

# **Gebze Technical University**

## **Computer Engineering**

**CSE 222- 2021**  
**HOMEWORK 05 REPORT**

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# 1 Problem Solution Approach

First I created classes :

-> User Classes : Person(abstract), Customer and trader

-> Shop System ,Product and Order classs

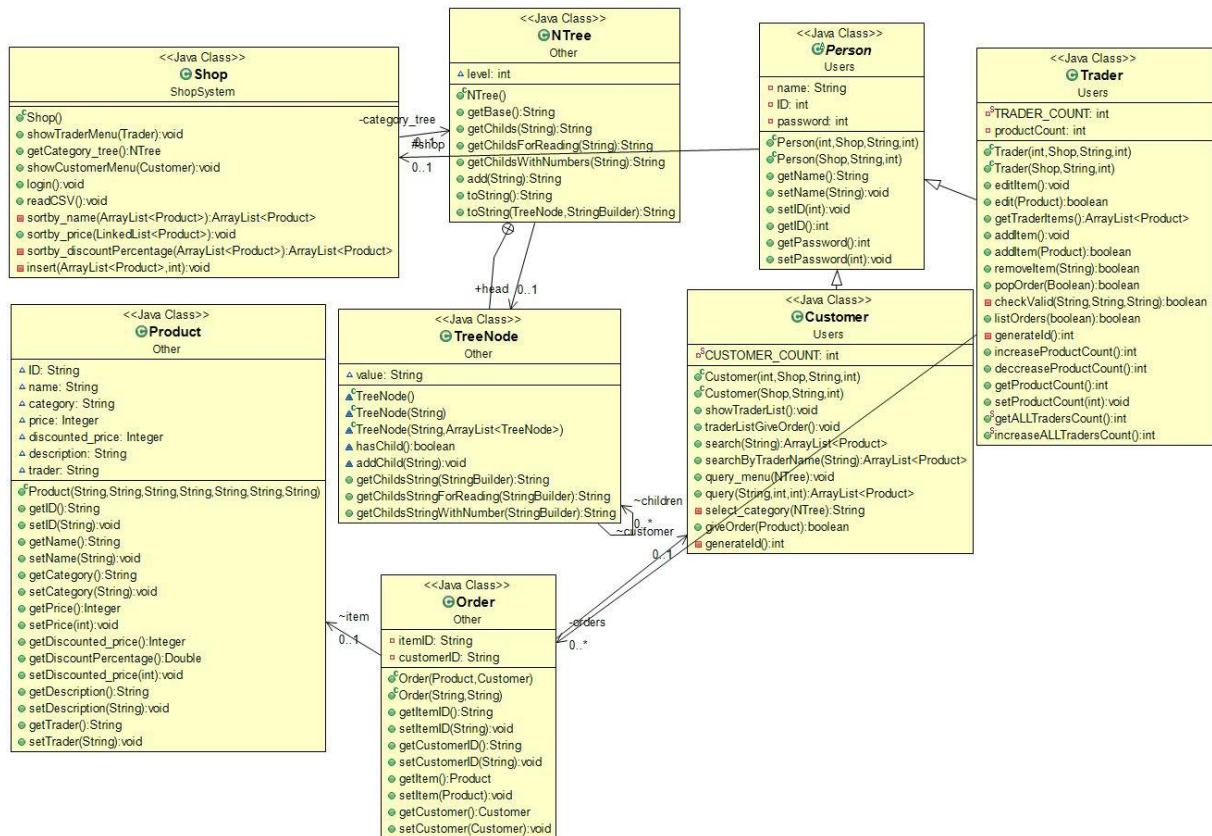
Then I realized that I need tree that can store categories

I read .csv file and created product.txt, users.txt and orders.txt.

I used arraylists for searching, linked list for insertion sorting with iterator, queue for orders, tree for categories and Hash table for reading csv then fastly finding unique trader names.

I created login system and menu for both users.

