GEBZE TECHNICAL UNIVERSITY

DEPARTMENT OF COMPUTER ENGINEERING

CSE222/505 – Spring 2021

Homework 1 Report

Yakup Talha Yolcu

1801042609

1. INTRODUCTION

1.1 PROBLEM DEFINITON

The automation system for a furniture company has users such as admins, branch employees and customers.

Admins can add and remove branch, branch employees. They can also ask to branch employee whether product supply is needed.

Branch Employee can inform about product need. They can add and remove any product. They can create subscription of the Person that want to be a Customer. They can make sale, view previous order of the any customer and add new order to this section. They can check the stocks of any product.

Customers can login to the system, list the products of the branches, list all products of the company and list the products with specific color name and model name. They can buy online and buy from shop. They can view previous orders themselves.

1.2 SYSTEM REQUIREMENTS

Firstly, we need to create a company. When creating company we need nothing to give as a parameter. In company's constructor some number of admin, branch are created by default. In branch, some number of Branch employee and product are created by default.

```
Company c1=new Company();
```

Then a person should be created with name, surname, e mail and password as a string parameter.

```
Person p=new Person( n: "Talha", s: "Yolcu", e: "E-MAIL", p: "PASSWORD");
```

Then person is going to subscribe himself by giving branch.

```
Customer i1=p.subscribe(c1.getBranch( index: 0));
```

Customer logs into to the system by giving the branch

```
i1.login( e_mail: "E-MAIL", password: "PASSWORD");
```

Then admin should be created

```
Admin a1=c1.getAdmin( index: 0);
```

```
BranchEmployee b1=new BranchEmployee();
```

Branch Employee is created.

```
OfficeChair o1=new OfficeChair();
```

There should be a product to make Branch Employee add

```
i1.list_the_branch(c1.getBranch( index: 0));

i1.list_all(c1);
i1.list_product(c1, model_name: "MT1");
```

There are three option to list the products.

1-Customer gives branch and list it.

2-Customer gives company and list all the branches

3-Customer gives specific product model name

```
i1.buy_online(c1, situation: 1, model_name: "OD1", color_name: "BLACK", number: 1);
i1.view_previous_orders();
System.out.println("BUYMENT IS SUCCESFUL");
i1.buy_shop(c1.getBranch( index: 0), situation: 2, model_name: "OD3", color_name: "BLUE", number: 1);
System.out.println("BUYMENT IS SUCCESFUL, BRANCH EMPLOYEE MADE A SALE AND ADDED A NEW ORDER");
```

Customer can buy online by giving company, situation (1-5 as OfficeChair, OfficeDesk, Meeting Table, Bookcase, OfficeCabinet), Model name of the product, Color name of the product, number of product that customer wanted to buy.

Customer can buy shop by giving branch, situation, model name, color name and number of product that customer wanted to buy.

Customer can also view previous orders of himself.

```
a1.add_branch(c1,bb);
```

Admin can add branch by giving company and branch as a parameter

```
a1.add_branch_employee(bb);
```

Admin can add branch employee by giving branch and it will be incremented by 1 by default.

```
b1.add_product(bb,o1);
```

Branch employee can add product by giving branch and product that will be added.

```
a1.remove_branch(c1, index: 2);
```

Admin can remove branch by giving company and index

```
a1.remove_branch_employee(bb);
```

Admin can remove branch employee by giving branch

```
b1.remove_product(bb, situation: 1, model_name: "OD3", color_name: "BLACK", stock: 1);
```

