

GIT Department of Computer Engineering

CSE 222/505 - Spring 2021

Homework 1 Report

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SYSTEM REQUIREMENTS

The user must have java v1.8.0 to run the program.And at least 5 MB space to run the program properly.

In Company class;

public boolean check(String model , String color , String name);

Checks if the wanted product (which is stated as model color name) exists in the company.If so returns true.

public void list_all() ;

Lists all products in every branches.

public void search(String model , String color , String name) ;

Searches all of the branches for the wanted product and sends a feedback.

public Admin check_admin_info(String email , String password) ;

Checks if the inputs match with an existing admin.If so returns the corresponding Admin. If not returns null.

public Customer check_customer_info(String email , String password);

Checks if the inputs match with an existing customer.If so returns the corresponding Customer. If not returns null.

public void check_stocks(Branch b1) ;

Asks from an admin to check the stocks of branch b1 .

public void add_customer(User u);

Adds customer u to the system.

public void add_branch(User u1 , Branch b1) ;

Asks from admin u1 to add a branch b1 to the company.

public void del_branch(User u1 , Branch b1) throws Exception;

Asks from admin u1 to delete a branch b1 from the company. Throws exception if the branch doesn't exist.

public void del_employee(User u1, User u2 , Branch b1) throws Exception ;

Asks from admin u1 to delete an employee from branch b1 Throws exception if the user u2 is not an employee of the branch

In Branch Class;

public void make_sale(Product x , User u) ;

Asks from a random employee to sell the product x to the customer u.

public void add_product(Product x);

Orders an employee to create a product x.

public void del_product(Product x) ;

Orders and employee to create a product x.

public void requested_amount(Product x) ;

If the stocks are not enough, orders to an employee to inform the manager about stocks.

public void sale(User u , String model , String color , String name);

A customer can buy a product by himself/herself with online shopping.

public boolean check_product(String model , String color , String name);

Checks the products if the wanted one exists.

public void stock_check();

Checks the stocks of the products. And sends a feedback if the product is out of stock.

public void list_products();

List all of the products in this branch.

public void search_product(String model , String color , String name) ;

Searches the products if the wanted one exists. Sends feedback.

public void Add_Employee(User u2);

Hires u2 to the branch as an employee.

public void Del_Employee(User u2);

Fires u2 to the branch as an employee.

In Admin Class;

public void query_branch(Branch b1);

Orders to an Admin to check the stocks of a branch.

In Customer Class;

public void addHistory(Product a) ;

Adds a product to the customer's purchase history.

public void addHistory(String model , String color , String name) ;

Adds a product to the customer's purchase history.

public void see_history() ;

Shows the customer's purchase history.

In Branch Employee class;

public void inform_the_manager(Product x) ;

Inform the manager about stocks of a product.

public void delete_product(Product x) ;

Deletes a product.

public void add_prod(Product x) ;

Creates a product.

public void sale(Product x , User u);

Sales a product x to the user u.

public void check_history(User u);

Checks the purchase history of an user.

In Desk class;

public void increaseStock() ;

Increases the corresponding desk's stock by one.

public void decreaseStock() ;

Decreases the corresponding desk's stock by one.

In Cabinet Class;

public void increaseStock() ;

Increases the corresponding desk's stock by one.

public void decreaseStock() ;

Decreases the corresponding desk's stock by one.