## 2 Class Diagrams



## 3 RESULT

### 3.1 Test Cases

Searching item with keyword

```
customer.showTraderList();
ArrayList<Product> products = customer.search( keyword: "Boot");

if (products == null){
    System.out.println("\n\nThere is no item with this keyword\n");
}else {
    for (int j= 0 ; j < products.size(); j++){
        System.out.println("\n"+ "ITEM: "+(j+1));
        System.out.println("\n"+ (j+1) + "th item : " + products.get(j).getName());
        System.out.println("description: " + products.get(j).getDescription());
        System.out.println("price: " + products.get(j).getPrice());
        System.out.println("discounted price: " + products.get(j).getDiscounted_price());
        System.out.println("trader: " + products.get(j).getTrader() + "\n");
    }
}
```

```
183th item : Knotty Derby Burbage Short Boots
description: Knotty Derby Burbage Short Boots - Buy Knotty Derby Burbage Short Boots - 198929-H3 only for Rs. 1601 from Flipkart.com. Only Genuine Products. 30 Day Replacement
price: 2288
discounted price: 1601
trader: BigCompany

ITEM: 184

184th item : Arden Devon Derby Boots
description: Arden Devon Derby Boots - Buy Arden Devon Derby Boots - 198856-BE2 only for Rs. 1744 from Flipkart.com. Only Genuine Products. 30 Day Replacement Guarantee. Free S
price: 3488
discounted price: 1744
trader: BigCompany

ITEM: 185

185th item : Arstoreindia Boots
description: Arstoreindia Boots
price: 2199
discounted price: 949
trader: BigCompany
```

## Searching item with trader name that doesnt exist

```
ArrayList<Product> products = customer.searchByTraderName("Fancy Store 999");

if (products == null){
    System.out.println("\n\nThis trader doesn't exist\n");
}else {
    for (int j= 0 ; j < products.size(); j++){
        System.out.println("\n"+ (j+1) + "th item : " + products.get(j).getName());
        System.out.println("description: " + products.get(j).getDescription());
        System.out.println("price: " + products.get(j).getPrice());
        System.out.println("discounted price: " + products.get(j).getDiscounted_price());
        System.out.println("trader: " + products.get(j).getTrader() + "\n");
    }
}
```

This trader doesn't exist

## Searching item with exist trader name

```
products = customer.searchByTraderName("Alisha");

if (products == null){
    System.out.println("\n\nThis trader doesn't exist\n");
}else {
    for (int j= 0 ; j < products.size(); j++){
        System.out.println("\n"+ (j+1) + "th item : " + products.get(j).getName());
        System.out.println("description: " + products.get(j).getDescription());
        System.out.println("price: " + products.get(j).getPrice());
        System.out.println("discounted price: " + products.get(j).getDiscounted_price());
        System.out.println("trader: " + products.get(j).getTrader() + "\n");
    }
}
```

```
ITEM: 1

1th item : Alisha Solid Women's Cycling Shorts
description: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra Navy, Red, Navy,Specifications of Alisha Solid Women's Cycling Shorts Shorts Details Number of
price: 999
discounted price: 379
trader: Alisha

ITEM: 2

2th item : Alisha Solid Women's Cycling Shorts
description: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra Black, Red,Specifications of Alisha Solid Women's Cycling Shorts Shorts Details Number of Conte
price: 699
discounted price: 267
trader: Alisha

ITEM: 3

3th item : Alisha Solid Women's Cycling Shorts
description: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra Navy, Red, White, Red,Specifications of Alisha Solid Women's Cycling Shorts Shorts Details Numb
price: 1199
discounted price: 479
trader: Alisha
```

## Query item with selected category, max and min prices

```
products = customer.query( selected_cat: "Clothing >> Men's Clothing", selected_max: 1000, selected_min: 200);

if (products == null){
    System.out.println("There are no such element that you are looking");
}else {
    System.out.println("\n\nQueried Items: \n");
    for (i = 0; i < products.size(); i++) {
        System.out.println("\nITEM: " + (i + 1));
        System.out.println("\n" + (i + 1) + "th item : " + products.get(i).getName());
        System.out.println("description: " + products.get(i).getDescription());
        System.out.println("price: " + products.get(i).getPrice());
        System.out.println("discounted price: " + products.get(i).getDiscounted_price());
        System.out.println("trader: " + products.get(i).getTrader() + "\n");
    }
}
```

ITEM: 318

318th item : GetAbhi Printed Tie  
description: GetAbhi Printed Tie - Buy Blue GetAbhi Printed Tie For Only Rs. 501 Online in India. Shop Online For Apparels. Huge Collection of Branded Clothes  
price: 501  
discounted price: 501  
trader: BigCompany

ITEM: 319

319th item : GetAbhi Printed Tie  
description: GetAbhi Printed Tie - Buy Yellow GetAbhi Printed Tie For Only Rs. 451 Online in India. Shop Online For Apparels. Huge Collection of Branded Clothes  
price: 451  
discounted price: 451  
trader: BigCompany

ITEM: 320

320th item : Lowe Alpine Face Cap  
description: Lowe Alpine Face Cap - Buy Black Lowe Alpine Face Cap For Only Rs. 999 Online in India. Shop Online For Apparels. Huge Collection of Branded Clothes  
price: 999  
discounted price: 999  
trader: BigCompany

