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

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#### 1. SYSTEM REQUIREMENTS

First of all, a store class must be. Because the start menu function was created in that class, the name ,surname, eposta and password of the users(Customer,Branch Employee and Manager) should be determined.

```
public Store(String nameSurname, String eposta, String password){
```

```
@Override
public void Welcome(){{
        System.out.println();
        System.out.println("*************************);
        System.out.println("****PLEASE SELECT THE NUMBER FOR MENU:****");
        System.out.println(" 1)-Press 1 to New Register: ");
        System.out.println(" 2)-Press 2 Already Customer: ");
        System.out.println(" 3)-Press 3 if you are Branch Employee: ");
        System.out.println(" 4)-Press 4 if you are Administrator: ");
        System.out.println(" 0)-Press 0 if you want to exit the store: ");
}
```

Give only the asked diagram/s for the related homework under this heading. Explain your diagrams if it is needed. For example; give brief explanations about the classes and their relations.

Useful links to create good use case diagrams:

Also, In addition, I assigned the number and types of furniture in the store class to 3dimensional arrays as default values.

```
@Override
public void stockTotal(){

shrink[0] = new int[7][5];
shrink[1] = new int [5][4];
shrink[2] = new int [10][4];
shrink[3] = new int [12][1];
shrink[4] = new int [12][1];

int[] array = new int[5];

for(int i=0;i<shrink.length;i++){
    for(int j=0;j<shrink[i].length;j++){
        shrink[i][j].length;k++){
            shrink[i][j][k] = 5;
        }
    }
}</pre>
```

- -The image I have given above is only my assignment for Branch1.
- All operations take place in main. I made all the menus I print on the terminal by using the switch-case structure and placed the functions that I need to use.

```
*******WELCOME TO THE FURNITURE STORE:*******

***PLEASE SELECT THE NUMBER FOR MENU:***

1)-Press 1 to New Register:

2)-Press 2 Already Customer:

3)-Press 3 if you are Branch Employee:

4)-Press 4 if you are Administrator:

0)-Press 0 if you want to exit the store:
```

Our menu starts like this. If you are going to start as a customer and you are not registered in the system, you have to register. All processes you have made after registration will be seen by both the store employee and the manager, and processes will be made on them.

SPECIAL FUNCTIONS OF THE CLASSES:

# A-ADMINISTRATOR(Manager):

Administrator can add and delete branch and branch employee see the total branch, branch employee and add the product.

```
public void quitBranch(){ // To remove branch from the system.
```

-To remove branch from the system.

```
public void exit(){ //To remove employees from the store.
```

-To remove employees from the store.

```
public static int numberEmployee(){
```

-To I use this function to find out the number of active employees in the store.

```
public static int numberBranch(){
```

- To I use this function to find out the number of active branches in the store

#### **B-STORE:**

```
/**
 * Show the First menu for the users.
 */
@Override
public void Welcome(){
```

-This function displays the first menu that appears before the user (customer, manager, store employee).

```
@Override public void registerCustomer(){
```

-This function enables the customer who enters the system for the first time to register with the system

```
@Override
public void loginAccount(){
```

-If the users are login, program will print to the terminal.

```
@0verride
public void Register(){
```

-In this function, function allows the customer to enter the information required to register in the system.

```
*/
@Override
public void stockTotal(){
```

-In this function, I myself assigned values to 3-dimensional arrays for the number of furniture and features for example (1-Furniture,2-Model,3-Color).

```
b/*
 *In this method, I reduce the 3-dimensional array to a one-dimensional array,
 *at the same time I apply ArrayList here.

a*/
public void rePlace(){

branch.add(0,new Branch(shrink));
 branch.add(1,new Branch(shrink2));
 branch.add(2,new Branch(shrink3));
 branch.add(3,new Branch(shrink4));

a}

}
```

-In this function(rePlace) I shrink the 3-D array to 1-D array in Branch class.

# **C-CUSTOMER:**

public void choiceCatalog(int name,int model,int color,int amount,Branch branch)throws RuntimeException{

In this function, you determine the properties of the product you will buy. I save it in the array as a number.

private void extendArray(){ //I am expanding the size of the directory used for our shopping cart.