In Bookcase Class;

```
public void increaseStock() ;
```

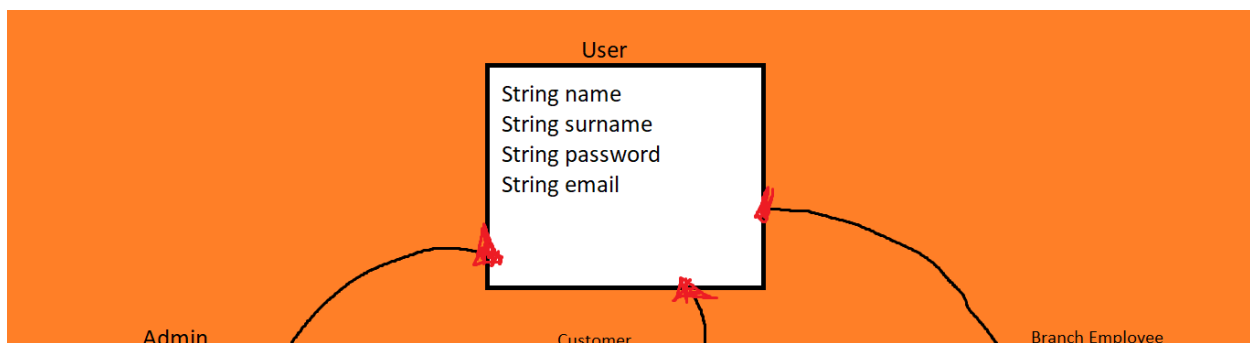
Increases the corresponding desk's stock by one.

