

GTU
Department of Computer Engineering
CSE 222/505 - Spring 2020
Homework 1 Part 2 Report

Abdulahkim Emre ARTIŞ
141044034

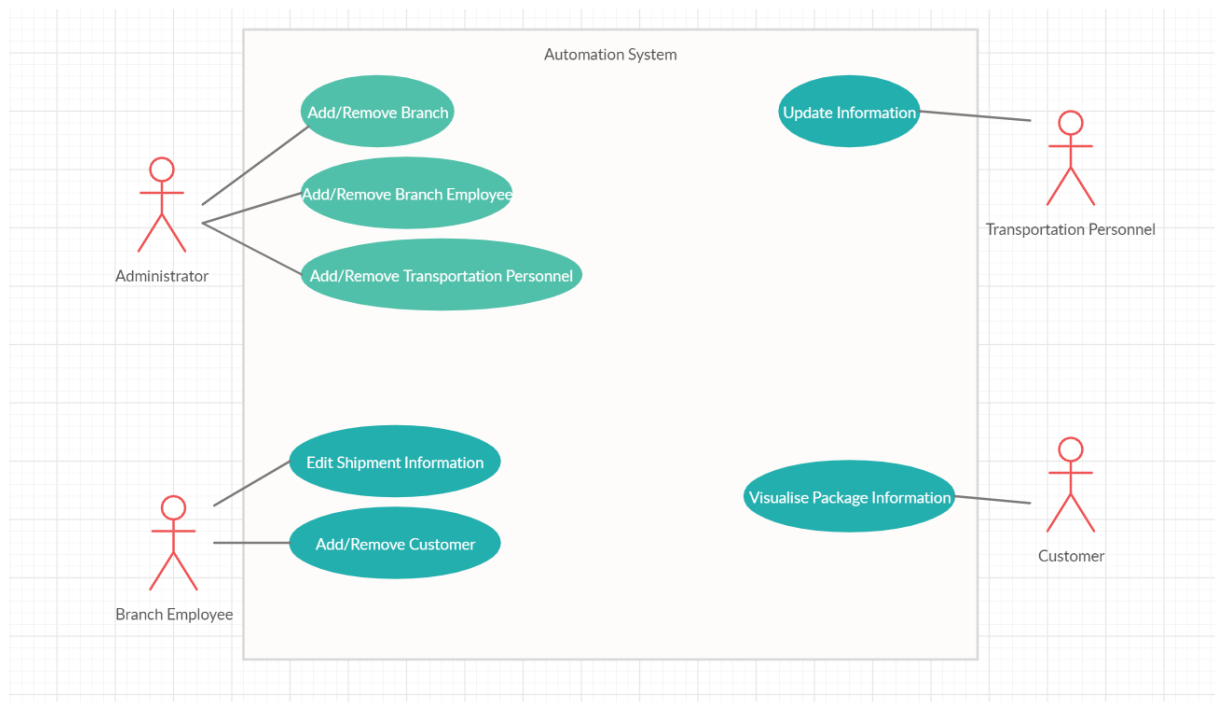
1-System Requirements

Cargo automation system supports to add/remove branches, branch employees, transportation personnels and customers. Branch employees and transportation personnel can change the status. The system also supports to visualization of information(sender, receiver, status) about package for customers.

System uses ArrayLists to keep all system information like list of branches, list of branch employees, list of transportation personnels, list of customers. And throws exceptions when any errors occur.

