FLEET MANAGEMENT SYSTEM

GROUP NAME: COLLOID

TEAM 43 - DELIVERABLE 3

Architecture Design

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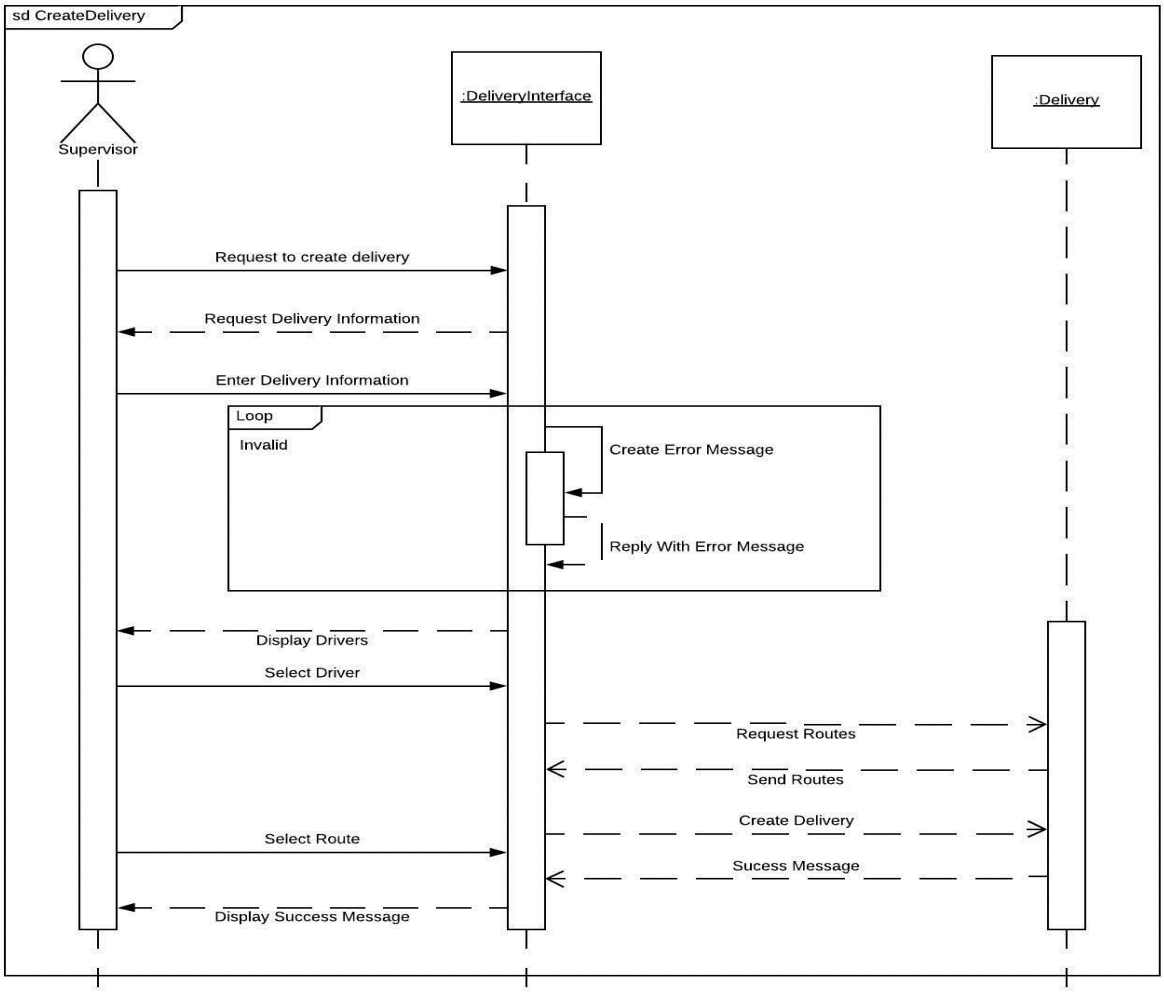
Contents

1. Interaction Sequence Diagrams 2
    - 1.1 Create Delivery 2
    - 1.2 Accept Assignment 3
    - 1.3 Add Driver 4
    - 1.4 Add Truck 5
    - 1.5 Delete Driver 6
    - 1.6 Delete Truck 7
    - 1.7 End Trip 8
    - 1.8 Start Trip 9
    - 1.9 Login Driver 10
    - 1.10 Generate Truck Report 11
    - 1.11 Monitor Trucks 12
2. Component & Deployment Diagram 13
3. Database Design 14
4. Plagiarism Declaration 15

1. Interaction Sequence Diagrams

A sequence diagram shows the objects and classes involved in a scenario and the sequence of the messages exchanged between the objects. They specifically focus on the lifelines and the messages to perform a function before the lifeline terminates.