## Ordering exist product and non exist product

```
Product product = new Product( ID: "SRTEH2FF9KEDEF6F", name: "Alisha Solid Women's Cycling Shorts", category: "Clothing >  
if (customer.giveOrder(product)){  
    System.out.println("Order is Successful");  
}else {  
    System.out.println("Order is UNSuccessful, Already ordered");  
}  
System.out.println("Second time same item ordering");  
if (customer.giveOrder(product)){  
    System.out.println("Order is Successful");  
}else {  
    System.out.println("Order is UNSuccessful, Already ordered");  
}  
}
```

```
Order is Successful  
Second time same item ordering  
Order is UNSuccessful, Already ordered
```

## Removing item (exist, removed, not exist cases)

```
if (trader.removeItem( ItemID: "SRTEH2FVVKRBAXHB")){  
    System.out.println("Remove is Successful");  
}else {  
    System.out.println("Remove is UNSuccessful, Already ordered or does not exist");  
}  
System.out.println("Trying to Remove same item");  
if (trader.removeItem( ItemID: "SRTEH2FVVKRBAXHB")){  
    System.out.println("Remove is Successful");  
}else {  
    System.out.println("Remove is UNSuccessful, Already ordered or does not exist");  
}  
System.out.println("Trying to Remove another does not exist item");  
if (trader.removeItem( ItemID: "AAAAAAAAAAAAAAAAAAAA")){  
    System.out.println("Remove is Successful");  
}else {  
    System.out.println("Remove is UNSuccessful, Already ordered or does not exist");  
}  
}
```

```
Remove is Successful  
Trying to Remove same item  
This item does NOT belong this trader  
Remove is UNSuccessful, Already ordered or does not exist  
Trying to Remove another does not exist item  
This item does NOT belong this trader  
Remove is UNSuccessful, Already ordered or does not exist
```

## Add Product (Not exist and exist cases)

```
Product willadd = new Product( ID: "ABCDEFH46ZS", name: "ADDED ITEM", category: "UNIQUE CATEGORY >> UNIQUE SUB CATEGORY", price: "999");

if (trader.addItem(willadd)){
    System.out.println("Successful adding product");
}else{
    System.out.println("UNSuccessful adding, try unique ID");
}
System.out.println("Trying to Add same item");
if (trader.addItem(willadd)){
    System.out.println("Successful adding product");
}else{
    System.out.println("UNSuccessful adding, try unique ID");
}
```

```
Successful adding product
Trying to Add same item
UNSuccessful adding, try unique ID
```

## Editing Product (Exist and not exist cases)

```
//Editing ITEM
product.setPrice(999);
product.setDescription("EDITED DESCRIPTION");
product.setDiscounted_price(14);
product.setName("EDITED NAME");

if (trader.edit(product)){
    System.out.println("Successful editing product");
}else{
    System.out.println("UNSuccessful editing product, product ID does not exist");
}
System.out.println("Trying to edit not existed ID");
product.setID("SGFGJDGHJGKBGFGHFG");
if (trader.edit(product)){
    System.out.println("Successful editing product");
}else{
    System.out.println("UNSuccessful editing product, product ID does not exist");
}
```

```
Successful editing product
Trying to edit not existed ID
This item does NOT belong this trader
UNSuccessful editing product, product ID does not exist
```

Showing orders, then polling order from queue, then polling order from empty queue

```
if (trader.listOrders( poll: false)){
    if (trader.popOrder( remove: true)){
        System.out.println("Ordered Item successfully sold");
    }else{
        System.out.println("Ordered Item does not exist");
    }
}
System.out.println("Trying to poll while there are no orders");
if (trader.popOrder( remove: true)){
    System.out.println("Ordered Item successfully sold");
}else{
    System.out.println("Ordered Item does not exist or there are no order left");
}
```

List Of Orders of Alisha

Order: 1

1th Order: || CustomerID : 70000007 ordered || itemID : SRTEH2FF9KEDEF6F

Ordered Item successfully sold

Trying to poll while there are no orders

Ordered Item does not exist or there are no order left



### 3.2 Running Commands

Login as a user

```
Welcome to Everything Is Here

press 1 for login.
press 2 for exit whole program.
Option: 1
Enter ID: 700000000
Enter Password: 123456
LOGIN Successful. Ahmet Welcome to System as a Customer
```

```
Customer Menu:

1-> search item.
2-> query item.
3-> show items from trader.
4-> Search after that query item.
0-> Exit from customer menu
Select one of the operations :4
```

