

**GIT Department of Computer
Engineering
CSE 222/505 - Spring 2020
Homework #1-2 Report**

**Emirhan UZUN
171044019**

1. SYSTEM REQUIREMENTS

First I have to make an outline:

-We have a company. And there are branches, admin and customers under this company. There are employees under these branches. Thus, branch employees and transportation personnel are under employee class. Apart from these, we have a cargo class. We said “apart from” but of course it depends on company class. Finally we have a interface which name is User. Because we have lots of users (Admin, branch employees, transportation employees, customer) and all of them have name and surname. Therefore I create a interface which has some methods to implement other classes.

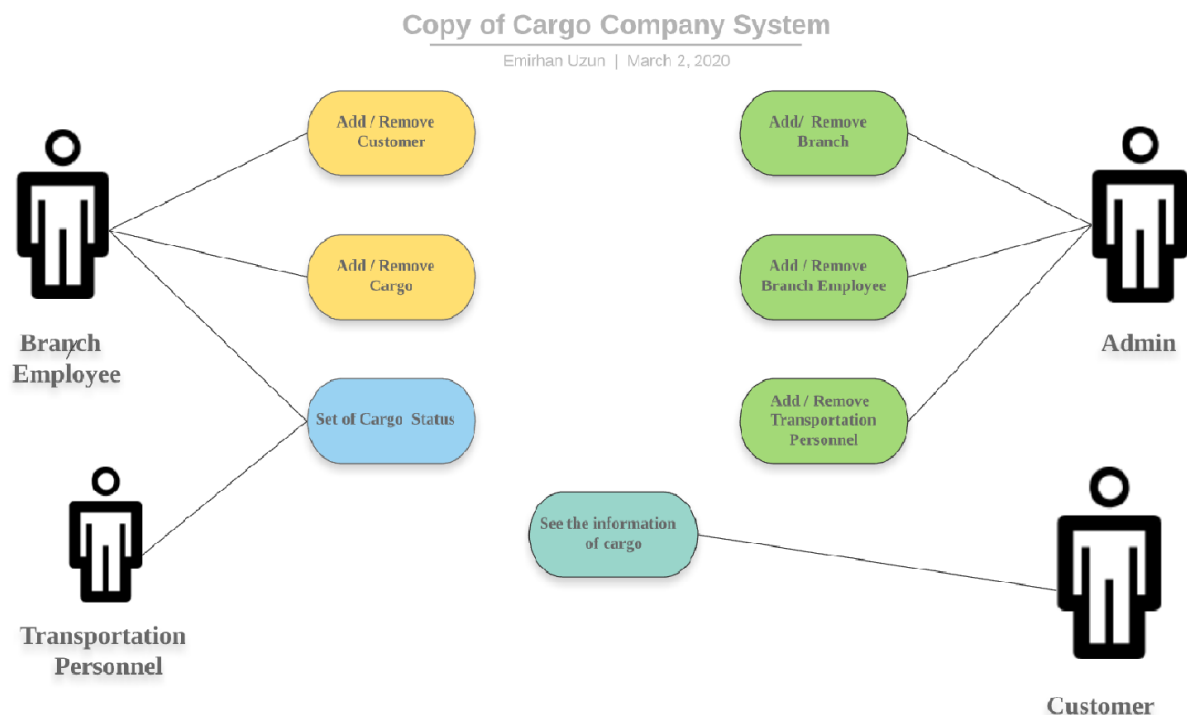
Secondly I define the purpose of my product:

- The purpose of my product is to create a cargo company and create this company’s objects using specific classes.