1.1 Create Delivery

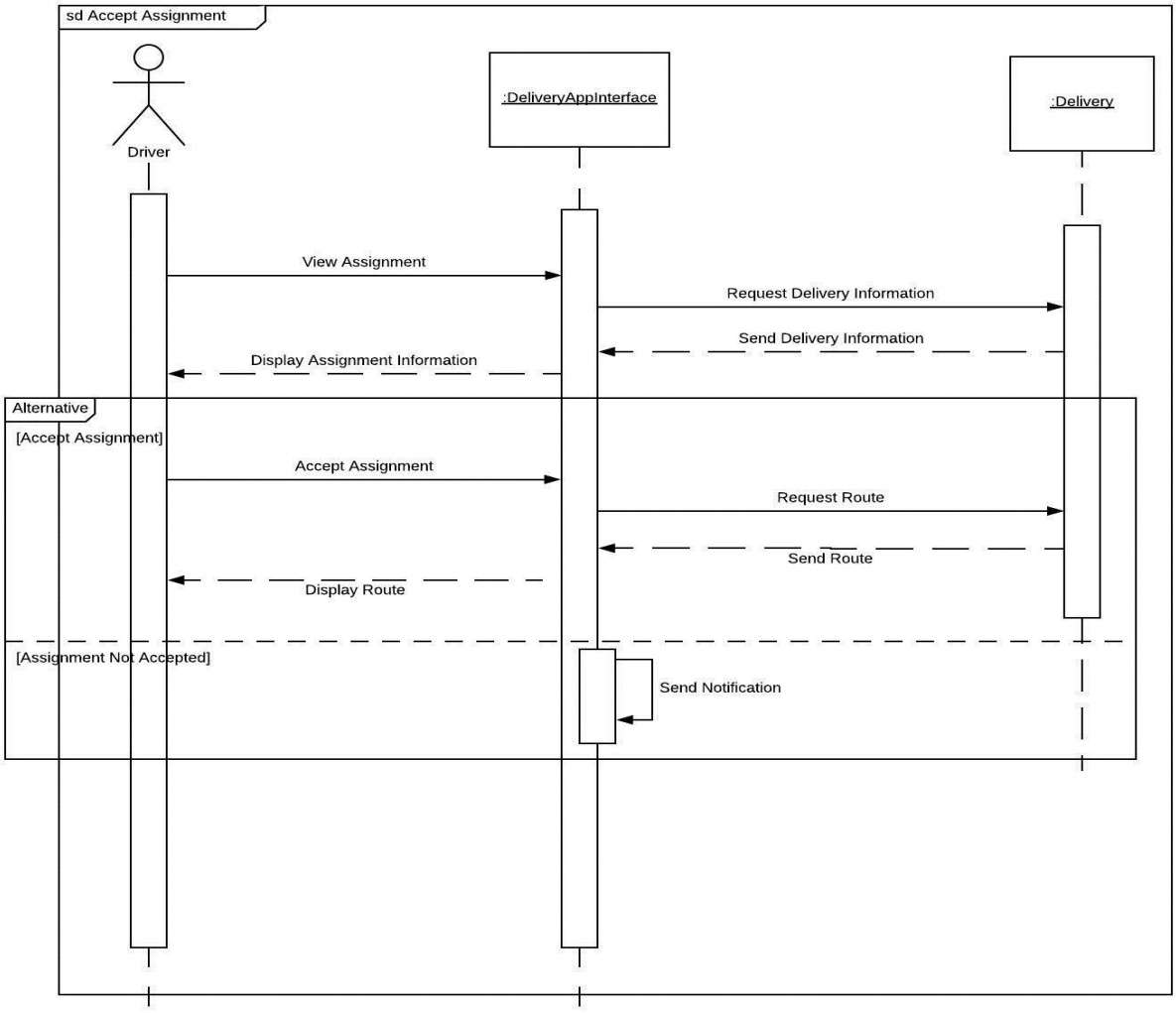


Create Delivery Summary

The supervisor will request to create a delivery via the delivery interface. The interface class will request delivery information to be submitted (i.e. order number, load, material and dates). If the information entered is not of the correct data type, the interface will create an error message and display it until the correct data type information is submitted.

