

GIT Department of Computer Engineering
CSE 222/505 - Spring 2021
Homework 1 # Report

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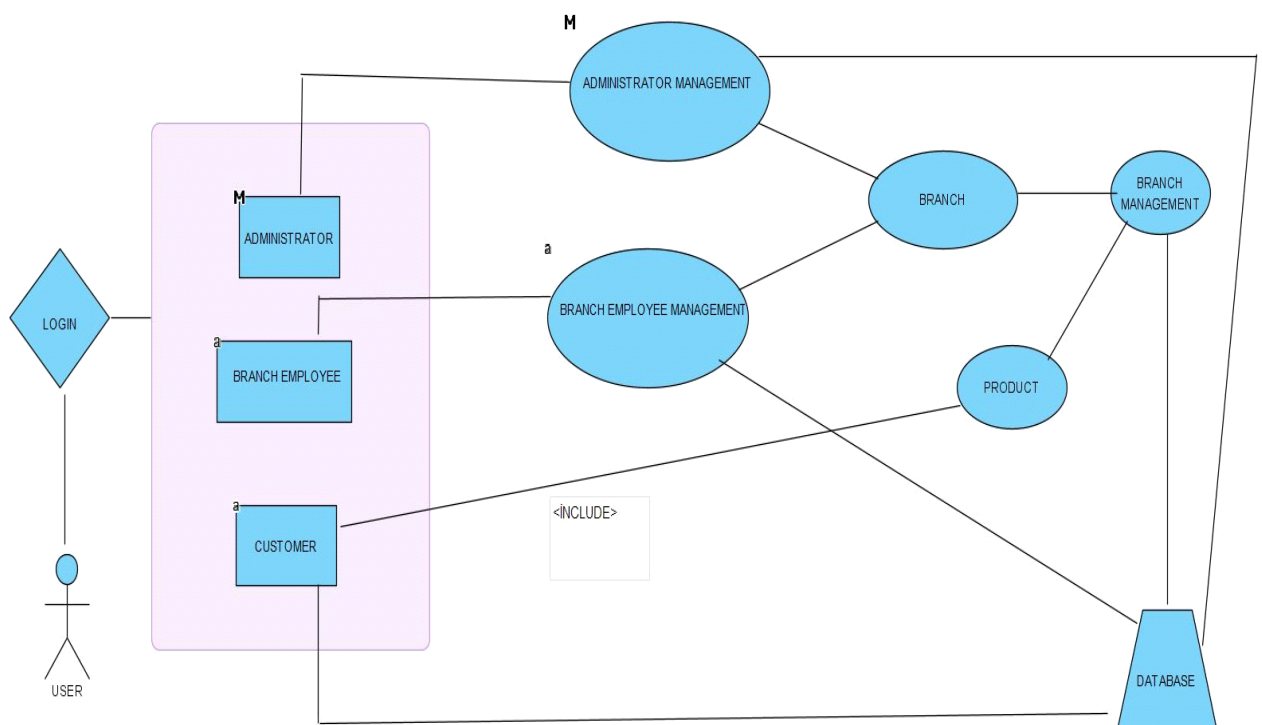
1)SYSTEM REQUIREMENTS

The main purpose of the system is to sell online and in the store. There are 3 types of users, first the user must log in to the system. The admin, branch employee and customer all have their own authorities. All information about these users and branches are stored in the database class. The manager has the authority to add and delete branches and employees. 5 stocks are automatically created for each product type in each branch. If the branch employee warns about the product stock, the manager can increase the stock of this product. The customer and the branch employee can query the customer's previous orders with the customer number. When the customer is registered, the system automatically generates a customer number. Orders are stored in the Product [] object. Each customer has its own Product [] object and is updated with

