

**GIT Department of Computer Engineering**  
**CSE 222/505 - Spring 2020**  
**Homework 1\_part2 Report**

**ALI BAHAR**  
**171044066**

# 1.SYSTEM REQUIREMENTS

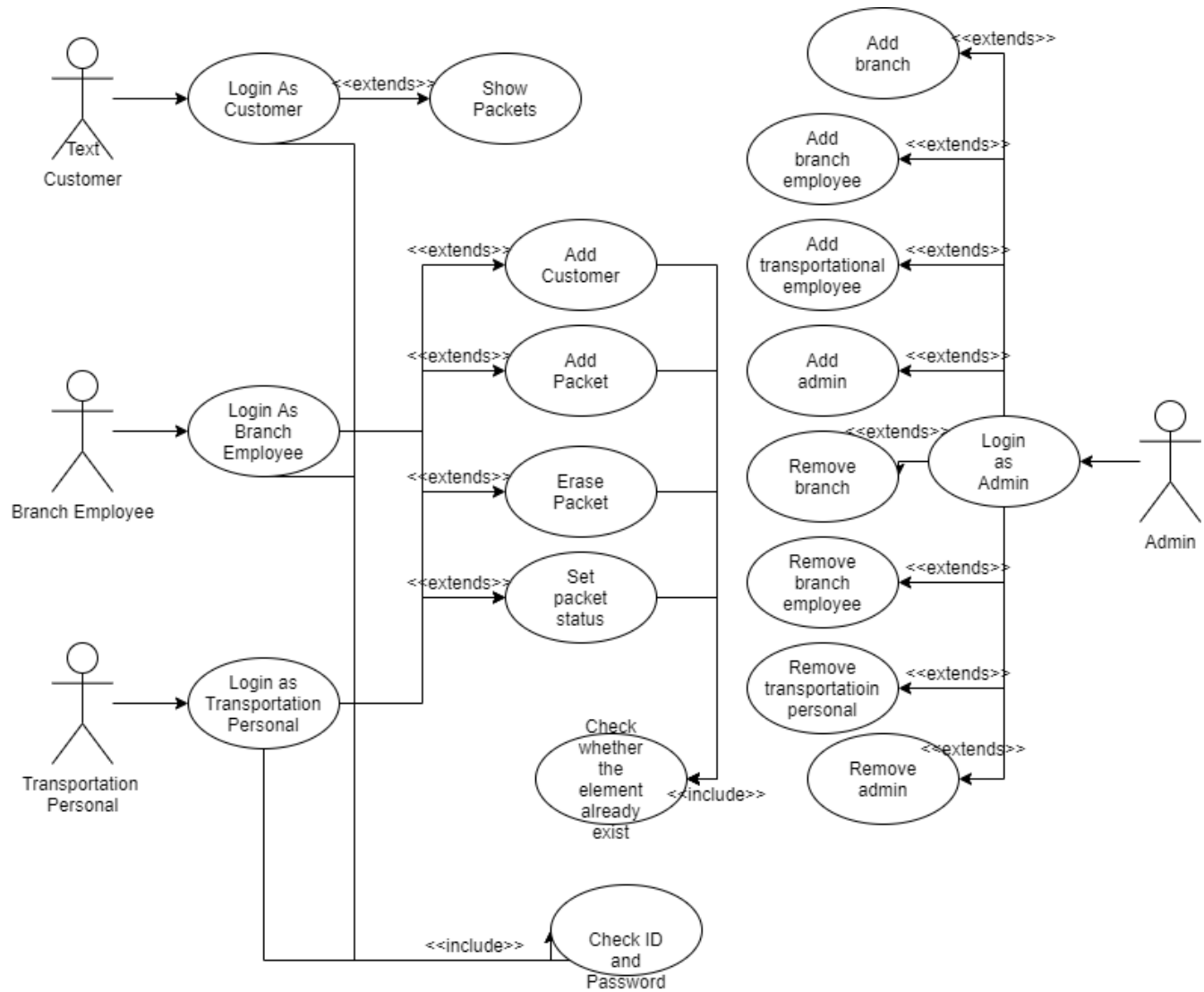
## NonFunctional:

when any user try to login they will have to enter their Id and password.  
if there is any wrong entry they can't reach their system.If an Admin tries to add a new branch,  
new branch have to has a unique name. Same ID can not be added to system.

