RIPR Self Design Women's Multicolor Basic Short>>

Search results are filtering by upper bound 1000
ID: SRTEAHH2HK7NQS98 NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Yellow Nuteez Prin
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWE9A2SGUZ NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez Printe
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWJ4KHCRXE NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez Printe
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEG78F2PFK24ZJ NAME: Ashdan Solid Women's Basic Shorts PRICE: 999 DISCOUNTED PRICE: 549DESCRIBTION: Key Features of Ashdan Solid Women's Basic Shorts 97% Cotton,
CATEGORY: Clothing>>Women's Clothing>>Western Wear>>Jeans & Shorts>>Shorts>>Ashdan Shorts>>Ashdan Solid Women's Basic Short>>

```
Search results are filtering by lower bound 250 and upper bound 750
ID: SRTEAHH2HK7NQS98 NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Yellow Nuteez Print
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWE9A2SGUZ NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez Printed
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
ID: SRTEAJNWJ4KHCRXE NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez Printed
CATEGORY: Clothing>>Women's Clothing>>Fusion Wear>>Jeans & Shorts>>Shorts>>Nuteez Short>>
Customer creating order by first of search results and the second one:
true
true
```

```
Customer searching products of trader Alisha
ID: SRTEH2FF9KEDEFGF NAME: Alisha Solid Women's Cycling Shorts PRICE: 999 DISCOUNTED PRICE: 379DESCRIBTION: Key Features of Alisha Solid Women's Cycling Shorts Cotton Ly
CATEGORY: Clothing>>Women's Clothing >>Lingerie, Sleep & Swimwear >>Shorts >>Alisha Shorts >>Alisha Solid Women's Cycling Shorts>>
ID: SRTEH2F6HUZMQ6SJ NAME: Alisha Solid Women's Cycling Shorts PRICE: 699 DISCOUNTED PRICE: 267DESCRIBTION: Key Features of Alisha Solid Women's Cycling Shorts Cotton Ly
CATEGORY: Clothing>>Women's Clothing >>Lingerie, Sleep & Swimwear >>Shorts >>Alisha Shorts >>Alisha Solid Women's Cycling Shorts>>
ID: SRTEH2FVVKRBAXHB NAME: Alisha Solid Women's Cycling Shorts PRICE: 1199 DISCOUNTED PRICE: 479DESCRIBTION: Key Features of Alisha Solid Women's Cycling Shorts Cotton L
CATEGORY: Clothing>>Women's Clothing >>Lingerie, Sleep & Swimwear >>Shorts >>Alisha Shorts >>Alisha Solid Women's Cycling Shorts>>
ID: SRTEH2FVUHAAVH9X NAME: Alisha Solid Women's Cycling Shorts PRICE: 1199 DISCOUNTED PRICE: 479DESCRIBTION: Key Features of Alisha Solid Women's Cycling Shorts Cotton L
CATEGORY: Clothing>>Women's Clothing >>Lingerie, Sleep & Swimwear >>Shorts >>Alisha Shorts >>Alisha Solid Women's Cycling Shorts>>
ID: SRTEH2FGBDJGX8FW NAME: Alisha Solid Women's Cycling Shorts PRICE: 999 DISCOUNTED PRICE: 379DESCRIBTION: Key Features of Alisha Solid Women's Cycling Shorts Cotton Ly
CATEGORY: Clothing>>Women's Clothing >>Lingerie, Sleep & Swimwear >>Shorts >>Alisha Shorts >>Alisha Solid Women's Cycling Shorts>>
ID: SRTEH2FECMGNZJXJ NAME: Alisha Solid Women's Cycling Shorts PRICE: 999 DISCOUNTED PRICE: 379DESCRIBTION: Key Features of Alisha Solid Women's Cycling Shorts Cotton Ly
CATEGORY: Clothing>>Women's Clothing >>Lingerie, Sleep & Swimwear >>Shorts >>Alisha Shorts >>Alisha Solid Women's Cycling Shorts>>
--------------
```

Trader is creating named as Alisha from csv file and logging In
true

Alisha adding product named as table
true

Alisha trying to add same product again
false

Alisha trying to edit table prices
true

Alisha trying to edit product which is not in the storage
false

Alisha trying to remove table product
true

```
Alisha trying to remove table product again
false
--------------

New trader logging in as an Big Company to check orders.
true
--------------

1) ID: SRTEAHH2HK7NQS98 NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Yellow Nuteez Pr
CATEGORY: Clothing>> Women's Clothing >> Fusion Wear >> Jeans & Shorts >> Shorts >> Nuteez Short>>
1) ID: SRTEAJNWE9A2SGUZ NAME: Nuteez Printed Women's Basic Shorts PRICE: 399 DISCOUNTED PRICE: 299DESCRIBTION: Nuteez Printed Women's Basic Shorts - Buy Blue Nuteez Prin
CATEGORY: Clothing>> Women's Clothing >> Fusion Wear >> Jeans & Shorts >> Shorts >> Nuteez Short>>
--------------
```

```
Big company meets first order.
true
Big company cancel second order.
true
1)Customer Menu
2)Trader Menu
3)Exit
```