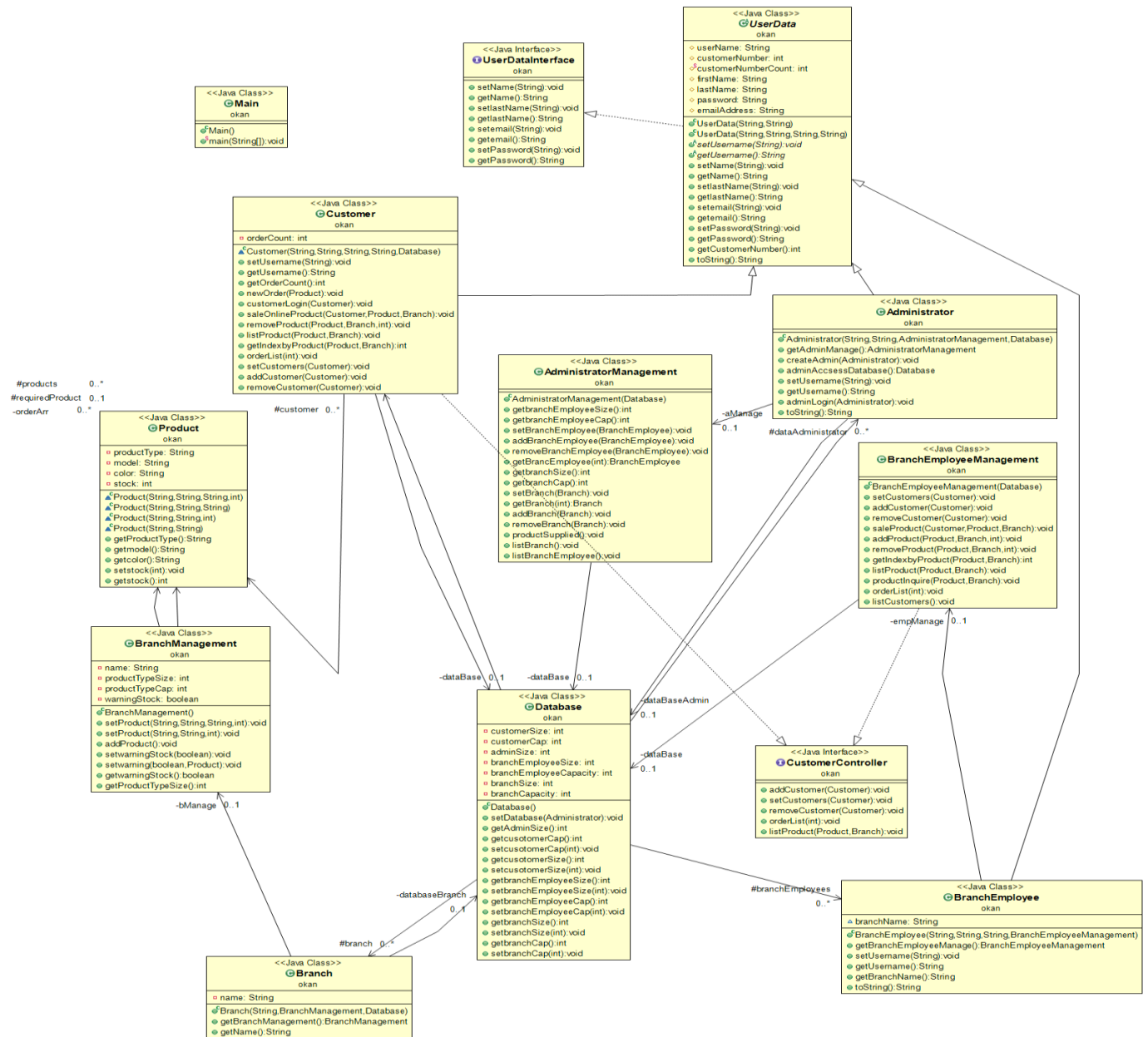
each order. Branch employee can access all information about the customer and delete the customer register. To compile the system use the provided Makefile in src folder.

2)USE CASE DIAGRAMS

The user has 4 roles. Authorities of admin and branch employees are defined in a class belonging to them. Customer's authorities are defined in customer class. Adminin can add and remove branch and branch employees, branch employee only interacts with products and customers in the branch. The customer interacts with the products in the branch and their common information is stored in the database class.



3) CLASS DIAGRAMS



4)PROBLEM SOLUTION APPROACH

Is the problem asking users to authorize and restrict. My primary goal was to establish a connection with classes representing these users.

I mean, a branch officer can see the information seen by a different branch officer and make changes on it. For this, I opened **admin**, **employee** and **branch** related management classes.