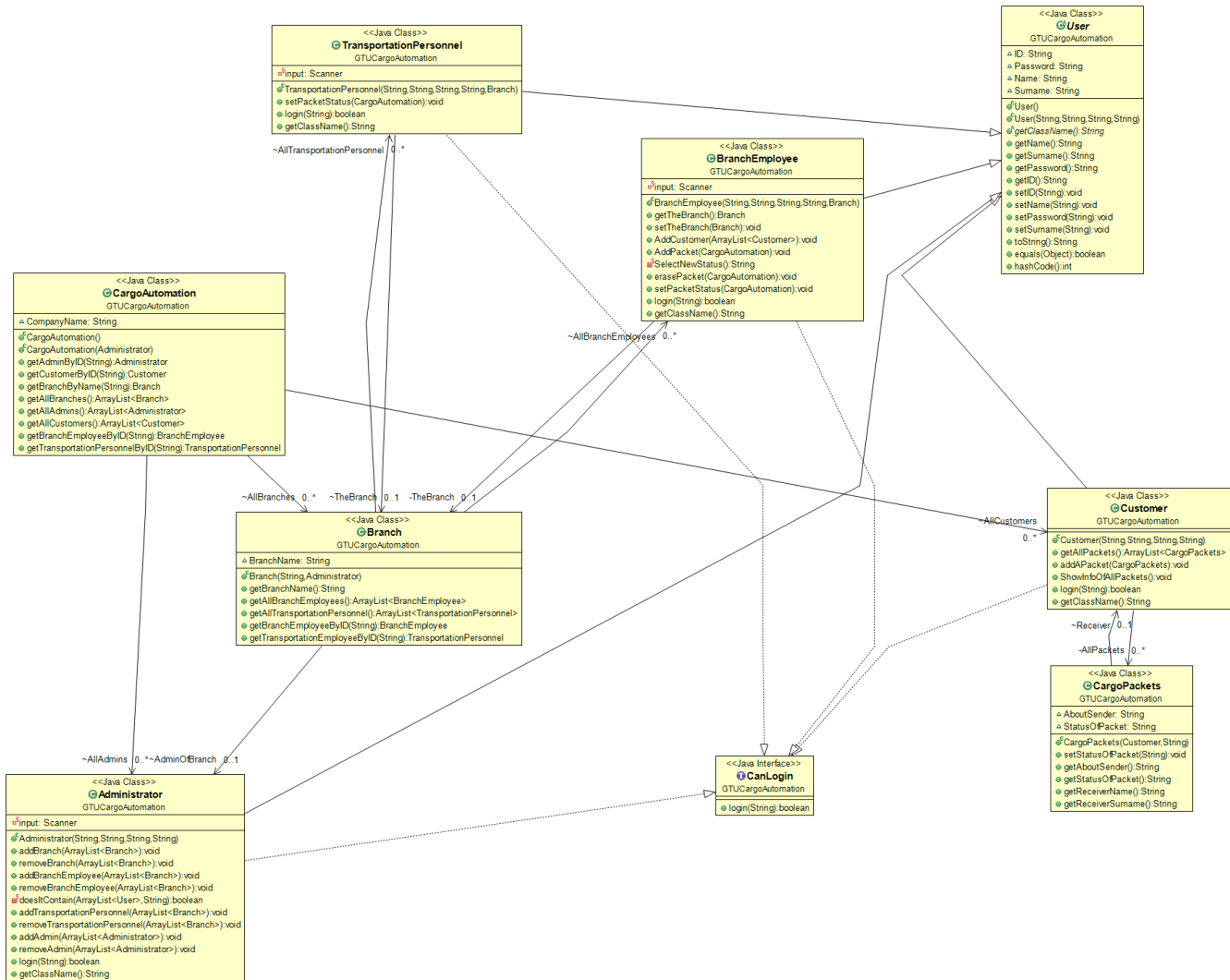
## Functional:

When the program begins an Admin is created defaultly. When an admin login to system, the Admin can add another admin to this system. Admin can remove any other Admin from system.Default Admin can be removed by another Admin. Admin can add and remove a new branch. Admin can add and remove a new branch employee. Branch employee who has added to system by admin can add new Customer and remove any Customer. Branch employee can add and remove a new packet for a Customer who has added to system. Branch employee can set the status of the packet. Transportation employees can be added to system by admin. Trasnportation employees can set the status of the packets. Customers can also login to system by using their ID. When they login to system they can be see theri packet information if they have any packet which is added to system by branch employee. An admin can not add a new customer or new packet, An admin can not erase a customer or packet. A Branch employee can not add and remove a new admin, branch employee, transportation employee, and packet. A transportation employee can not add and remove branch employee, transportation employee, and packet.