-I am expanding the size of the directory used for our shopping cart.

```
public String amountPocket(){
```

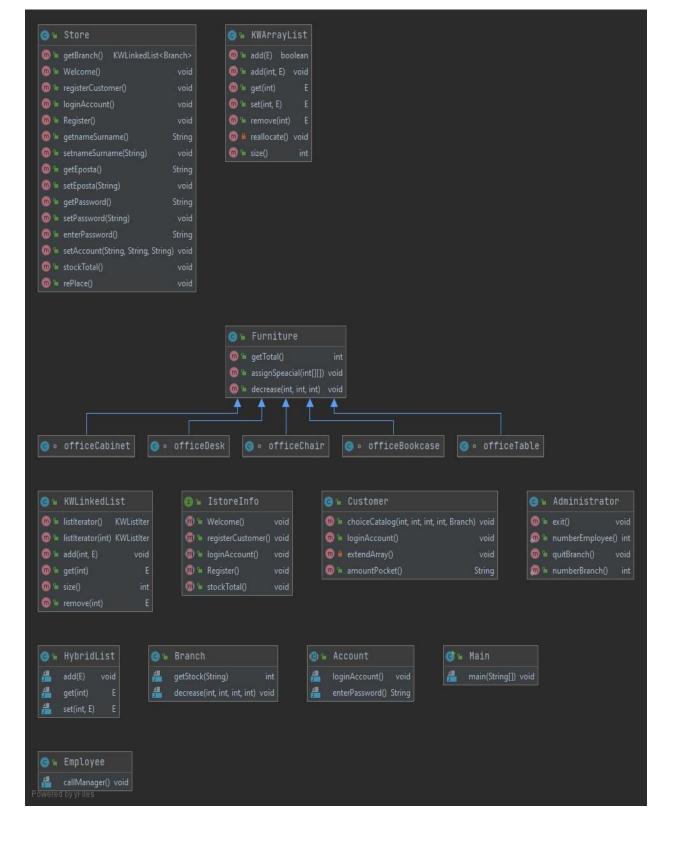
- I print the product that the customer bought in her/his basket and all the features of the product with this function.