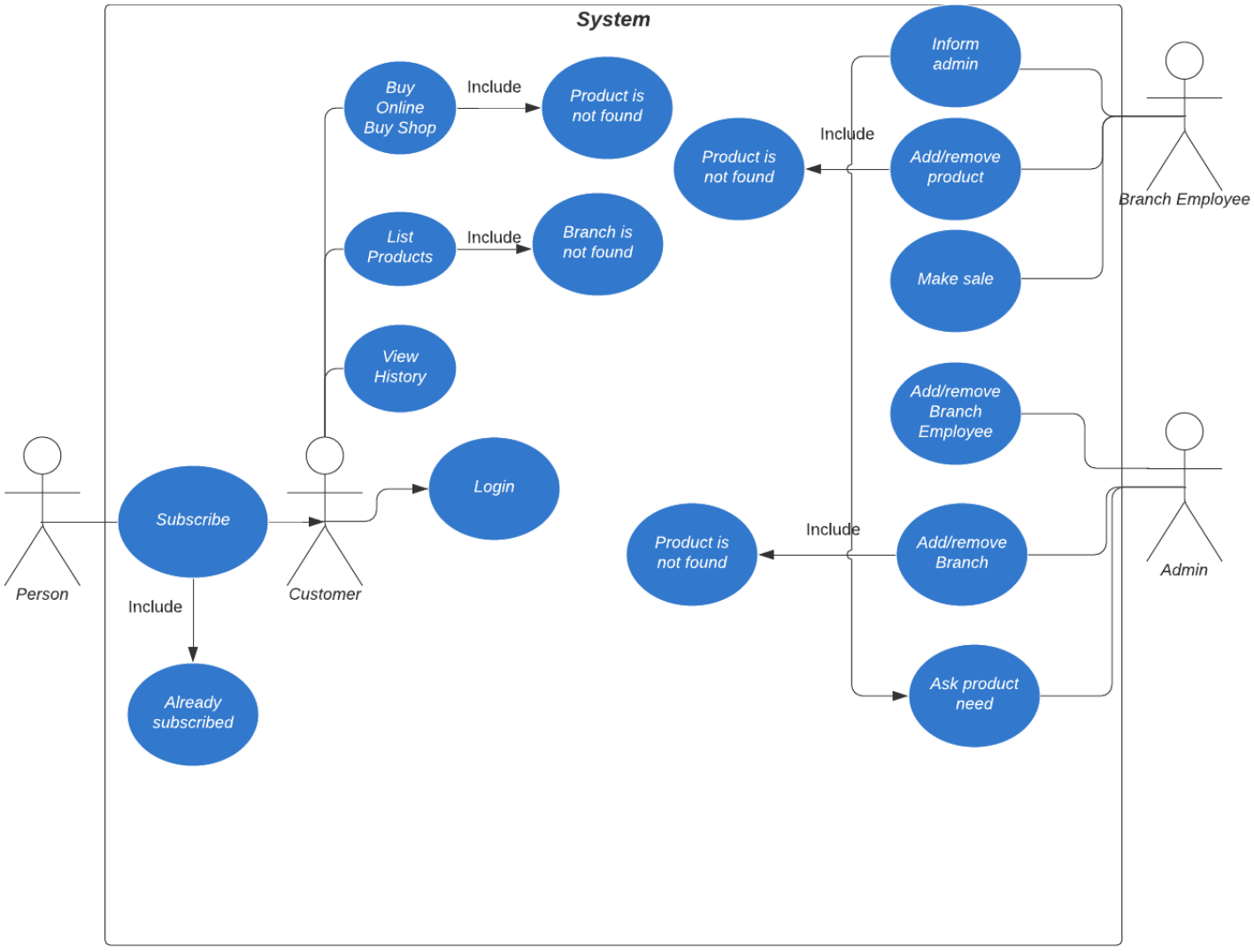
Branch employee can remove product by giving branch, situation, model name, color name, stock

```
Person p10=new Person( n: "NAME", s: "SURNAME", e: "EMAIL3", p: "PASSWORD3");
b1.create_subscription(bb,p10);
```

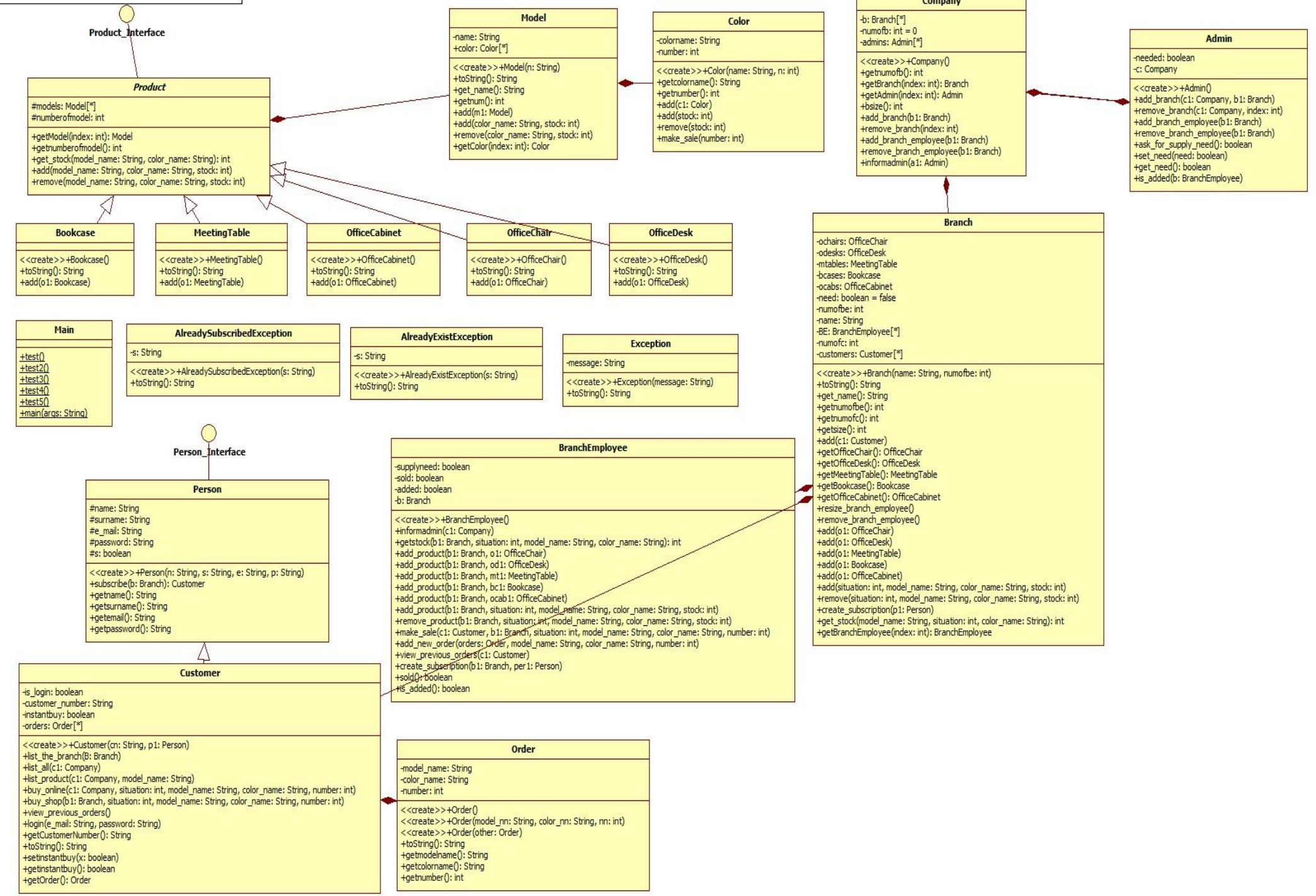
Branch employee can create subscription of any person with proper information.