## 2.USE CASE DIAGRAMS



# 3.CLASS DIAGRAMS



## 4.PROBLEM SOLUTION APPROACH

the problem was creating an automation system for a cargo company so I have to store some kind of data such as Admins, Customers, transportation employee, branch employee and packet informations. to be able to store these data I used an generic ArrayList class. we can add and remove data by using methods. There was some kind of Users so I have created new classes for every different type User.They have their own methods and fields. I have used them in a main class and I created menus in main. By using this menus any user can use this automation.

## 5. TEST CASES

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### Test Cases

- 1 ) Log in as an Admin which is default.
- 2 ) Create a new Admin (Ali)
- 3 ) remove the default admin
- 4 ) try to login with default admin(shouldn't be logged in.)
- 5 ) log in as an admin (which is added by us)
- 6 ) try to add a new admin who has same ID. (shouldn't be added)
- 7 ) add three new branch.(b1,b2,b3)
- 8 ) add a branch employee for every branch.(be1,be2,be3)
- 9 ) add a transportation personnel for every branch(tp1,tp2,tp3)
- 10) go to the Cargo Automation Login Screen
- 11) log in as branch employee (be1)
- 12) add three customer.(cu1,cu2,cu3)
- 13) add five packet to a customers.(cu1)
- 14) go to the Cargo Automation Login Screen.
- 15) log in as Transportation Personal.(tp1)
- 16) change the status of a packet.
- 17) go to the Cargo Automation Login Screen.
- 18) log in as Customer.(cu1)
- 19) go to the Cargo Automation Login Screen.
- 20) log in as branch employee (be1)
- 21) erase two packet.
- 22) set status a packet.
- 23) go to the Cargo Automation Login Screen.
- 24) log in as Customer.(cu1)
- 25) go to the Cargo Automation Login Screen.
- 26) log in as an Admin.
- 27) remove a branch employee.(be1)

- 28) try to log in with removed branch employee.(be1)(shouldn't be logged in)
  - 29) remove a transportation personal.(tp1)
  - 30) try to log in as a transportation personal.(tp1)(shouldn't be logged in)
  - 31) remove the Admin.(Ali)
  - 32) try to log in as Admin.(Ali)(shouldn't be logged in)
  - 33) We cant reach the Admin panel any more because there is no admin in system.
  - 34) Quit from automation
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Cargo Automation Login screen.

- 1) Login as an Admin.
  - 2) Login as a Branch Employee.
  - 3) Login as a Transportation Personnel.
  - 4) Login as a Customer.
  - 0) to quit from automation.
- choice : 1

Default ID : tr

Default password : tr

After Login you can add a new Admin

Enter Admin ID : tr

Enter Admin Password : tr

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 4

Enter the name of the new Admin : Ali

Enter the surname of the new Admin : Bahar

Enter the ID of the new Admin : Ali

Enter the password of the new Admin : Ali

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 8

Enter the ID of the admin to remove :

tr

The admin has been removed.

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 0

Cargo Automation Login screen.

- 1) Login as an Admin.
- 2) Login as a Branch Employee.
- 3) Login as a Transportation Personnel.
- 4) Login as a Customer.
- 0) to quit from automation.

choice : 1

Default ID : tr

Default password : tr

After Login you can add a new Admin

Enter Admin ID : tr

Enter Admin Password : tr

invalid ID

Cargo Automation Login screen.

- 1) Login as an Admin.
- 2) Login as a Branch Employee.
- 3) Login as a Transportation Personnel.
- 4) Login as a Customer.
- 0) to quit from automation.

choice : 1

Default ID : tr

Default password : tr

After Login you can add a new Admin

Enter Admin ID : Ali

Enter Admin Password : Ali

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 4

Enter the name of the new Admin : Ali

Enter the surname of the new Admin : Bahar

Enter the ID of the new Admin : Ali

Enter the password of the new Admin : Ali

This ID has been already added.

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.



5) remove Branch.  
6) remove Branch Employee.  
7) remove Transportation Personnel.  
8) remove Admin.  
0) back.  
choice : 1  
Enter the name of new branch : b1

Admin Panel

1) Add Branch.  
2) Add BranchEmployee.  
3) Add Transportation Personnel.  
4) Add Admin.  
5) remove Branch.  
6) remove Branch Employee.  
7) remove Transportation Personnel.  
8) remove Admin.  
0) back.  
choice : 1  
Enter the name of new branch : b2

Admin Panel

1) Add Branch.  
2) Add BranchEmployee.  
3) Add Transportation Personnel.  
4) Add Admin.  
5) remove Branch.  
6) remove Branch Employee.  
7) remove Transportation Personnel.  
8) remove Admin.  
0) back.  
choice : 1  
Enter the name of new branch : b3

Admin Panel

1) Add Branch.  
2) Add BranchEmployee.  
3) Add Transportation Personnel.

- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 2

Enter the name of the branch to be able to add a new branch employee. : b1

Enter the name of the new branch employee : be1

Enter the surname of the new branch employee : be1

Enter the ID of the new branch employee : be1

Enter the password of the new branch employee : be1

#### Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 2

Enter the name of the branch to be able to add a new branch employee. : b2

Enter the name of the new branch employee : be2

Enter the surname of the new branch employee : be2

Enter the ID of the new branch employee : be2

Enter the password of the new branch employee : be2

#### Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.

0) back.

choice : 2

Enter the name of the branch to be able to add a new branch employee. : b3

Enter the name of the new branch employee : be3

Enter the surname of the new branch employee : be3

Enter the ID of the new branch employee : be3

Enter the password of the new branch employee : be3

Admin Panel

1) Add Branch.

2) Add BranchEmployee.

3) Add Transportation Personnel.

4) Add Admin.

5) remove Branch.

6) remove Branch Employee.

7) remove Transportation Personnel.

8) remove Admin.

0) back.

choice : 3

Enter the name of the branch to be able to add a new Transportation Personnel : b1

Enter the name of the new Transportation Personnel : tp1

Enter the surname of the new Transportation Personnel : tp1

Enter the ID of the new Transportation Personnel : tp1

Enter the password of the new Transportation Personnel : tp1

Admin Panel

1) Add Branch.

2) Add BranchEmployee.

3) Add Transportation Personnel.

4) Add Admin.

5) remove Branch.

6) remove Branch Employee.

7) remove Transportation Personnel.

8) remove Admin.

0) back.

choice : 3

Enter the name of the branch to be able to add a new Transportation Personnel : b2

Enter the name of the new Transportation Personnel : tp2

Enter the surname of the new Transportation Personnel : tp2

Enter the ID of the new Transportation Personnel : tp2

Enter the password of the new Transportation Personnel : tp2

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 3

Enter the name of the branch to be able to add a new Transportation Personnel : b3

Enter the name of the new Transportation Personnel : tp3

Enter the surname of the new Transportation Personnel : tp3

Enter the ID of the new Transportation Personnel : tp3

Enter the password of the new Transportation Personnel : tp3

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 0

Cargo Automation Login screen.

- 1) Login as an Admin.
- 2) Login as a Branch Employee.
- 3) Login as a Transportation Personnel.
- 4) Login as a Customer.
- 0) to quit from automation.

choice : 2

Enter Your Branch Employee ID :

be1

Enter Your Branch Employee Password :

be1

1) Add Customer.

2) Add packet.

3) erase packet.

4) Set packet status.

0) Quit

1

Enter customer name : cu1

Enter customer surname : cu1

Enter tracking number : cu1

1) Add Customer.

2) Add packet.

3) erase packet.

4) Set packet status.

0) Quit

1

Enter customer name : cu2

Enter customer surname : cu2

Enter tracking number : cu2

1) Add Customer.

2) Add packet.

3) erase packet.

4) Set packet status.

0) Quit

1

Enter customer name : cu3

Enter customer surname : cu3

Enter tracking number : cu3

1) Add Customer.

2) Add packet.

3) erase packet.

4) Set packet status.

0) Quit

2

Enter the customer Tracking Number : cu1

Enter sender name : Baran

Enter sender surname : Bozduman

- 1) in branch
- 2) in Transportation
- 0) quit

1

- 1) Add Customer.
- 2) Add packet.
- 3) erase packet.
- 4) Set packet status.
- 0) Quit

2

Enter the customer Tracking Number : cu1  
Enter sender name : Nevzat  
Enter sender surname : Seferoglu

- 1) in branch
- 2) in Transportation
- 0) quit

1

- 1) Add Customer.
- 2) Add packet.
- 3) erase packet.
- 4) Set packet status.
- 0) Quit

2

Enter the customer Tracking Number : cu1  
Enter sender name : Abdullah  
Enter sender surname : Celik

- 1) in branch
- 2) in Transportation
- 0) quit

2

- 1) Add Customer.
- 2) Add packet.
- 3) erase packet.
- 4) Set packet status.
- 0) Quit

2

Enter the customer Tracking Number : cu1  
Enter sender name : Berk  
Enter sender surname : Pekgoz

- 1) in branch
- 2) in Transportation

0) quit

2

1) Add Customer.