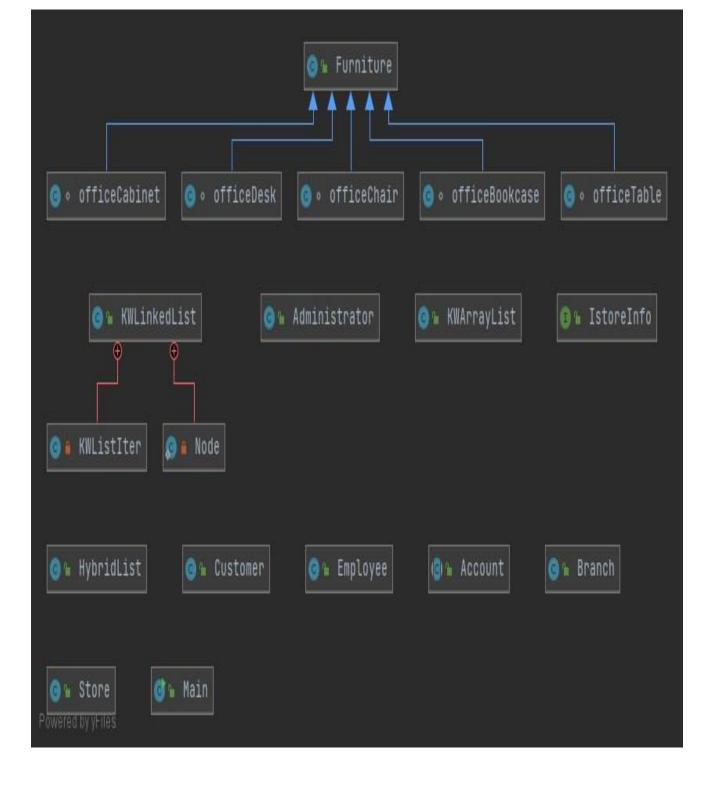
# public void callManager(){

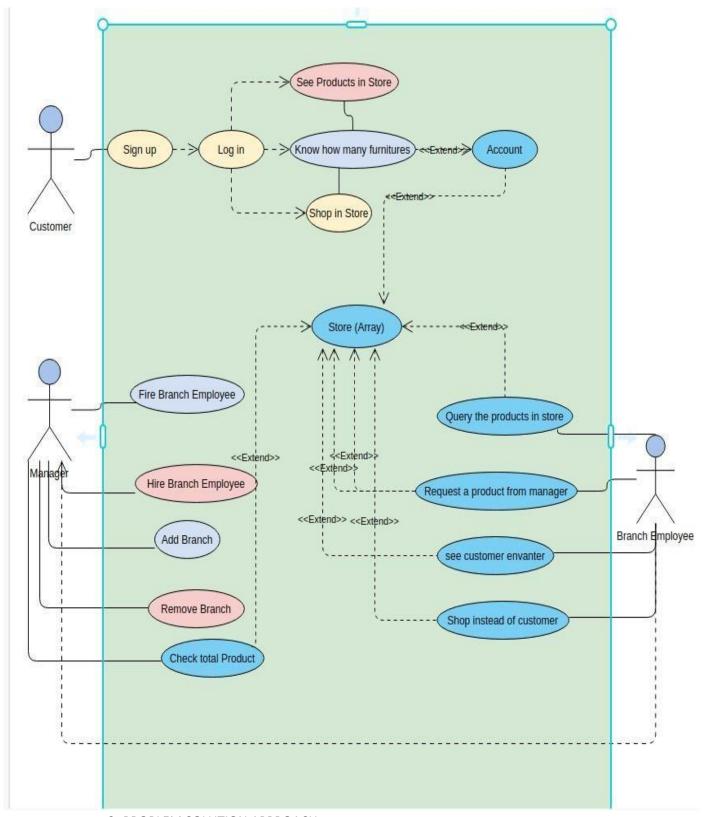
# **D-EMPLOYEE:**

In this function, call the manager if there is need product in store.

2-USE CASE AND CLASS DIAGRAMS:







### 2. PROBLEM SOLUTION APPROACH:

- I provide the whole system with arrays that I have created as default values (type, color, amount). The paths to my classes all depend on the store class. I process all shopping information through these arrays. All of thr users can shop on these arrays. I tested all the operations done in main class.

#### 4. TEST CASES:

- If an unwanted input is entered while testing my program, I want theuser to reenter input again, thanks to try-catch and throw exception structures that I have placed between the switch-case structure I use in main. Also, I use the throw exception structure in a function where I use switch-case.

```
1-) PLEASE PRESS '1' TO QUERY THE PRODUCTS IN STOCK .
2-) PLEASE PRESS '2' TO REQUEST A PRODUCT FROM THE MANAGER.
3-) ENTER THE PASSWORD OF THE CUSTOMER YOU WANT AND PRESS '3' TO VIEW THE CUSTOMER'S SHOPPIN G CART.
4-) PLEASE PRESS '4' TO ENTER THE CUSTOMER'S PASSWORD AND SHOP INSTEAD OF THE CUSTOMER.
5
ERROR !!! PLEASE ENTER THE VALID NUMBER.
```

```
*******WELCOME TO THE FURNITURE STORE:*******

***PLEASE SELECT THE NUMBER FOR MENU:***

1)-Press 1 to New Register:

2)-Press 2 Already Customer:

3)-Press 3 if you are Branch Employee:

