

GTU Department of Computer Engineering
CSE 222 – SPRING 2021

HW 1 REPORT

SİNAN SARI

1801042091

1. SYSTEM REQUIREMENTS

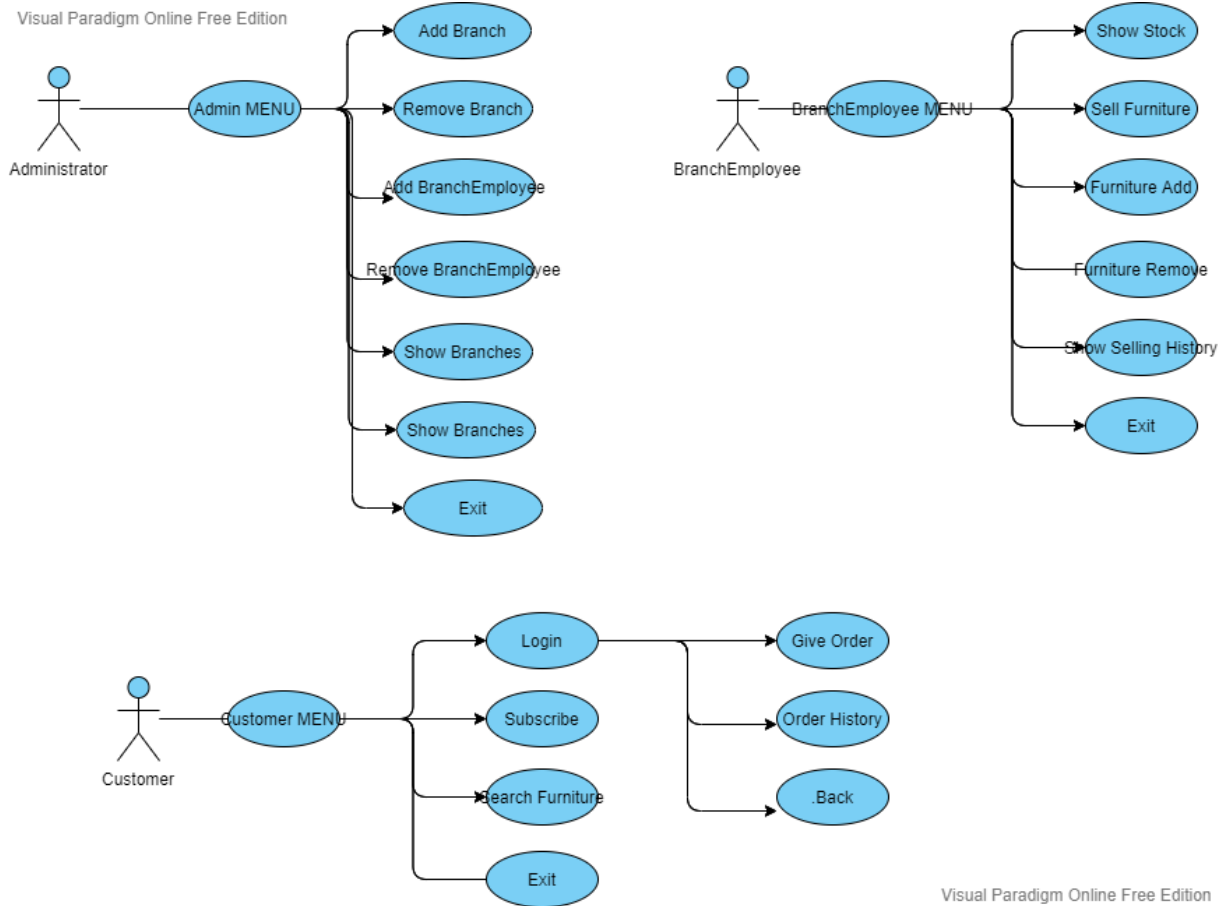
The software is a Furniture Company based system the user should be able to login as one of three categories which are Administrator, Branch Employee and Customer. At beginning there is a registered administrator which is name Sinan SARI . Firstly , to start system you need to add branch then branch employee and so on .

Administrators Manages the system by adding and removing branches and branch employees. They can also query whether there are any products that need to be supplied.