If the information is valid then the interface will display the drivers available to which the supervisor will select one. The interface will then display the routes and the supervisor will select one. The interface will then create delivery using the delivery class. The class will reply with a success message to the interface and the interface will display a success message to the supervisor.

1.2 Accept Assignment

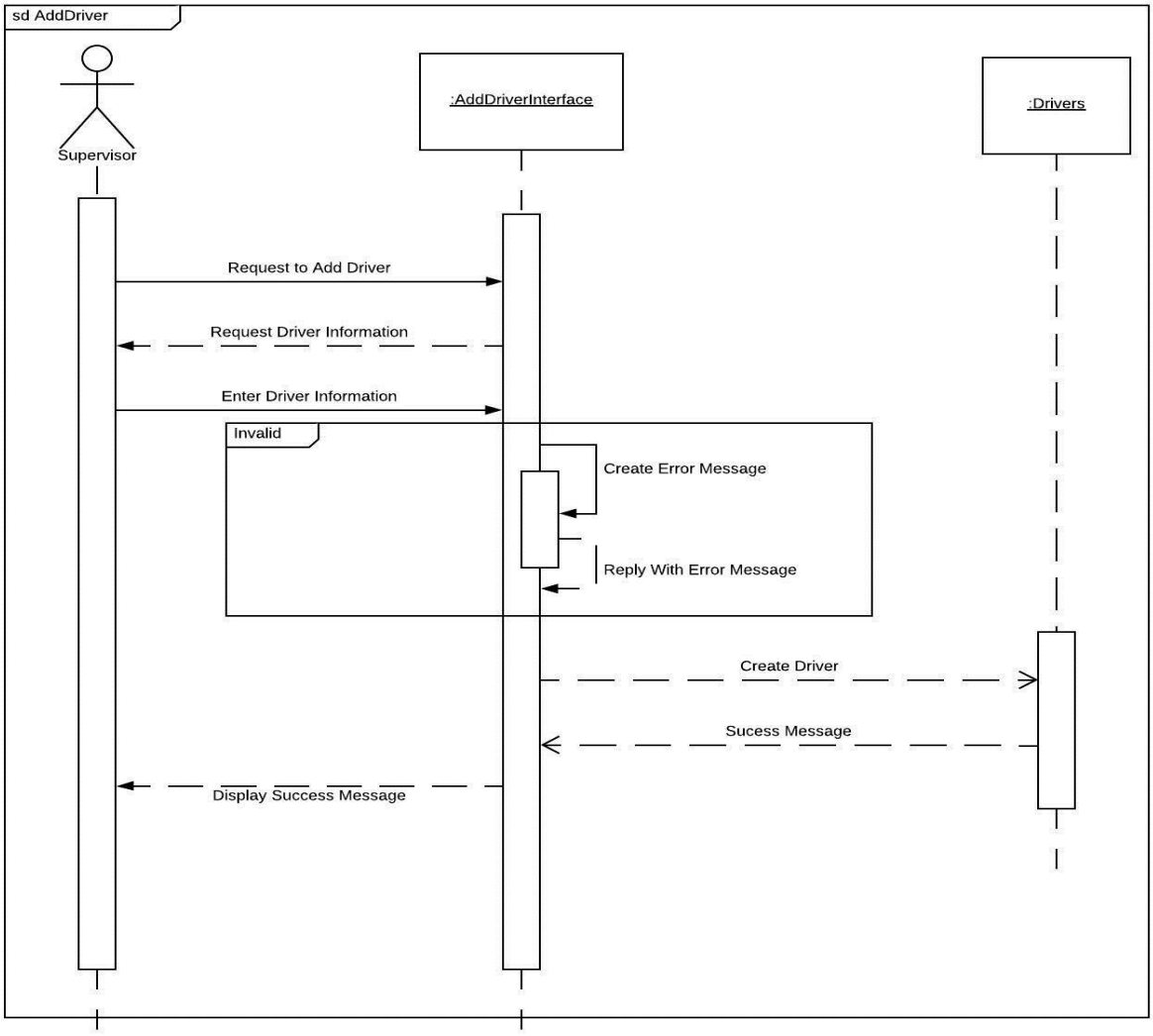


Accept Assignment Summary

The driver will open the app to view the assignment via the delivery interface on the mobile application. The interface will request the assignment information which the delivery class will send back. The interface will then display the information to the driver. If the driver

accepts the assignment, the interface will request the route and the route will be displayed to the driver. If the driver does not accept the assignment within a given time limit, the interface will send a notification to the admin.