2) Add packet.

3) erase packet.

4) Set packet status.

0) Quit

2

Enter the customer Tracking Number : cu1

Enter sender name : Murat

Enter sender surname : Yildiz

1) in branch

2) in Transportation

0) quit

2

1) Add Customer.

2) Add packet.

3) erase packet.

4) Set packet status.

0) Quit

0

Cargo Automation Login screen.

1) Login as an Admin.

2) Login as a Branch Employee.

3) Login as a Transportation Personnel.

4) Login as a Customer.

0) to quit from automation.

choice : 3

Enter Your Transportation Personnel ID :

tp1

Enter Your Transportation Personnel Password :

tp1

Do you want to change any packet status to Delivered

y)yes

n)no

y

Enter the Customer ID : cu1

index	Receiver	Sender	Status
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0	cu1 cu1	Baran Bozduman	in branch
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1	cu1 cu1	Nevzat Seferoglu in branch
2	cu1 cu1	Abdullah Celik in Transportation
3	cu1 cu1	Berk Pekgoz in Transportation
4	cu1 cu1	Murat Yildiz in Transportation

Enter the index of the packet to change status:

3

The status changed to Delivered.

Cargo Automation Login screen.

- 1) Login as an Admin.
- 2) Login as a Branch Employee.
- 3) Login as a Transportation Personnel.
- 4) Login as a Customer.
- 0) to quit from automation.

choice : 4

Enter your Tracking Number : cu1

index	Receiver	Sender	Status
0	cu1 cu1	Baran Bozduman in branch	
1	cu1 cu1	Nevzat Seferoglu in branch	
2	cu1 cu1	Abdullah Celik in Transportation	
3	cu1 cu1	Berk Pekgoz Delivered	
4	cu1 cu1	Murat Yildiz in Transportation	

Cargo Automation Login screen.

- 1) Login as an Admin.
- 2) Login as a Branch Employee.
- 3) Login as a Transportation Personnel.
- 4) Login as a Customer.
- 0) to quit from automation.

choice : 2

Enter Your Branch Employee ID :

be1

Enter Your Branch Employee Password :

be1

- 1) Add Customer.
- 2) Add packet.
- 3) erase packet.
- 4) Set packet status.
- 0) Quit



3

Enter the tracking ID of customer :

cu1

index	Receiver	Sender	Status
0	cu1 cu1	Baran Bozduman	in branch
1	cu1 cu1	Nevzat Seferoglu	in branch
2	cu1 cu1	Abdullah Celik	in Transportation
3	cu1 cu1	Berk Pekgoz	Delivered
4	cu1 cu1	Murat Yildiz	in Transportation

Enter the index of the packet to remove:

3

- 1) Add Customer.
- 2) Add packet.
- 3) erase packet.
- 4) Set packet status.
- 0) Quit

3

Enter the tracking ID of customer :

cu1

index	Receiver	Sender	Status
0	cu1 cu1	Baran Bozduman	in branch
1	cu1 cu1	Nevzat Seferoglu	in branch
2	cu1 cu1	Abdullah Celik	in Transportation
3	cu1 cu1	Murat Yildiz	in Transportation

Enter the index of the packet to remove:

3

- 1) Add Customer.
- 2) Add packet.
- 3) erase packet.
- 4) Set packet status.
- 0) Quit

4

Enter the tracking ID of customer :

cu1

index	Receiver	Sender	Status
0	cu1 cu1	Baran Bozduman	in branch
1	cu1 cu1	Nevzat Seferoglu	in branch
2	cu1 cu1	Abdullah Celik	in Transportation

Enter the index of the packet to change status:

0

- 1) in branch

2) in Transportation

0) quit

2

1) Add Customer.

2) Add packet.

3) erase packet.

4) Set packet status.

0) Quit

0

Cargo Automation Login screen.

1) Login as an Admin.

2) Login as a Branch Employee.

3) Login as a Transportation Personnel.

4) Login as a Customer.

0) to quit from automation.

choice : 4

Enter your Tracking Number : cu1

index	Receiver	Sender	Status
0	cu1 cu1	Baran Bozduman	in Transportation
1	cu1 cu1	Nevzat Seferoglu	in branch
2	cu1 cu1	Abdullah Celik	in Transportation

Cargo Automation Login screen.