And I initialized these classes in the driver. In this way, each user provided the purpose of accessing common data with the relevant object parameter.

I also had to check the login information and the customers and employees had to have **common access to the product**. I tried to collect the employee, product and customer information in general there.

Thus, the customer can access his own information and the branch employee can also access the information of the customer he/she wants.

I thought it might be an obstacle to use the **container class** as we were asked to use only arrays in homework. So each user was connecting with a common object in their class. And I store the necessary information in the **database class in the objects of these classes**.

5)TEST CASES

```
//database class in which the necessary data is stored
Database objDatabase = new Database();

//Administrators will gain access using the parameter in this manager object to have common access.
AdministratorManagement objAdminManagment = new AdministratorManagement(objDatabase);

//I'm creating a new admin object, but I haven't registered to the system yet.
//With database object, common access to data can be provided.
Administrator admin = new Administrator("Alex","123",objAdminManagment,objDatabase);

//I save the admin object whose information I have prepared as an administrator for system.
admin.createAdmin(admin);

//and now I can login successfully with this information.
//Compares the information entered with the information in the data structure and results.
admin.adminLogin(admin);

//****NOTE****//
//If I tried to enter with this information without registering, an error message would be received.
```

5)RUNNING AND RESULTS

```
*****TWO ADMIN REGISTRATION HAS BEEN COMPLETED*****
Admin registration successful.
Admin registration successful.

<<<<<<TEST FOR ADMINISTRATORS>>>>>>
Admin Login successful.

*****TEST FOR ADD TWO BRANCHES*****
Branch successfully added.
Branch successfully added.
1. Branch) Ankara
2. Branch) Bursa

*****TEST FOR ADD TWO BRANCHES*****
Branch successfully added.
Branch successfully added.
1. Branch) Ankara
2. Branch) Bursa
3. Branch) Istanbul
4. Branch) Izmir

*****TEST FOR REMOVE ONE BRANCH*****
1. Branch) Ankara
2. Branch) Bursa
3. Branch) Izmir

*****TEST FOR ADD THREE BRANCH EMPLOYEE AND LIST*****
Branch Employee successfully added.
Branch Employee successfully added.
Branch Employee successfully added.
1. Branch Employee) Ahmet - Ankara branch
2. Branch Employee) Mehmet - Bursa branch
3. Branch Employee) Melike - Izmir branch

*****TEST FOR REMOVE ONE BRANCH EMPLOYEE AND LIST*****
Branch Employee successfully removed.
1. Branch Employee) Mehmet - Bursa branch
2. Branch Employee) Melike - Izmir branch

*****TEST FOR SUPPLIED PRODUCT*****
There is no product to be supplied.
```

ADMIN-EXCEPTION HANDLING

*****TWO ADMIN REGISTRATION HAS BEEN COMPLETED*****

Admin registration successful.

Admin registration successful.

<<<<<<TEST FOR ADMINISTRATORS>>>>>>

Admin Login successful.

*****TEST FOR ADD TWO BRANCHES*****

Branch successfully added.

Branch successfully added. |

1. Branch) Ankara

2. Branch) Bursa

*****TEST FOR ADD TWO BRANCHES*****

Branch successfully added.

Branch successfully added.

1. Branch) Ankara

2. Branch) Bursa

3. Branch) Istanbul

4. Branch) Izmir

*****TEST FOR ADD AN EXISTING BRANCHES*****

Already existing Izmir in the set object cannot be added.

*****TWO ADMIN REGISTRATION HAS BEEN COMPLETED*****
Admin registration successful.
Admin registration successful.

<<<<<<TEST FOR ADMINISTRATORS>>>>>>

Admin Login successful.

*****TEST FOR ADD TWO BRANCHES*****

Branch successfully added.

Branch successfully added.

1. Branch) Ankara

2. Branch) Bursa

*****TEST FOR REMOVE AN NON-EXISTING BRANCHE*****

Error : There is no Izmir so it cannot be deleted

|

BRANCH EMPLOYEE

<<<<<<TEST FOR BRANCH EMPLOYEE>>>>>>

*****TEST FOR SEARCH PRODUCT*****

Branch : Bursa
Product Type : Chair
Product Model : m1
Product Color: c1
Product Stock : 5

*****TEST FOR STORE SALE TWO PRODUCT NON-MEMEBER CUSTOMER *****

You have successfully registered, your customer number is 100
PRODUCT REMOVE SUCCESSFUL
The product has been successfully sold.
PRODUCT REMOVE SUCCESSFUL
The product has been successfully sold.