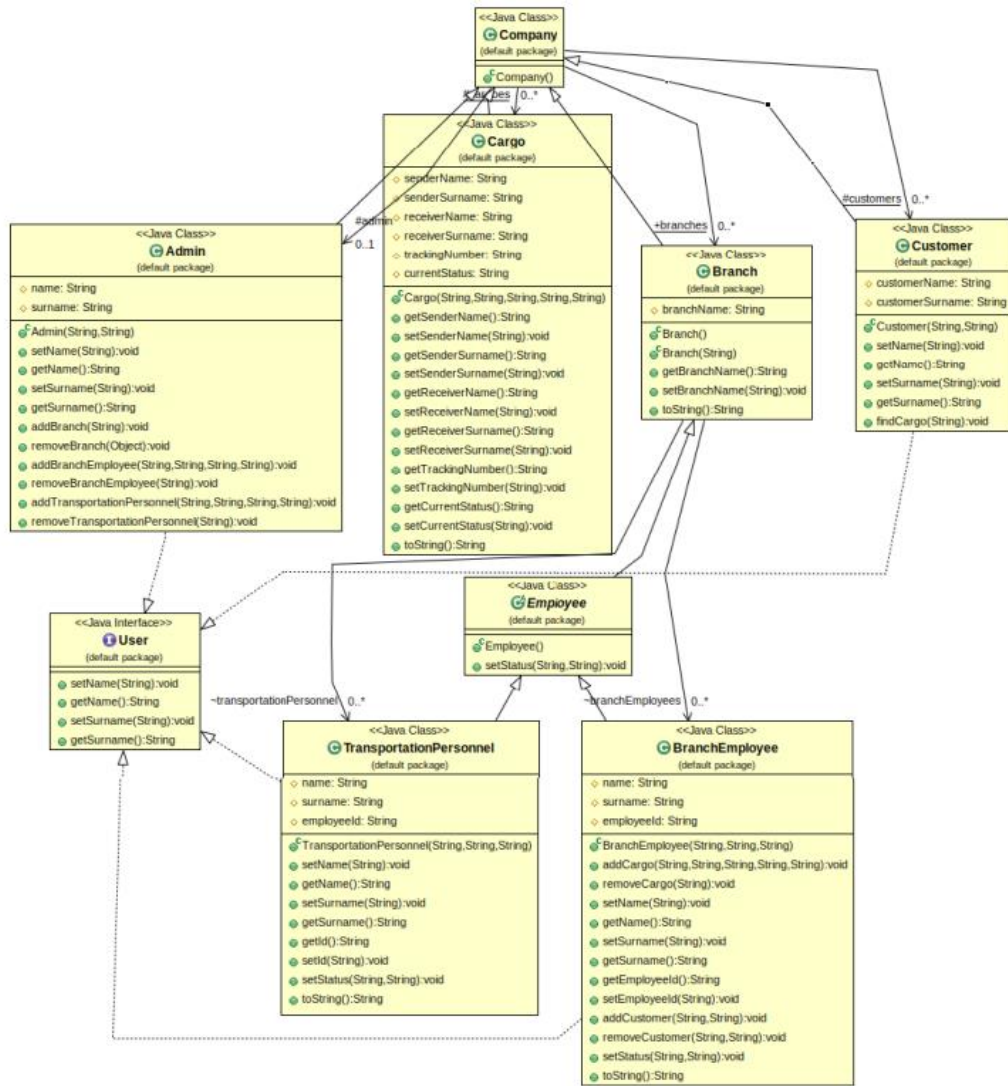
Thirdly I describe what I’m building

-This program creates many objects like users, cargoes, admins etc. And these objects are created by different class and methods. For instance branch employees are created by admin class, cargos are created by branch employees etc. Therefore, I created my classes and methods which are appropriate after I thought about my hierarchy.