4)-Press 4 if you are Administrator:

0)-Press 0 if you want to exit the store:

6
ERROR !!! PLEASE ENTER THE VALID NUMBER.
```

```
*******WELCOME TO THE FURNITURE STORE:*******

***PLEASE SELECT THE NUMBER FOR MENU:***

1)-Press 1 to New Register:

2)-Press 2 Already Customer:

3)-Press 3 if you are Branch Employee:

4)-Press 4 if you are Administrator:

0)-Press 0 if you want to exit the store:

2
Please enter the Password:

1234
Wrong password, please try again !!!
```

```
1-)IF YOU WANT TO KNOW HOW MANY FURNITURE IS IN WHICH STORE, PLEASE PRESS '1'.
2-)IF YOU WANT TO SHOP AT THE STORE, PRESS '2'.
3-)IF YOU WANT TO SEE THE PRODUCTS IN YOUR SHOPPING CART, press '3'.
PLEASE ONLY WRITE THE NUMBER OPPOSITE OF THE ITEM YOU WANT TO CHOOSE.( chair = '0', desk = '1', table = '2', bookcase = '3', cabinet = '4'
PLEASE ENTER THE MODEL YOU WILL CHOOSE AS A NUMBER.(FOR EXAMPLE Model1 = '1', Model2 = '2' ...):
PLEASE ENTER THE COLOR YOU WILL CHOOSE AS A NUMBER.(FOR EXAMPLE Color1 = '1', Color2 = '2' ...):
Please determine the amount of furniture
ERROR !!! PLEASE ENTER THE VALID NUMBER.
******WELCOME TO THE FURNITURE STORE:******
***PLEASE SELECT THE NUMBER FOR MENU:***
 1)-Press 1 to New Register:
 2)-Press 2 Already Customer:
 3)-Press 3 if you are Branch Employee:
 4)-Press 4 if you are Administrator:
 0)-Press 0 if you want to exit the store:
PLEASE ENTER THE PASSWORD TO LOGIN TO THE SYSTEM.
Admin
```

THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.

1-)IF YOU WANT TO REMOVE A BRANCH EMPLOYEE, PRESS 'q' :

2-)IF YOU WANT TO ADD A BRANCH EMPLOYEE, PRESS 'w' : 3-)IF YOU WANT TO ADD A BRANCH, PRESS 's' : 4-)IF YOU WANT TO REMOVE A BRANCH, PRESS 'a' :

Current Number Of Branch Employee: 9

ERROR !!! PLEASE ENTER THE VALID NUMBER.

Current Number Of Branch: 9

- I just showed you some of the places I tested. I have done this kind ofchecks on the paper in most local area.

```
}
catch(Exception e){
    System.out.println("ERROR !!! PLEASE ENTER THE VALID NUMBER.");
}
```

```
pocket[pocketCount][0] = "bookcase";
break;

case 4:
    pocket[pocketCount][0] = "cabinets";
break;

default:
    throw new Exception("Invalid Value!!!");
}
```

5. RUNNING AND RESULTS: Start

Menu:

```
anil@anil-ABRA-A5-V15-2:~/Desktop/HMW1DENEME$ make
javac *.java
java Main

*******WELCOME TO THE FURNITURE STORE:*******

***PLEASE SELECT THE NUMBER FOR MENU:***

1)-Press 1 to New Register:

2)-Press 2 Already Customer:

3)-Press 3 if you are Branch Employee:

4)-Press 4 if you are Administrator:

0)-Press 0 if you want to exit the store:
```

```
********WELCOME TO THE FURNITURE STORE:*******

***PLEASE SELECT THE NUMBER FOR MENU:***

1)-Press 1 to New Register:

2)-Press 2 Already Customer:

3)-Press 3 if you are Branch Employee:

4)-Press 4 if you are Administrator:

0)-Press 0 if you want to exit the store:

1
Enter Customer name:
Serdil
Enter Customer Eposta:

@Anil02
Enter Customer Password:

123
```

```
Inter Customer name:
Serdil
Enter Customer Eposta:
@Anil02
Enter Customer Password:
123
YOUR REGISTRATION HAS BEEN COMPLETED.YOU CAN LOG IN TO THE SYSTEM With The Password You Set.
```

```
*******WELCOME TO THE FURNITURE STORE:*******

***PLEASE SELECT THE NUMBER FOR MENU:***

1)-Press 1 to New Register:

2)-Press 2 Already Customer:

3)-Press 3 if you are Branch Employee:

4)-Press 4 if you are Administrator:

0)-Press 0 if you want to exit the store:

2
Please enter the Password:

123
```

```
Please enter the Password:
123
THE SYSTEM HAS BEEN LOGGED IN BY CUSTOMER.
1-) IF YOU WANT TO KNOW HOW MANY FURNITURE IS IN WHICH STORE, PLEASE PRESS '1'.
2-)IF YOU WANT TO SHOP AT THE STORE, PRESS '2'.
3-)IF YOU WANT TO SEE THE PRODUCTS IN YOUR SHOPPING CART, press '3'.
  -)IF YOU WANT TO KNOW HOW MANY FURNITURE IS IN WHICH STORE, PLEASE PRESS '1'.
  -)IF YOU WANT TO SHOP AT THE STORE, PRESS '2
3-) IF YOU WANT TO SEE THE PRODUCTS IN YOUR SHOPPING CART, press '3'.
Please write that which you furniture you want FOR EXAMPLE: (You can write: chairs desks tables bookcases cabinets)
PLEASE ENTER THE FURNITURE YOU WANT WHICH IN CATALOG:
Sum of the office Chairs are in Branch1:175
Sum of the office Chairs are in Branch2:105
Sum of the office Chairs are in Branch4:35
   ******WELCOME TO THE FURNITURE STORE: *******
   ***PLEASE SELECT THE NUMBER FOR MENU:***
   1)-Press 1 to New Register:
   2)-Press 2 Already Customer:
   0)-Press 0 if you want to exit the store:
  Please enter the Password:
   THE SYSTEM HAS BEEN LOGGED IN BY CUSTOMER.
  1-) IF YOU WANT TO KNOW HOW MANY FURNITURE IS IN WHICH STORE, PLEASE PRESS '1'.
  2-) IF YOU WANT TO SHOP AT THE STORE, PRESS '2'
  3-) IF YOU WANT TO SEE THE PRODUCTS IN YOUR SHOPPING CART, press '3'.
  PLEASE ONLY WRITE THE NUMBER OPPOSITE OF THE ITEM YOU WANT TO CHOOSE.( chair = '0', desk = '1', table = '2', bookcase = '3', cabinet = '4')
  PLEASE ENTER THE MODEL YOU WILL CHOOSE AS A NUMBER. (FOR EXAMPLE Model1 = '1', Model2 = '2' ...):
  PLEASE ENTER THE COLOR YOU WILL CHOOSE AS A NUMBER. (FOR EXAMPLE Color1 = '1', Color2 = '2' ...):
  Please determine the amount of furniture
   Name: chair, Model: Model 1, Color: Color 4, Amount: 2
   ******WELCOME TO THE FURNITURE STORE:*******
```