*****TEST FOR SEARCH PRODUCT AGAIN*****

Branch : Bursa
Product Type : Chair
Product Model : m1
Product Color: c1
Product Stock : 4

Branch : Bursa
Product Type : BookCases
Product Model : m1
Product Stock : 4

*****TEST FOR BEFORE REMOVE PRODUCT*****

Branch : Istanbul
Product Type : OfficeDesk
Product Model : m3
Product Color: c2
Product Stock : 5

```
*****TEST FOR REMOVE PRODUCT*****  
PRODUCT REMOVE SUCCESSFUL  
  
Branch : Istanbul  
Product Type : OfficeDesk  
Product Model : m3  
Product Color: c2  
Product Stock : 2  
  
*****TEST FOR ADD PRODUCT*****  
PRODUCT ADD SUCCESSFUL  
  
Branch : Istanbul  
Product Type : OfficeDesk  
Product Model : m3  
Product Color: c2  
Product Stock : 3  
  
*****TEST FOR PREVIOUS ORDERS OF THE CUSTOMER WITH THE CUSTOMER NUMBER ENTERED*****  
Chair m1 c1  
BookCases m1  
  
*****STOCK OF ITEMS BEFORE ADMIN IS ALERTED*****  
  
Branch : Istanbul  
Product Type : OfficeDesk  
Product Model : m3  
Product Color: c2  
Product Stock : 3  
  
*****STOCK INCREASED BY ADMIN.*****  
The product has been successfully supplied.  
  
Branch : Istanbul  
Product Type : OfficeDesk  
Product Model : m3  
Product Color: c2  
Product Stock : 5
```

BRANCH EMPLOYEE-Exception Handling

*****TEST FOR SEARCH PRODUCT*****

Branch : Bursa
Product Type : Chair
Product Model : m1
Product Color: c1
Product Stock : 5

*****TEST FOR STORE SALE TWO PRODUCT NON-MEMEBER CUSTOMER *****

You have successfully registered, your customer number is 100
PRODUCT REMOVE SUCCESSFUL
The product has been successfully sold.
PRODUCT REMOVE SUCCESSFUL
The product has been successfully sold.

*****ADD A REGISTERED CUSTOMER TO THE SYSTEM*****

Error : This customer is available

CUSTOMER

<<<<<<TEST FOR CUSTOMERS>>>>>>

E-mail or password is wrong.

*****TEST FOR CUSTOMER REGISTERED*****

You have successfully registered, your customer number is 101
Customer Login successful.

*****TEST FOR LIST REGISTERED CUSTOMERS*****

Okan Torun , torun.okn@gmail.com ,CustomerNumber : 100
Peter Bishop , p.bishop@gmail.com ,CustomerNumber : 101

*****TEST FOR BRANCH EMPLOYEES DELETING ONE CUSTOMER FROM THE SYSTEM AND LIST*****

Okan Torun , torun.okn@gmail.com ,CustomerNumber : 100

*****TEST FOR CUSTOMER SEARCH PRODUCT*****

Branch : Ankara
Product Type : OfficeDesk
Product Model : m3
Product Color: c2

*****CUSTOMER REGISTERS TO THE SYSTEM*****

You have successfully registered, your customer number is 102

*****CUSTOMER BUYS ONLINE PRODUCTS.*****

The product has been successfully sold.

*****TEST FOR SEARCH THE PREVIOUS ORDERS.*****

Customer number 102

MeetingTable m3 c2

*****TEST FOR SALE PRODUCT AGAIN AND SEARCH PREVIOUS ORDERS SAME CUSTOMER*****

The product has been successfully sold.

Customer number 102

MeetingTable m3 c2

BookCases m3 c2

*****TEST FOR SEARCH PREVIOUS ORDERS ANOTHER CUSTOMER*****

Customer number 100

Chair m1 c1

BookCases m1