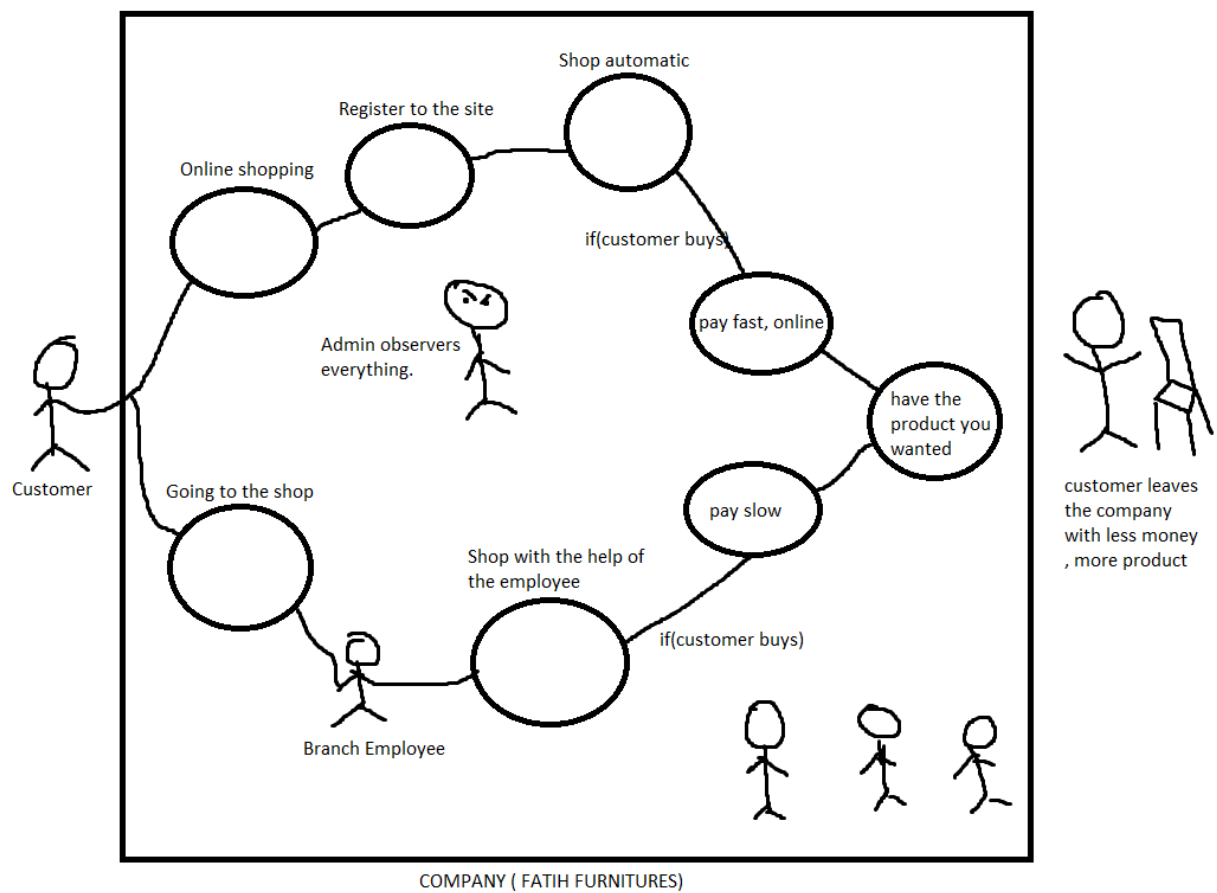
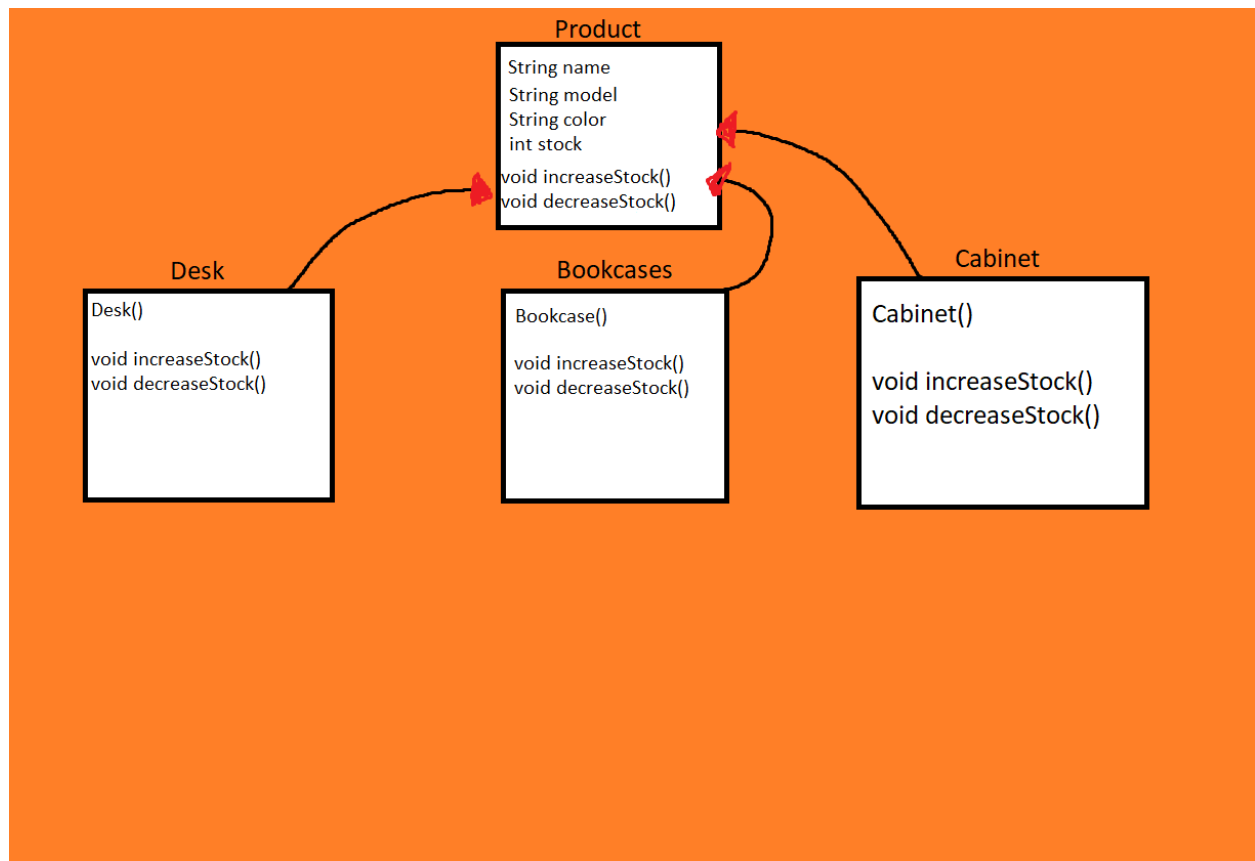
```
public void decreaseStock() ;
```

Decreases the corresponding desk's stock by one.