1) Login as an Admin.

2) Login as a Branch Employee.

3) Login as a Transportation Personnel.

4) Login as a Customer.

0) to quit from automation.

choice : 1

Default ID : tr

Default password : tr

After Login you can add a new Admin

Enter Admin ID : Ali

Enter Admin Password : Ali

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 6

Enter the Branch Employee ID :

be1

The branch employee has been removed.

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 0

Cargo Automation Login screen.

- 1) Login as an Admin.
- 2) Login as a Branch Employee.
- 3) Login as a Transportation Personnel.
- 4) Login as a Customer.
- 0) to quit from automation.

choice : 2

Enter Your Branch Employee ID :

be1

Enter Your Branch Employee Password :

be1

This ID Doesn't exist.

Cargo Automation Login screen.

- 1) Login as an Admin.
  - 2) Login as a Branch Employee.
  - 3) Login as a Transportation Personnel.
  - 4) Login as a Customer.
  - 0) to quit from automation.
- choice : 1

Default ID : tr

Default password : tr

After Login you can add a new Admin

Enter Admin ID : Ali

Enter Admin Password : ALi

invalid Admin password

Cargo Automation Login screen.

- 1) Login as an Admin.
  - 2) Login as a Branch Employee.
  - 3) Login as a Transportation Personnel.
  - 4) Login as a Customer.
  - 0) to quit from automation.
- choice : 1

Default ID : tr

Default password : tr

After Login you can add a new Admin

Enter Admin ID : Ali

Enter Admin Password : Ali

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.

0) back.

choice : 7

Enter the Transportation Personnel ID :

tp1

The Transportation personnel has been removed.

Admin Panel

1) Add Branch.

2) Add BranchEmployee.

3) Add Transportation Personnel.

4) Add Admin.

5) remove Branch.

6) remove Branch Employee.

7) remove Transportation Personnel.

8) remove Admin.

0) back.

choice : 0

Cargo Automation Login screen.

1) Login as an Admin.

2) Login as a Branch Employee.

3) Login as a Transportation Personnel.

4) Login as a Customer.

0) to quit from automation.

choice : 3

Enter Your Transportation Personnel ID :

tp1

Enter Your Transportation Personnel Password :

tp1

This ID Doesn't exist.

Cargo Automation Login screen.

1) Login as an Admin.

2) Login as a Branch Employee.

3) Login as a Transportation Personnel.

4) Login as a Customer.

0) to quit from automation.

choice : 1

Default ID : tr  
Default password : tr  
After Login you can add a new Admin  
Enter Admin ID : Ali  
Enter Admin Password : Ali

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 8

Enter the ID of the admin to remove :  
Ali

The admin has been removed.

Admin Panel

- 1) Add Branch.
- 2) Add BranchEmployee.
- 3) Add Transportation Personnel.
- 4) Add Admin.
- 5) remove Branch.
- 6) remove Branch Employee.
- 7) remove Transportation Personnel.
- 8) remove Admin.
- 0) back.

choice : 0

Cargo Automation Login screen.

- 1) Login as an Admin.
- 2) Login as a Branch Employee.
- 3) Login as a Transportation Personnel.

4) Login as a Customer.  
0) to quit from automation.  
choice : 1

Default ID : tr  
Default password : tr  
After Login you can add a new Admin  
Enter Admin ID : Ali  
Enter Admin Password : Ali  
invalid ID

Cargo Automation Login screen.  
1) Login as an Admin.  
2) Login as a Branch Employee.  
3) Login as a Transportation Personnel.  
4) Login as a Customer.  
0) to quit from automation.  
choice : 1

Default ID : tr  
Default password : tr  
After Login you can add a new Admin  
Enter Admin ID : tr  
Enter Admin Password : tr  
invalid ID

Cargo Automation Login screen.  
1) Login as an Admin.  
2) Login as a Branch Employee.  
3) Login as a Transportation Personnel.  
4) Login as a Customer.  
0) to quit from automation.  
choice : 1

Default ID : tr  
Default password : tr  
After Login you can add a new Admin  
Enter Admin ID : Ali  
Enter Admin Password : Ali

invalid ID

Cargo Automation Login screen.

- 1) Login as an Admin.
  - 2) Login as a Branch Employee.
  - 3) Login as a Transportation Personnel.
  - 4) Login as a Customer.
  - 0) to quit from automation.
- choice : 0

Process finished with exit code 0