2- USE CASE AND CLASS DIAGRAMS

2.1 USE CASE DIAGRAM



2.2 CLASS DIAGRAM



3. PROBLEM SOLUTION APPROACH

In this homework I've just used simple Java Array. I did reallocation when it is needed.I created a Company class at the beginning. I have admins, branch employees, persons, customers, branches, products in the company . All branches have employees and customers. Branches have items. There are several classes that represents the products as OfficeChair, OfficeDesk … Customer can buy online and buy from shop. He can view previous order. He can list the all products. Admins can add or remove branch. They can also add and remove branch employees. Branch employees can add and remove products. They can create subscription for any Person.

4.TEST CASES

```
LAST TEST,NO EXCEPTION
SUBSCRIPTION IS SUCCESFUL
LOGIN IS SUCCESFUL
BRANCH: BRANCH_B1
OFFICE CHAIRS
MODEL NAME      STOCK NUMBER
O1                      5
O2                      5
O3                      5
O4                      5
O5                      5
O6                      5
O7                      5
```

Person subscribes.

Person Logins

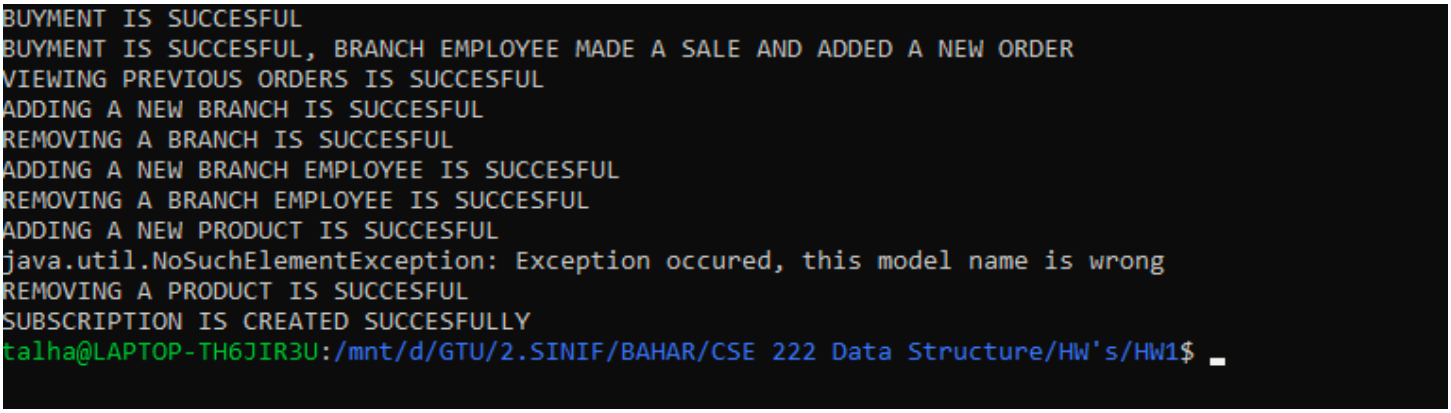
Customer lists the branch

Customer lists the whole branch

```
BRANCH: BRANCH_B1
OFFICE CHAIRS
MODEL NAME      STOCK NUMBER
O1                      5
O2                      5
O3                      5
O4                      5
O5                      5
O6                      5
O7                      5
```

```
BRANCH: BRANCH_B2
OFFICE CHAIRS
MODEL NAME      STOCK NUMBER
O1                      5
O2                      5
O3                      5
O4                      5
O5                      5
O6                      5
O7                      5


OFFICE DESKS
MODEL NAME      STOCK NUMBER
OD1                     4
OD2                     4
OD3                     4
OD4                     4
OD5                     4
OD6                     4
OD7                     4
```



Customer Buys something online

Customer Buys something from the shop

Customer views previous orders.

Admin adds new branch to the company

Admin removes branch from the company

Branch employee adds new product

Branch employee removes product

Branch employee creates a subscription of the person