GTU Department of Computer Engineering

CSE 222/505 - Spring 2021 Homework 6

Report

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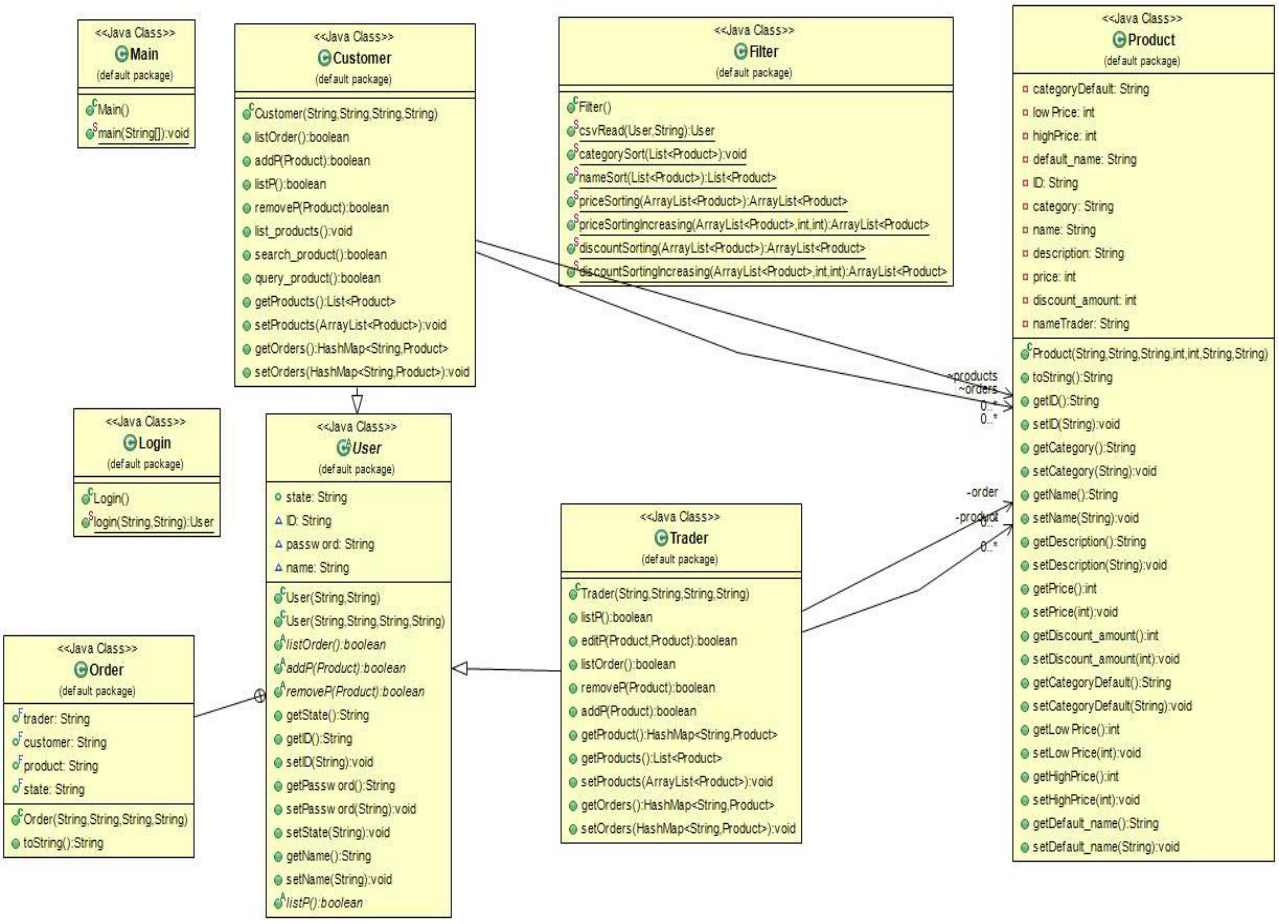
Problem solution approach;

I divided the solution to the problem into 4 phases. My approaches to the problem was as follows;

Reading files ,sorting products, users implementation ,user authentication.Firstly ; I read the csv file after then create the product file from it. Users implementation I created a user abstract class because there are two user who have same methods and fields. Orders and HashMap have been implemented inside of the users.For sorting products i thought two different approach bubblesort and heapsort.I used bubble sort for name and category , insertionsort for price and discount amount. User authentication has been implemented like given the assignment. (The user ID is an eight-digit unique number and the password consists of six characters.) After the authentication process is done properly, the program shows a menu to the users with respect to their user role. Which data structure is used to implement which part of the application and why i do them? :Array List and Linked List have been used all the class , HashMap for product.

Class Diagrams;



Test Cases:

Test Case #	Test Case Description	Test Data	Expected Result	Actual Result	Pass/Fail
1	Add product	addP()	add product to system	As expected	Pass
2	Remove Product	removeP()	Remove product from system	As expected	Pass
3	Edit Product	editP()	Change product of features	As expected	Pass
4	List Product	listP();	List all of prodcuts	As expected	Pass
5	List Orders	listOrder()	List all of them	As expected	Pass
6	Sort by price increasing order	Sort _price_inc()	Sort price	As expected	Pass
7	Sort by price decreasing order	Sort _price_dec()	Sort price	As expected	Pass
8	Sort by discount amount increasing order	Sort _amount _inc ()	Sort discount amount	As expected	Pass
9	Sort by discount amount decreasing order	Sort _price_amount _dec()	Sort discount amount	As expected	Pass
10	Sort by name	Sort _name ()	Sort name	As expected	Pass
11	Sort by category	Sort _category()	Sort Category	As expected	Pass

Running And Result;

Test	Result

T1	`product = new Product("SRTEH2FF9KEDEFGF","Alisha Solid Women`
	`if(trader.addP(product) == true){`
	`System.out.println("passed.->addP");`
	`}else{`
	`System.out.println("failed");`
	`}`
	passed.->addP

T2	`if(trader.removeP(trader.getProduct().get("SRTEH2FF9KEDEFGF")) ==`
	`System.out.println("passed.->removeP");`
	`}else{`
	`System.out.println("Failed");`
	`}`
	passed.->removeP

T3	`if(trader.editP(trader.getProduct().get("SRTEH2FF9KEDEFGF"), produ`
	`System.out.println("passed.->editP");`
	`}else{`
	`System.out.println("Failed");`
	`}`
	passed.->editP

T4	`if(trader.listP() == true){`
	`System.out.println("passed.->listP");`
	`}else{`
	`System.out.println("Failed");`
	`}`
	passed.->listP

T5	`if(trader.listOrder() == true){`
	`System.out.println("passed.->listOrder");`
	`}else{`
	`System.out.println("Failed");`
	passed.->listOrder

T6	`Filter.categorySort(trader.getProducts());` `ArrayList<Product> name = (ArrayList<Product>) Filter.nameSort( trader.getProduct`
T7	`ArrayList<Product> discountSort = Filter.discountSorting((ArrayList<Product>) trader.getProdu` `Filter.categorySort(trader.getProducts());`
T8	`ArrayList<Product> priceSort = (ArrayList<Product>) Filter.priceSorting((ArrayList<Product>) trader.getPro`