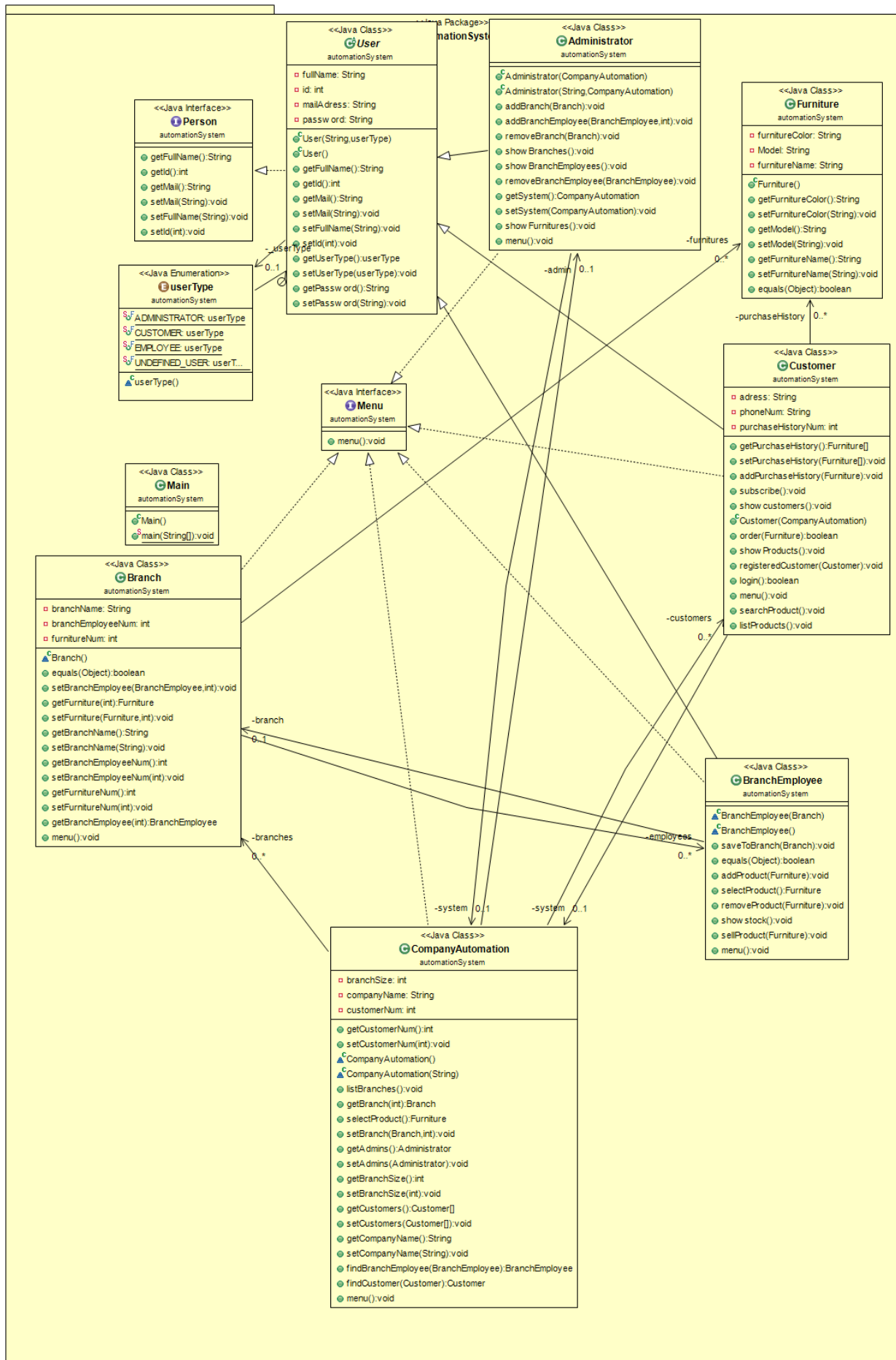
Customer number is defined for each customer in the system. When a person subscribes to the system, he/she uses his/her full name and defines a password. When the registration is completed, the customer number is automatically defined in the system and the user is informed about it. When the customer logs into the system, they can search for products, see the list of products, see which store a product is in, shop online by entering address and phone information, and view their previous orders.

Branch employees can inquire about the products in stock, inform the manager that the product should be purchased when any product is less than the requested amount, add / remove products, make sales, access the information of the previous orders of a customer by using the customer number and add new order to this section. Branch employees should update the customers' previous orders section during their sales from the store. If the customer is shopping for the first time, then they should create a new subscription