Searching then querying

```
1-> by name (biggest to smallest)
2-> by price (smallest to biggest)
3-> by discount prcentage (biggest to smallest)
4-> do not sort
Select one of the sort :2
Enter Keyword: Boot
```

```
Select Query types:

1 -> Select Category : (Now: ALL)
2 -> Select Discounted Max Price : (Now: 99999)
3 -> Select Discounted Min Price : (Now: 0)
4 -> Query with theese

Select operation:1
```

All Categories ::

## Categories

- 1-> Clothing
- 2-> Furniture
- 3-> Footwear
- 4-> Pet Supplies
- 5-> Eternal Gandhi Super Series Crystal Paper Weight...
- 6-> Pens & Stationery
- 7-> Sports & Fitness
- 8-> Beauty and Personal Care
- 9-> Bengal Blooms Rose Artificial Plant with Pot (3...
- 10-> Bags, Wallets & Belts
- 11-> Home Decor & Festive Needs
- 12-> Automotive
- 13-> Tools & Hardware
- 14-> Vishudh Printed Women's Straight Kurta
- 15-> Vishudh Printed Women's Anarkali Kurta
- 253-> Speedwav 186158 Manual Rear View Mirror (Right, ...
- 254-> Small Toes Bellies
- 255-> EASIES Solid Single Breasted Casual Men's Blazer
- 256-> Clovia Lingerie Set
- 257-> Speedwav 186926 Royal Enfield 350 Twin Spark LED...
- 258-> Speedwav 186879 Bajaj Pulsar 200 NS DTS-i LED In...
- 259-> Household Supplies
- 260-> Pazel Slim Fit Men's Jeans
- 261-> SMART TRADERS Girls Bellies
- 262-> Corcepts Universal Tablet HD Ultra Clear Transpa...
- 263-> Areon Luxurious Fragrance Long Lasting Car,Home,...
- 264-> UNIQUE CATEGORY

Enter category that numbered: 3

Categories

1-> Women's Footwear

2-> Men's Footwear

3-> Kids' & Infant Footwear

4-> REMSON INDIA Women Flats

If you want to exit, type 0:

Enter category that numbered: 0

Select Query types:

1 -> Select Category : (Now: Categories >> Footwear)

2 -> Select Discounted Max Price : (Now: 99999)

3 -> Select Discounted Min Price : (Now: 0)

4 -> Query with these

Select operation:2

Type Max Price :6500

Select Query types:

1 -> Select Category : (Now: Categories >> Footwear)

2 -> Select Discounted Max Price : (Now: 6500)

3 -> Select Discounted Min Price : (Now: 0)

4 -> Query with these

Select operation:3

Type Min Price :150

## Found items listed

Select Query types:

- 1 -> Select Category : (Now: Categories >> Footwear)
- 2 -> Select Discounted Max Price : (Now: 6500)
- 3 -> Select Discounted Min Price : (Now: 150)
- 4 -> Query with these

Select operation:4

ITEM: 1

1th item : Anand Archies Boots

description: Anand Archies Boots - Buy Anand Archies Boots - AA-36 only for Rs. 499 from Flipkart.com. Only Genuine Products

price: 499

discounted price: 499

trader: BigCompany

ITEM: 2

2th item : Do Bhai Boots

description: Do Bhai Boots

price: 799

discounted price: 699

trader: BigCompany

price: 5999

discounted price: 3599

trader: BigCompany

ITEM: 181

181th item : Magnum Footwear Lifestyle Boots

description: Magnum Footwear Lifestyle Boots - Buy Magnum Footwear Lifestyle Boots - 1588 only for Rs. 3199 from Flipkart.com. Only Genuine Products. 30 Day Return

price: 5999

discounted price: 3199

trader: BigCompany

Which item that numbered do you want to order ? : 181

Order Successful

Customer Menu:

1-> search item.

2-> query item.

3-> show items from trader.

4-> Search after that query item.

0-> Exit from customer menu

Select one of the operations :3

Trader name list:

Alisha

FabHomeDecor

BigCompany

Sicons

Eternal Gandhi

dilli bazaaar

Ladela

Carrel

Freelance

Style Foot

dongli

SWAGGA

Corcepts

Areon

Sinina

Aarushi Fashion

Ambika Lahenga

Elite Collection

999store

Uberlyfe

Fun To See

Enter Trader name: Alisha

ITEM: 1

1th item : Alisha Solid Women's Cycling Shorts

description: Key Features of Alisha Solid Women's Cycling Shorts Cotton

price: 699

discounted price: 267

trader: Alisha

ITEM: 2

2th item : Alisha Solid Women's Cycling Shorts

description: Key Features of Alisha Solid Women's Cycling Shorts Cotton

price: 1199

discounted price: 479

Showing items of trader,  
but first writing trader  
names.