1.3 Add Driver

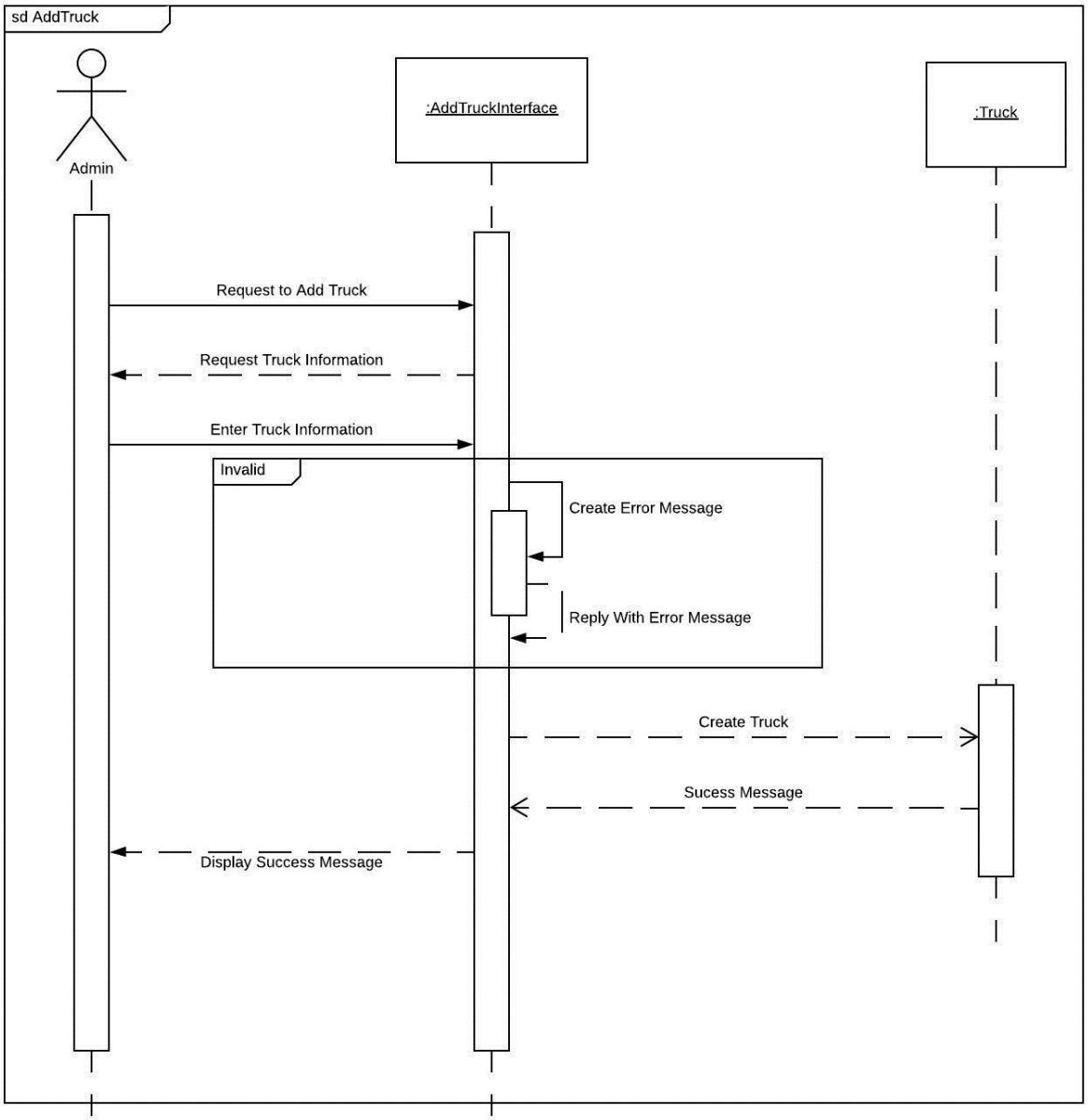


Add Driver Summary

The supervisor will request to add the driver via the add driver interface and the interface will request the driver information. The supervisor will then send the information needed. If the information entered is not of the correct data type, the interface will create an error message and display it until the correct data type information is submitted. If the information is valid then the interface will create the driver using driver class. The driver

class will then reply with a success message and the interface will display a success message to the supervisor.