2. USE CASE DIAGRAMS



3. CLASS DIAGRAMS



5. PROBLEM SOLUTION APPROACH

There is a need for keep the informations. Informations are branches, cargoes and customers. So I created arrays for that informations in that class. The customer class keeps the name, surname and tracking number. It also extends by Company. The Cargo keeps the sender and receiver names, status and tracking number. Branch class is the super class of employee. Employee is the abstract class which keeps the set status method that common for branch employee and transportation personnel. In addition, branch and transportation employees sub class of Employee class. These employee array lists are in the branch class. So it holds the array lists of that employees. Branch employee can add and remove customer and Cargo. Also branch employees can set the status. Transportation employee can just set status of cargos. So firstly, we have to create a class which keeps the informations (branches, cargoes and customers). And then to add branches and employees, I create admin. After that, I add branches, add employees and remove. Then, I added customers and cargos. Apart from these, I create a user interface. Because every user has name and surname. So that interface has getters and setters methods of names and surnames. All of these users can implements this interface. These are my problem solution.

6. TEST CASES

Add Company : I write that beginning of the test class

Add Admin : I added after the company.

Add Branch : After the admin, I added employees.

Remove Branch : This removes the branches from array list.

Add Employee : This method adds the employees.

Remove Employee : This method removes the branch employee and transportation employee.

Add Cargo : Add cargos to array lists.

Remove Cargo : Remove cargos from array lists.

Add Customer : Add customers to customer array list which use the branch employees

Remove Customer : Remove customers from customer array list which use the branch employees

Set Status : This method changes the status of cargos. Branch employee and transportation personnel can do this.

Find Cargo : This method finds the cargo which is entered tracking number to it.

7. RUNNING AND RESULTS

Admin name and surname is Emirhan Uzun

-----ADD BRANCH-----

Kadikoy was added to branches !

Maltepe was added to branches !

Kartal was added to branches !

Bostanci was added to branches !

```
[Branch(s) Name = Kadikoy
, Branch(s) Name = Maltepe
, Branch(s) Name = Kartal
, Branch(s) Name = Bostanci
]
```

-----REMOVE BRANCH-----

Maltepe was erased from branch array !

```
[Branch(s) Name = Kadikoy
, Branch(s) Name = Kartal
, Branch(s) Name = Bostanci
]
```

I add some branches and remove one of them in this picture.

-----ADD EMPLOYEE-----

DenizUzun was inserted to branch employee in branch Kadikoy

FeyzaCendek was inserted to branch employee in branch Bostanci

YagizEfe was inserted to branch employee in branch Kartal

EfeOmur was inserted to branch employee in branch Kartal

AliCalisir was inserted to transportation employee in branch Kadikoy

RamazanSari was inserted to transportation employee in branch Bostanci

MustafaSurun was inserted to transportation employee in branch Kartal

```
Branch(s) Name = Kadikoy
Branch's employee(s) :
[[Name = Deniz Surname = Uzun Employee Id = HM00001]
]
Transportation Personnel(s) :
[[Name = Ali Surname = Calisir Employee Id = NEV3450]]
```

```
Branch(s) Name = Kartal
Branch's employee(s) :
[[Name = Yagiz Surname = Efe Employee Id = CCK2598]
, [Name = Efe Surname = Omur Employee Id = CLK4735]
]
Transportation Personnel(s) :
[[Name = Mustafa Surname = Surun Employee Id = LOL4988]]
```

```
Branch(s) Name = Bostanci
Branch's employee(s) :
[[Name = Feyza Surname = Cendek Employee Id = LOV2001]
]
Transportation Personnel(s) :
[[Name = Ramazan Surname = Sari Employee Id = DSL6110]]
```

-----REMOVE EMPLOYEE-----

Yagiz was erased from branch employee array !

Mustafa was erased from transportation employee array !