\*\*\*PLEASE SELECT THE NUMBER FOR MENU:\*\*\*

```
*********WELCOME TO THE FURNITURE STORE:******

***PLEASE SELECT THE NUMBER FOR MENU:***

1)-Press 1 to New Register:

2)-Press 2 Already Customer:

3)-Press 3 if you are Branch Employee:

4)-Press 4 if you are Administrator:

0)-Press 0 if you want to exit the store:

2

Please enter the Password:

123

THE SYSTEM HAS BEEN LOGGED IN BY CUSTOMER.

1-)IF YOU WANT TO KNOW HOW MANY FURNITURE IS IN WHICH STORE, PLEASE PRESS '1'.

2-)IF YOU WANT TO SHOP AT THE STORE, PRESS '2'.

3-)IF YOU WANT TO SEE THE PRODUCTS IN YOUR SHOPPING CART, press '3'.

Name: chair, Model: Model 1, Color: Color 4, Amount: 2
```

```
******WELCOME TO THE FURNITURE STORE:*******
  **PLEASE SELECT THE NUMBER FOR MENU:***
 1)-Press 1 to New Register:
 3)-Press 3 if you are Branch Employee:
 4)-Press 4 if you are Administrator:
 0)-Press 0 if you want to exit the store:
 Please enter the Password:(If you are an administrator or a store employee, you can log in by typing ' Admin ' in the password. )
 Admin
 THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.
 1-) PLEASE PRESS '1' TO QUERY THE PRODUCTS IN STOCK
 2-) PLEASE PRESS '2' TO REQUEST A PRODUCT FROM THE MANAGER.
 3-) ENTER THE PASSWORD OF THE CUSTOMER YOU WANT AND PRESS '3' TO VIEW THE CUSTOMER'S SHOPPING CART.
 4-) PLEASE PRESS '4' TO ENTER THE CUSTOMER'S PASSWORD AND SHOP INSTEAD OF THE CUSTOMER.
 Sum of the office Chairs are in Branch1:175
 Sum of the office Chairs are in Branch2:105
 Sum of the office Chairs are in Branch3:140
 Sum of the office Chairs are in Branch4:35
 Sum of the office Desks are in Branch1:100
 Sum of the office Desks are in Branch2:60
 Sum of the office Desks are in Branch3:80
 Sum of the office Desks are in Branch4:20
 Sum of the office Tables are in Branch1:200
 Sum of the office Tables are in Branch2:120
 Sum of the office Tables are in Branch3:160
 Sum of the office Tables are in Branch4:40
 Sum of the office Bookcases are in Branch1:60
 Sum of the office Bookcases are in Branch2:36
 Sum of the office Bookcases are in Branch3:48
 Sum of the office Bookcases are in Branch4:12
 Sum of the office Cabinets are in Branch1:60
 Sum of the office Cabinets are in Branch2:36
 Sum of the office Cabinets are in Branch3:48
 Sum of the office Cabinets are in Branch4:12
******WELCOME TO THE FURNITURE STORE:******
***PLEASE SELECT THE NUMBER FOR MENU:***
 1)-Press 1 to New Register:
 2)-Press 2 Already Customer:
 3)-Press 3 if you are Branch Employee:
 4)-Press 4 if you are Administrator:
 0)-Press 0 if you want to exit the store:
Please enter the Password:(If you are an administrator or a store employee, you can log in by typing ' Admin ' in the password.)
Admin
THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.
1-) PLEASE PRESS '1' TO QUERY THE PRODUCTS IN STOCK .
2-) PLEASE PRESS '2' TO REQUEST A PRODUCT FROM THE MANAGER.
3-) ENTER THE PASSWORD OF THE CUSTOMER YOU WANT AND PRESS '3' TO VIEW THE CUSTOMER'S SHOPPING CART.
4-) PLEASE PRESS '4' TO ENTER THE CUSTOMER'S PASSWORD AND SHOP INSTEAD OF THE CUSTOMER.
Items in the customer's shopping cart: Name: chair, Model: Model 1, Color: Color 4, Amount: 2
```

```
******WELCOME TO THE FURNITURE STORE:******
***PLEASE SELECT THE NUMBER FOR MENU:***
1)-Press 1 to New Register:
2)-Press 2 Already Customer:
3)-Press 3 if you are Branch Employee:
4)-Press 4 if you are Administrator:
0)-Press 0 if you want to exit the store:
Please enter the Password:(If you are an administrator or a store employee, you can log in by typing ' Admin ' in the password.)
Admin
THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.