User and Product Classes are abstract classes.

USE CASE AND CLASS DIAGRAMS



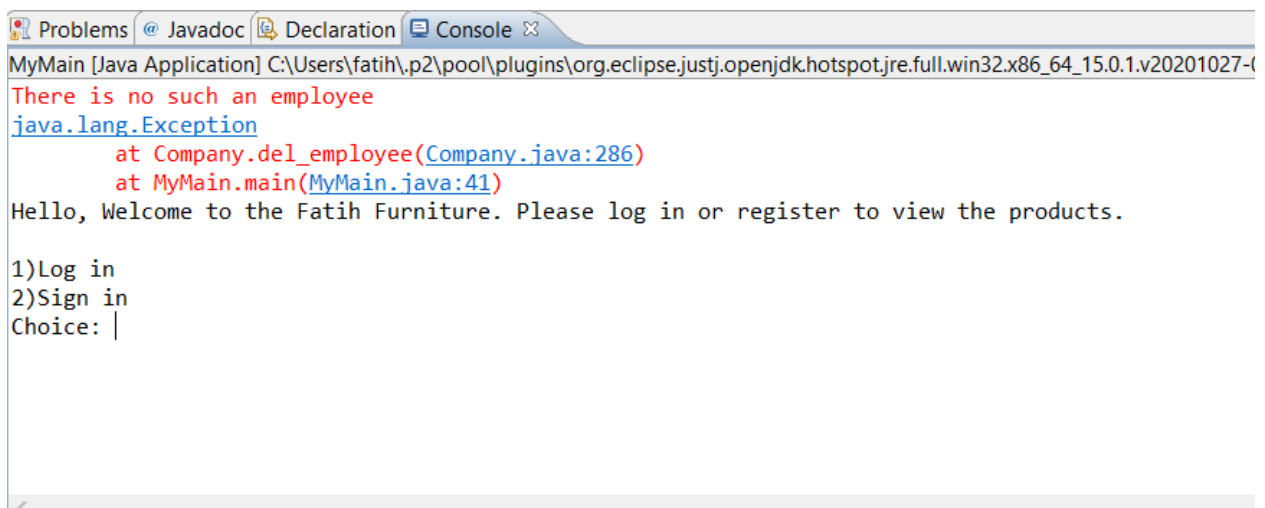


PROBLEM SOLUTION APPROACH

I had a lot of problems with java. Because it doesn't have dynamic arrays and pointers. But I knew what should I do. So I searched the internet , some resources and pdfs to learn java's approach to pointers and alternatives of dynamic arrays. After all , I figured it out how to handle java with my knowledge in programming.

TEST CASES

Test case 1: trying to delete an unexisting employee

A screenshot of an Eclipse IDE console window. The window has tabs for 'Problems', 'Javadoc', 'Declaration', and 'Console'. The 'Console' tab is active, showing the output of a Java application. The output starts with a red error message: 'There is no such an employee' followed by 'java.lang.Exception' in blue. Below this, the stack trace is shown in red: 'at Company.del_employee(Company.java:286)' and 'at MyMain.main(MyMain.java:41)'. The application then prints 'Hello, Welcome to the Fatih Furniture. Please log in or register to view the products.' followed by a menu: '1)Log in', '2)Sign in', and 'Choice: |'.

```
MyMain [Java Application] C:\Users\fatih\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_15.0.1.v20201027-1
There is no such an employee
java.lang.Exception
    at Company.del_employee(Company.java:286)
    at MyMain.main(MyMain.java:41)
Hello, Welcome to the Fatih Furniture. Please log in or register to view the products.

1)Log in
2)Sign in
Choice: |
```