In this picture, I added employees (Branch employees and transportation personnel) and then I print branches and branches' employees. After that, I remove some employees.

```
-----
-----ADD CARGO-----
SMK5834 tracking number was inserted cargo array !
[Cargo(es) [senderName=Handan, senderSurname=Uzun, receiverName=Hilal, receiverSurname=Okuyan, trackingNumber=SMK5834, Status = Not delivered]
]
CRM1977 tracking number was inserted cargo array !
[Cargo(es) [senderName=Handan, senderSurname=Uzun, receiverName=Hilal, receiverSurname=Okuyan, trackingNumber=SMK5834, Status = Not delivered]
, Cargo(es) [senderName=Gulsen, senderSurname=Cinar, receiverName=Abdullah, receiverSurname=Aydogan, trackingNumber=CRM1977, Status = Not delivered]
]
SVS1566 tracking number was inserted cargo array !
[Cargo(es) [senderName=Handan, senderSurname=Uzun, receiverName=Hilal, receiverSurname=Okuyan, trackingNumber=SMK5834, Status = Not delivered]
, Cargo(es) [senderName=Gulsen, senderSurname=Cinar, receiverName=Abdullah, receiverSurname=Aydogan, trackingNumber=CRM1977, Status = Not delivered]
, Cargo(es) [senderName=Enes, senderSurname=Kartal, receiverName=Melek, receiverSurname=Yilmaz, trackingNumber=SVS1566, Status = Not delivered]
]
OMT4635 tracking number was inserted cargo array !
[Cargo(es) [senderName=Handan, senderSurname=Uzun, receiverName=Hilal, receiverSurname=Okuyan, trackingNumber=SMK5834, Status = Not delivered]
, Cargo(es) [senderName=Gulsen, senderSurname=Cinar, receiverName=Abdullah, receiverSurname=Aydogan, trackingNumber=CRM1977, Status = Not delivered]
, Cargo(es) [senderName=Enes, senderSurname=Kartal, receiverName=Melek, receiverSurname=Yilmaz, trackingNumber=SVS1566, Status = Not delivered]
, Cargo(es) [senderName=Cemal, senderSurname=Boyras, receiverName=Taner, receiverSurname=Keskin, trackingNumber=OMT4635, Status = Not delivered]
]
-----
-----REMOVE CARGO-----
SMK5834 tracking number was erased from cargoes !
-----
-----ADD CUSTOMER-----
FatmaErdogan was added to customers !
SenaDurgut was added to customers !
-----
-----REMOVE CUSTOMER-----
Sena Durgut was erased from customers !
-----
-----BRANCH EMPLOYEE CHANGES SET STATUS -----
SVS1566's cargo status changed !
Cargo(es) [senderName=Enes, senderSurname=Kartal, receiverName=Melek, receiverSurname=Yilmaz, trackingNumber=SVS1566, Status = Delivered]
-----
-----TRANSPORTATION EMPLOYEE CHANGES SET STATUS -----
CRM1977's cargo status changed !
Cargo(es) [senderName=Gulsen, senderSurname=Cinar, receiverName=Abdullah, receiverSurname=Aydogan, trackingNumber=CRM1977, Status = Delivered]
-----
-----CUSTOMER FIND CARGO-----
Cargo(es) [senderName=Cemal, senderSurname=Boyras, receiverName=Taner, receiverSurname=Keskin, trackingNumber=OMT4635, Status = Not delivered]
-----
```

In this last picture, I added cargos, customers and remove some of them. Finally I set the status using branch and transportation employees. Last operation is find cargo. We send the tracking number to the method and this method returns the cargo informations.

```
-----
-----ADD EMPLOYEE-----
DenizUzun was inserted to branch employee in branch Kadikoy
FeyzaCendek was inserted to branch employee in branch Bostanci
RagizEfe was inserted to branch employee in branch Kartal
EfeOmur was inserted to branch employee in branch Kartal
AliCalisir was inserted to transportation employee in branch Kadikoy
RamazanSari was inserted to transportation employee in branch Bostanci
java.lang.Exception: Gebze branch was not found !
-----
-----REMOVE EMPLOYEE-----
Ragiz was erased from branch employee array !
java.lang.Exception: Emirhan transportation employee was not found !
-----
```

These last 2 pictures are my exceptions. While if admin can't find branches, it throws an exception. Below picture, I remove employee whose name is Emirhan, but the admin couldn't find that name and it throws the exception