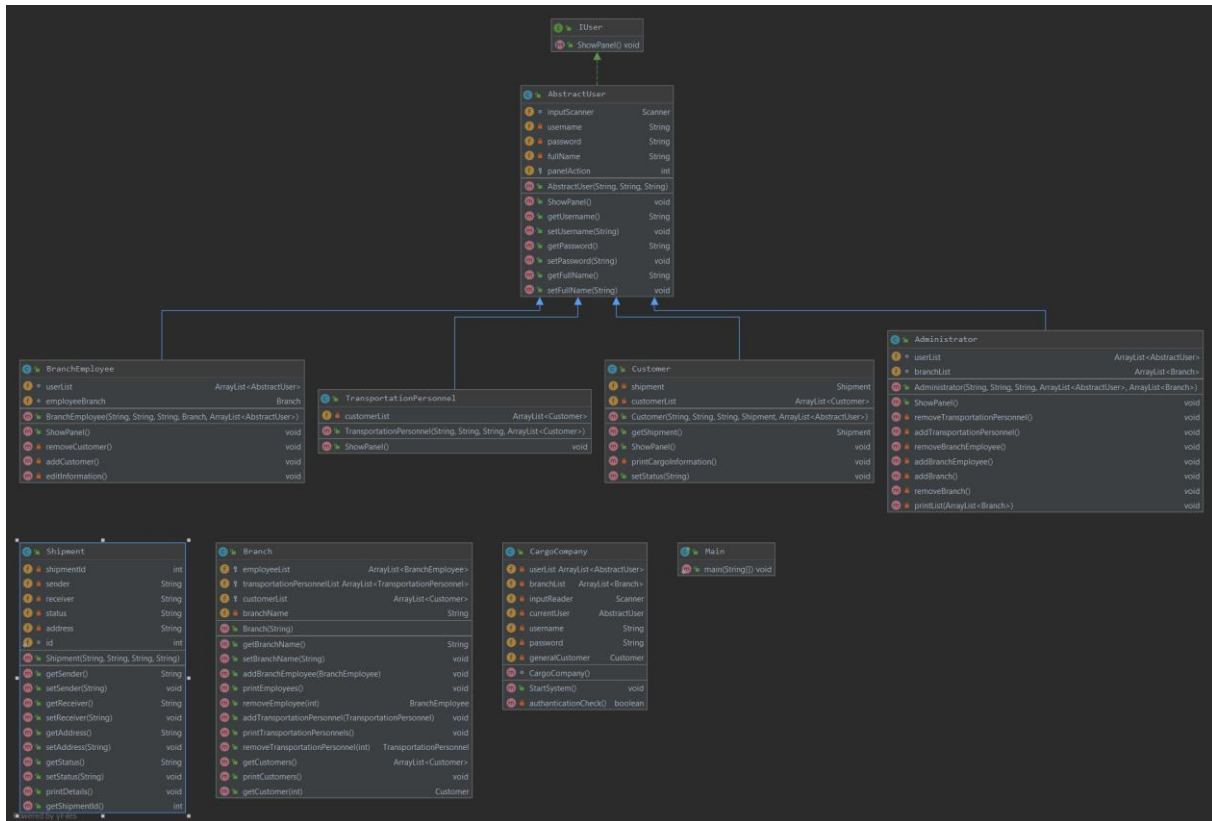
2-Use case Diagram

Use case diagram for cargo automation system shown below:



3-Class Diagrams:

All the class diagrams showed below:



Detailed class diagram with relations exists in homework files: ".\Diagrams/DetailedClassDiagram.png"

4-Problem Solution Approach

To create cargo automation system, there must be users, branches and shipments and a class(CargoCompany class) to keep data and visualize panel for main system entrance. Also all users keep their own panel inside classes. The system have different user types so i created an interface because all user types have their own panel. And added an abstract class for users which keeps username, password and fullname, then i created user type classes: an

administrator type for add/remove new users, an employee type for editing status information, add/remove customers, a transportation personnel type for deliver shipments. A Cargo automation system must have administrators so i added one administrator to user ArrayList. Also it needs branches so i create branch class and its operations then added an ArrayList of it. A Cargo company branch has customers, branch employees and transportation personnels so i added ArrayList of them into branch class. Since every customer has their own package i create a shipment variable in customer class to keep shipment informations. System has a basic user interface to make operations easily. If user gives wrong input to the system, it warns the user.

5-Test Cases, Running and Results

For logging in to system as administrator;

Default username : admin1

Default password is : admin1

All methods tested with different scenarios, console outputs are available in TestConsoleOutput.pdf