1.4 Add Truck

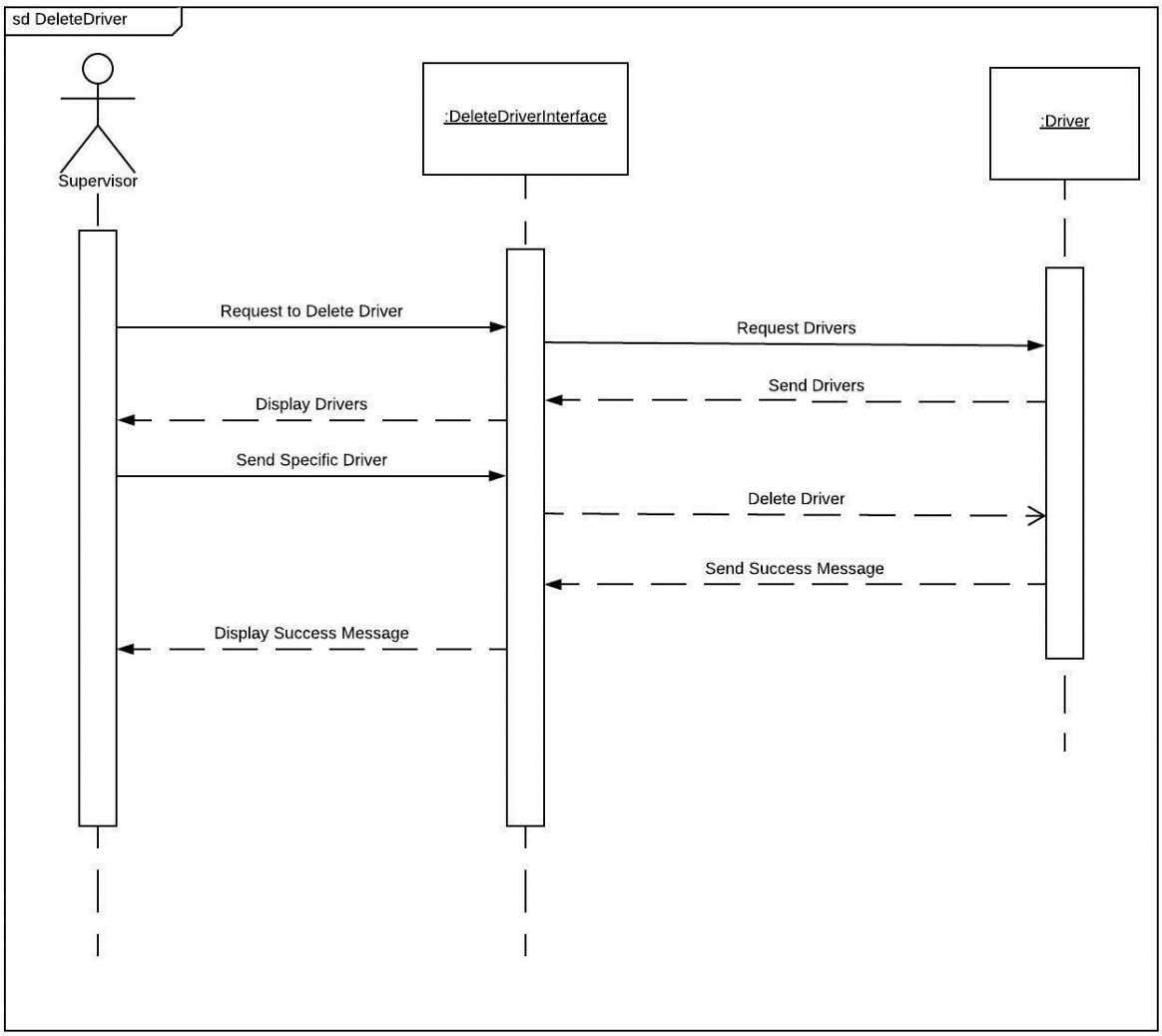


Add Truck Summary

The admin will request to add the truck via the add truck interface and the interface will request the truck information. The supervisor will then send the information needed. If the information entered is not of the correct data type, the interface will create an error

message and display it until the correct data type information is submitted. If the information is valid then the interface will create the truck using truck class. The truck class will then reply with a success message and the interface will display a success message to the supervisor.