1-) PLEASE PRESS '1' TO QUERY THE PRODUCTS IN STOCK .
2-) PLEASE PRESS '2' TO REQUEST A PRODUCT FROM THE MANAGER.
3-) ENTER THE PASSWORD OF THE CUSTOMER YOU WANT AND PRESS '3' TO VIEW THE CUSTOMER'S SHOPPING CART.
4-) PLEASE PRESS '4' TO ENTER THE CUSTOMER'S PASSWORD AND SHOP INSTEAD OF THE CUSTOMER.
PLEASE ENTER THE PASSWORD OF THE CUSTOMER THAT YOU WILL ENTER THE ACCOUNT.
123
PLEASE ONLY WRITE THE NUMBER OPPOSITE OF THE ITEM YOU WANT TO CHOOSE.( chair = '0', desk = '1', table = '2', bookcase = '3', cabinet = '4')
PLEASE ENTER THE MODEL YOU WILL CHOOSE AS A NUMBER.(FOR EXAMPLE Model1 = '1', Model2 = '2' ...):
PLEASE ENTER THE COLOR YOU WILL CHOOSE AS A NUMBER.(FOR EXAMPLE COLOR1 = '1', Color2 = '2' ...):
Please determine the amount of furniture
Items in the customer's NEW shopping cart: Name: chair, Model: Model 1, Color: Color 4, Amount: 2
Name: desk, Model: Model 1, Color: Color 1, Amount: 3
******WELCOME TO THE FURNITURE STORE:*******
```

```
***PLEASE SELECT THE NUMBER FOR MENU:***
1)-Press 1 to New Register:
2)-Press 2 Already Customer:
3)-Press 3 if you are Branch Employee:
4)-Press 4 if you are Administrator:
0)-Press 0 if you want to exit the store:
PLEASE ENTER THE PASSWORD TO LOGIN TO THE SYSTEM.
Admin
THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.
Current Number Of Branch Employee: 9
Current Number Of Branch: 9
1-)IF YOU WANT TO REMOVE A BRANCH EMPLOYEE, PRESS 'q' :
2-) IF YOU WANT TO ADD A BRANCH EMPLOYEE, PRESS 'w' :
3-)IF YOU WANT TO ADD A WORKER, PRESS 's'
4-) IF YOU WANT TO REMOVE A WORKER, PRESS 'a' :
Current Number Of Branch Employee: 8
```

```
******WELCOME TO THE FURNITURE STORE: ****
***PLEASE SELECT THE NUMBER FOR MENU:***
 1)-Press 1 to New Register:
 2)-Press 2 Already Customer:
3)-Press 3 if you are Branch Employee:
4)-Press 4 if you are Administrator:
0)-Press 0 if you want to exit the store:
PLEASE ENTER THE PASSWORD TO LOGIN TO THE SYSTEM.
THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.
Current Number Of Branch Employee: 9
Current Number Of Branch: 9
1-)IF YOU WANT TO REMOVE A BRANCH EMPLOYEE, PRESS 'q' :
2-) IF YOU WANT TO ADD A BRANCH EMPLOYEE, PRESS 'w' :
3-)IF YOU WANT TO ADD A BRANCH, PRESS 's' :
4-)IF YOU WANT TO REMOVE A BRANCH, PRESS 'a' :
Current Number Of Branch : 10
```

```
******WELCOME TO THE FURNITURE STORE:*****
***PLEASE SELECT THE NUMBER FOR MENU:***
 1)-Press 1 to New Register:
 2)-Press 2 Already Customer:
 3)-Press 3 if you are Branch Employee:
4)-Press 4 if you are Administrator:
 0)-Press 0 if you want to exit the store:
4
PLEASE ENTER THE PASSWORD TO LOGIN TO THE SYSTEM.
Admin
THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.
Current Number Of Branch Employee: 9
Current Number Of Branch: 10
1-) IF YOU WANT TO REMOVE A BRANCH EMPLOYEE, PRESS 'q' :
2-) IF YOU WANT TO ADD A BRANCH EMPLOYEE, PRESS 'w' :
3-) IF YOU WANT TO ADD A WORKER, PRESS 's' :
4-) IF YOU WANT TO REMOVE A WORKER, PRESS 'a':
W
Current Number Of Branch Employee: 10
```

```
******WELCOME TO THE FURNITURE STORE:******
***PLEASE SELECT THE NUMBER FOR MENU:***
 1)-Press 1 to New Register:
 2)-Press 2 Already Customer:
 3)-Press 3 if you are Branch Employee:
4)-Press 4 if you are Administrator:
 0)-Press 0 if you want to exit the store:
PLEASE ENTER THE PASSWORD TO LOGIN TO THE SYSTEM.
Admin
THE SYSTEM HAS BEEN LOGGED IN BY EMPLOYEES.
Current Number Of Branch Employee: 10
Current Number Of Branch: 10
1-) IF YOU WANT TO REMOVE A BRANCH EMPLOYEE, PRESS 'q' :
2-) IF YOU WANT TO ADD A BRANCH EMPLOYEE, PRESS 'w' :
3-) IF YOU WANT TO ADD A BRANCH, PRESS 's' :
4-)IF YOU WANT TO REMOVE A BRANCH, PRESS 'a' :
Current Number Of Branch : 9
```