USE CASE DIAGRAM



CLASS DIAGRAM



TEST CASES

Test Scenario	Test Cases	Test Result
Adding a Branch	Branch Name does not exist	Branch is rejected
	Branch Name exists	Branch is added
Adding an Employee	BranchEmployee Name exists	Employee is added
	BranchEmployee Name does not exist	Employee is rejected
Removing a Branch	Branch Name does not exist	The branch is not removed
	Branch Name exists	Branch is removed
Removing an Employee	BranchEmployee Name exists	Employee is removed
	BranchEmployee Name does not exist	Employee is not removed
Adding a Product	Product Type does not exist	Product is rejected
	Product Type exists	Product is added
	Product Model does not exist	Product is rejected
	Product Model exists	Product is added
	Product Color does not exist	Product is rejected
	Product Color exists	Product is added
Removing a Product	Product Type does not exist	The product is not removed
	Product Type exists	Product is removed
	Product Model does not exist	The product is not removed
	Product Model exists	Product is removed
	Product Color does not exist	The product is not removed
	Product Color exists	Product is removed
Display products in stok	Product does not exist	Warning(There is no this product)
	Product exist	Displays
Information of the previous orders of a customer	Product does not exist	Warning(There is no Product !)
	Product exist	Display
Type controls of input	If the desired type is input	Input provided
	If the not desired type is input	No entry
Search product	Product Type does not exist	Product is founded
	Product Type exists	Product is searched
	Product Model does not exist	Product is founded
	Product Model exists	Product is searched
	Product Color does not exist	Product is founded
	Product Color exists	Product is searched
Registration Page	Customer identity suitability	Customer registration
	Incorrect entry	Return the customer menu
Customers view previous their orders themselves	Product does not exist	Warning(There are not product)
	Product exist	Display
Login Page	Opening the authentication screen.	Opened
	Customer name exist	Login to the system has been provided.

	Customer name does not exist	Login to the system is not provided.
	Customer password exist	Login to the system has been provided.
	Customer password does not exist	Login to the system is not provided.
The customer's purchase of the product	If the product is in stock	Purchase successful
	Requesting products without color type	No color query
	Adding the product to the basket	Successfully

Running And Results

ADMINISTRATOR

Welcome

- 1-) Administrator
- 2-) BranchEmployee
- 3-) Customer
- 0-) Exit

1

- 1-) Branch add
- 2-) Branch remove
- 3-) BranchEmployee add
- 4-) BranchEmployee remove
- 5-) ShowBranches
- 6-) ShowBranchEmployees
- 0-) Exit

1

Please Enter Branch Name

istanbul

istanbul is Succesfully added

- 1-) Branch add
- 2-) Branch remove
- 3-) BranchEmployee add
- 4-) BranchEmployee remove
- 5-) ShowBranches
- 6-) ShowBranchEmployees
- 0-) Exit

3

Please Enter BranchEmployee Name

sinan

sinan is Succesfully added

- 1-) Branch add
- 2-) Branch remove
- 3-) BranchEmployee add
- 4-) BranchEmployee remove
- 5-) ShowBranches
- 6-) ShowBranchEmployees
- 0-) Exit

0

Welcome

- 1-) Administrator
- 2-) BranchEmployee
- 3-) Customer
- 0-) Exit

2

Please enter BranchEmployee Name

sinan

- 1-)Show Stocks
- 2-)Sell Furniture
- 3-)Furniture Add
- 4-)Furniture Remove
- 5-)Show Selling History
- 0-)Exit

3

0->chair

1->desk

2->meetingtable

3->bookcases

4->officecabinets

Choice Type:

0

0->red

1->yellow

2->blue

3->brown

4->orange

5->green

```
6->black
Color Type:
0
0->model1
1->model2
2->model3
3->model3
4->model4
5->model5
6->model6
7->model7
Model Type:
0
chair model1 red Successfully added
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
0
Welcome
1-) Administrator
2-) BranchEmployee
3-) Customer
0-) Exit
3
1-) Login
2-) Subscribe
3-) List Products
4-) Search Furniture
0-) Exit
3
2-)chair model1 model1
1-) Login
2-) Subscribe
3-) List Products
4-) Search Furniture
0-) Exit
```


BRANCHEMPLOYEE

```
Welcome
1-) Administrator
2-) BranchEmployee
3-) Customer
0-) Exit
1
1-) Branch add
2-) Branch remove
3-) BranchEmployee add
4-) BranchEmployee remove
5-) ShowBranches
6-) ShowBranchEmployees
0-) Exit
1
Please Enter Branch Name
istanbul
istanbul is Succesfully added
1-) Branch add
2-) Branch remove
3-) BranchEmployee add
4-) BranchEmployee remove
5-) ShowBranches
6-) ShowBranchEmployees
0-) Exit
3
Please Enter BranchEmployee Name
sinan
sinan is Succesfully added
1-) Branch add
2-) Branch remove
3-) BranchEmployee add
4-) BranchEmployee remove
5-) ShowBranches
6-) ShowBranchEmployees
0-) Exit
0
Welcome
1-) Administrator
2-) BranchEmployee
3-) Customer
0-) Exit
2
Please enter BranchEmployee Name
hakan
Wrong BranchEmployee Name !
Welcome
1-) Administrator
2-) BranchEmployee
3-) Customer
0-) Exit
2
Please enter BranchEmployee Name
sinan
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
3
0->chair
1->desk
2->meetingtable
3->bookcases
```

```
4->officecabinets
Choice Type:
0
0->red
1->yellow
2->blue
3->brown
4->orange
5->green
6->black
Color Type:
0
0->model1
1->model2
2->model3
3->model3
4->model4
5->model5
6->model6
7->model7
Model Type:
0
chair model1 red Successfully added
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
1
chair model1 red
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
4
0->chair
1->desk
2->meetingtable
3->bookcases
4->officecabinets
Choice Type:
0
0->red
1->yellow
2->blue
3->brown
4->orange
5->green
6->black
Color Type:
0
0->model1
1->model2
2->model3
3->model3
4->model4
5->model5
6->model6
7->model7
Model Type:
0
```

```
model1 Succesfully removed
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
1
There is no product in Stock
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
3
0->chair
1->desk
2->meetingtable
3->bookcases
4->officecabinets
Choice Type:
2
0->red
1->yellow
2->blue
3->brown
Color Type:
2
0->model1
1->model2
2->model3
3->model3
4->model4
5->model5
6->model6
7->model7
8->model8
9->model9
10->model10
Model Type:
2
meetingtable model3 blue Successfully added
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
```