## Ordering item that indexed

```
ITEM: 4

4th item : Alisha Solid Women's Cycling Shorts
description: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra Black, White, White,Specifications of Alisha Solid Women's Cy
price: 999
discounted price: 379
trader: Alisha

ITEM: 5

5th item : ADDED ITEM
description: ADDED ITEM DESCRIPTION
price: 9999
discounted price: 4667
trader: Alisha

Which item that numbered do you want to order ? : 4

Order Successful
```

## Login as a trader

```
Welcome to Everything Is Here

press 1 for login.
press 2 for exit whole program.
Option: 1
Enter ID: 10000000
Enter Password: 123456
LOGIN Successful. Alisha Welcome to System as a Trader

Trader Menu:

1-> Add item.
2-> Remove item.
3-> Edit item.
4-> List and Poll orders.
5-> Show this traders items.
0-> Exit from trader menu
Select one of the operations :1
```

Adding product with unique id

```
Products informations

Type Unique ID :gjpgfhkhjk
Type Name:Added super item
Type Price :596
Type Discounted Price :111
Type Description :this item is super
How many categories do you want to add :3
Type Category 1:Car
Type Category 2:electronic
Type Category 3:cd driver
Successful adding product
```

Removing item just we added

```
Trader Menu:

1-> Add item.
2-> Remove item.
3-> Edit item.
4-> List and Poll orders.
5-> Show this traders items.
0-> Exit from trader menu
Select one of the operations :2
Give ID of product that you want to remove: gjpgfhkhjk
Sucessfull removal
```

## Editing item, shows item list

```
Trader Menu:

1-> Add item.
2-> Remove item.
3-> Edit item.
4-> List and Poll orders.
5-> Show this traders items.
0-> Exit from trader menu
Select one of the operations :3

ITEM: 1

1th item : Alisha Solid Women's Cycling Shorts
description: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra Black, Re
price: 699
discounted price: 267

ITEM: 2

2th item : Alisha Solid Women's Cycling Shorts
description: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra White, B
price: 1199
```

## Selecting product will edited

```
Which item that numbered do you want to edit ? : 3

What do you want to edit ?

1-> Product name. Now: Alisha Solid Women's Cycling Shorts
2-> Product description. Now: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra Black, White, Wh
3-> Product price. Now: 999
4-> Product discounted price. Now: 379
0-> Edit
Select operation :1
Name: Alisha shorts

What do you want to edit ?

1-> Product name. Now: Alisha shorts
2-> Product description. Now: Key Features of Alisha Solid Women's Cycling Shorts Cotton Lycra Black, White, Wh
3-> Product price. Now: 999
4-> Product discounted price. Now: 379
0-> Edit
```



Selecting and editing product, it will show each step

```
What do you want to edit ?

1-> Product name. Now: Alisha shorts
2-> Product description. Now: edited
3-> Product price. Now: 999
4-> Product discounted price. Now: 379
0-> Edit
Select operation :3
Price: 1111111111
```

```
What do you want to edit ?

1-> Product name. Now: Alisha shorts
2-> Product description. Now: edited
3-> Product price. Now: 1111111111
4-> Product discounted price. Now: 379
0-> Edit
Select operation :4
Discounted Price: 432
```

```
What do you want to edit ?
```

Edited

```
What do you want to edit ?

1-> Product name. Now: Alisha shorts
2-> Product description. Now: edited
3-> Product price. Now: 1111111111
4-> Product discounted price. Now: 432
0-> Edit
Select operation :0

Successful Editing
```

Polling order list all orders and polls order from queue either meet or cancel

If you select cancel it won't remove item from product.txt. But if you meet, it will remove item from products.txt

```
Trader Menu:
```

```
1-> Add item.
```

```
2-> Remove item.
```

```
3-> Edit item.
```

```
4-> List and Poll orders.
```

```
5-> Show this traders items.
```

```
0-> Exit from trader menu
```

```
Select one of the operations :4
```

```
List Of Orders of Alisha
```

```
Order: 1
```

```
1th Order: || CustomerID : 70000000 ordered || itemID : SRTEH2FGBDJGX8FW
```

```
Do you want to poll order ? (yes/no): yes
```

```
cancel or meet ? (cancel/meet): meet
```

```
Successful poll
```