Test case 2: valid id and password

```
Hello, Welcome to the Fatih Furniture. Please log in or register to view the products.

1)Log in
2)Sign in
Choice: 2
E-mail: f.dogac2019@gtu.edu.tr
Password: 12345678
Name: Fatih
Surname: Doğaç
Registration complete. Welcome Fatih
Your customer id is 47
What would you like to do ?
1) Search for a specific product.
2) List all the products.
3) Shop online.
4) See history of yours.
5) Exit
```

Test case 3: invalid id and invalid password

```
Hello, Welcome to the Fatih Furniture. Please log in or register to view the products.
```

```
1)Log in
2)Sign in
Choice: 2
E-mail: a
Password: a
Name: a
Surname: a
Registration complete. Welcome a
Your customer id is 429
What would you like to do ?
1) Search for a specific product.
2) List all the products.
3) Shop online.
4) See history of yours.
5) Exit
```

RUNNING AND RESULTS

Valid product:

```
5) Exit
1
Please write the product as Model Color Product
Oval Blue Cabinet
Branch A
We have that product!
Branch B
We have that product!
Branch C
We have that product!
Branch D
We have that product!
Branch X
We have that product!
What would you like to do ?
1) Search for a specific product.
2) List all the products.
3) Shop online.
4) See history of yours.
5) Exit
```

Invalid product:

5) Exit

1

Please write the product as Model Color Product

q q q

Branch A

Sorry , we haven't got any of that product.

Branch B

Sorry , we haven't got any of that product.

Branch C

Sorry , we haven't got any of that product.

Branch D

Sorry , we haven't got any of that product.

Branch X

Sorry , we haven't got any of that product.

What would you like to do ?

1) Search for a specific product.

2) List all the products.

3) Shop online.

4) See history of yours.

5) Exit

Listing all the products:

What would you like to do ?

1) Search for a specific product.

2) List all the products.

3) Shop online.

4) See history of yours.

5) Exit

2

|

Branch A contains:

Round Black Desk

Square Black Desk

Big White Bookcase

Small White Bookcase

Big Black Bookcase

Small Black Bookcase

Oval Green Cabinet

Oval Red Cabinet

Oval Blue Cabinet

Branch B contains:

Round Black Desk

Square Black Desk

Shopping online:

What would you like to do ?

- 1) Search for a specific product.
- 2) List all the products.
- 3) Shop online.
- 4) See history of yours.
- 5) Exit

3

Please write the product that you want to buy as Model Color Product

Oval Blue Cabinet

Adress to deliver: Turkey

Phone number: 012345

Thanks for your shopping!

What would you like to do ?

- 1) Search for a specific product.
- 2) List all the products.
- 3) Shop online.
- 4) See history of yours.
- 5) Exit

What would you like to do ?

- 1) Search for a specific product.
- 2) List all the products.
- 3) Shop online.
- 4) See history of yours.
- 5) Exit

3

Please write the product that you want to buy as Model Color Product

Square Black Desk

Adress to deliver: Netherlands

Phone number: 213231

Thanks for your shopping!

What would you like to do ?

- 1) Search for a specific product.
 - 2) List all the products.
 - 3) Shop online.
 - 4) See history of yours.
 - 5) Exit
-

Purchase history:

```
Thanks for your shopping!  
What would you like to do ?  
1) Search for a specific product.  
2) List all the products.  
3) Shop online.  
4) See history of yours.  
5) Exit
```

```
4  
Oval Blue Cabinet  
Square Black Desk  
What would you like to do ?  
1) Search for a specific product.  
2) List all the products.  
3) Shop online.  
4) See history of yours.  
5) Exit
```