Customer

Welcome

- 1-) Administrator
- 2-) BranchEmployee
- 3-) Customer
- 0-) Exit

1

- 1-) Branch add
- 2-) Branch remove
- 3-) BranchEmployee add
- 4-) BranchEmployee remove
- 5-) ShowBranches
- 6-) ShowBranchEmployees
- 0-) Exit

1

Please Enter Branch Name

istanbul

istanbul is Succesfully added

- 1-) Branch add
- 2-) Branch remove
- 3-) BranchEmployee add
- 4-) BranchEmployee remove
- 5-) ShowBranches
- 6-) ShowBranchEmployees
- 0-) Exit

3

Please Enter BranchEmployee Name

sinan

sinan is Succesfully added

- 1-) Branch add
- 2-) Branch remove
- 3-) BranchEmployee add
- 4-) BranchEmployee remove
- 5-) ShowBranches
- 6-) ShowBranchEmployees
- 0-) Exit

0

Welcome

- 1-) Administrator
- 2-) BranchEmployee
- 3-) Customer
- 0-) Exit

2

Please enter BranchEmployee Name

sinan

- 1-)Show Stocks
- 2-)Sell Furniture
- 3-)Furniture Add
- 4-)Furniture Remove
- 5-)Show Selling History
- 0-)Exit

3

0->chair

1->desk

2->meetingtable

3->bookcases

4->officecabinets

Choice Type:

1

0->red

1->yellow

2->blue

3->brown

Color Type:

1

```
0->model1
1->model2
2->model3
3->model3
4->model4
5->model5
Model Type:
1
desk model2 yellow Successfully added
1-)Show Stocks
2-)Sell Furniture
3-)Furniture Add
4-)Furniture Remove
5-)Show Selling History
0-)Exit
0
Welcome
1-) Administrator
2-) BranchEmployee
3-) Customer
0-) Exit
3
1-) Login
2-) Subscribe
3-) List Products
4-) Search Furniture
0-) Exit
2
Please Enter Full Name
Foo Person
Please define a password
000
1-) Login
2-) Subscribe
3-) List Products
4-) Search Furniture
0-) Exit
1
Please Enter Full Name
Foo Person
Please enter password
000
Welcome Mr/Mrs
Foo Person
1-) Give an Order
2-) Show Order History
0-) Back
1
0->chair
1->desk
2->meetingtable
3->bookcases
4->officecabinets
Choice Type:
1
0->red
1->yellow
2->blue
3->brown
Color Type:
1
0->model1
1->model2
2->model3
```

```
3->model3
4->model4
5->model5
Model Type:
1
Please Enter Phone Number
5555
Please Enter Address
darÄ±ca
model2 Successfully removed
You successfully ordered!
Welcome Mr/Mrs
Foo Person
1-) Give an Order
2-) Show Order History
0-) Back
2
1-)desk
Welcome Mr/Mrs
Foo Person
1-) Give an Order
2-) Show Order History
0-) Back
```

Problem solution approach

Every class now has limited number of methods and getters for some data is removed. Again, there is a main system class which is to be created by anyone who is in charge of the system. System allows creating and removal of admins. Everything else is done through admins. They are methods for adding and branches and branch employees in admin class. All exceptions for 'remove' methods that work with index parameters are caught and securely handled. There is no direct class for branch employees also. Branch employee is an inner class of yet another public class called Branch. There is a dependency relationship between the two as it is not possible to make a branch employee if a branch does not exist. When the branch exists and there are employees inside that branch those employees can add and remove furnitures . they are allowed to add and remove customers to/from the system. Those are the only methods they use as a unique class. There is a common thing for all the classes and that is the Person interface all of them implement. This interface has 6 methods and one of them is supposed to be used by developers that are making the system . Some of the classes implement some of these methods using polymorphism.I tried to make it as object oriented as possible so that the developer using the package to create the system could be able to make as few mistakes as possible.