1.5 Delete Driver

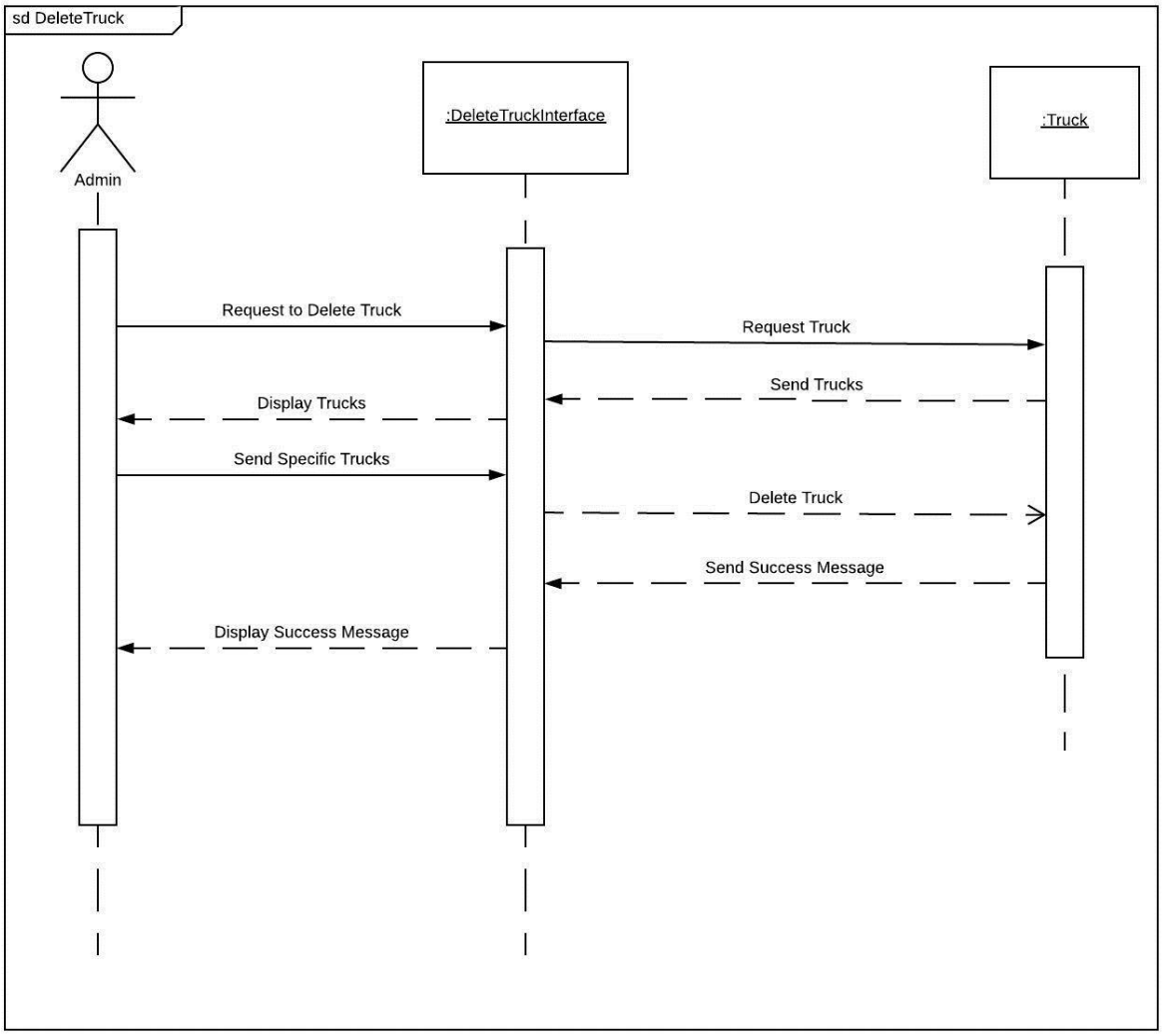


Delete Driver Summary

The supervisor will request to delete the driver via the delete driver interface and the interface will display the drivers provided from the driver class. The supervisor will then choose the driver to delete via the interface. The interface will then request to delete the

driver from the driver class. The driver class will send a success message and the interface will display it to the supervisor.

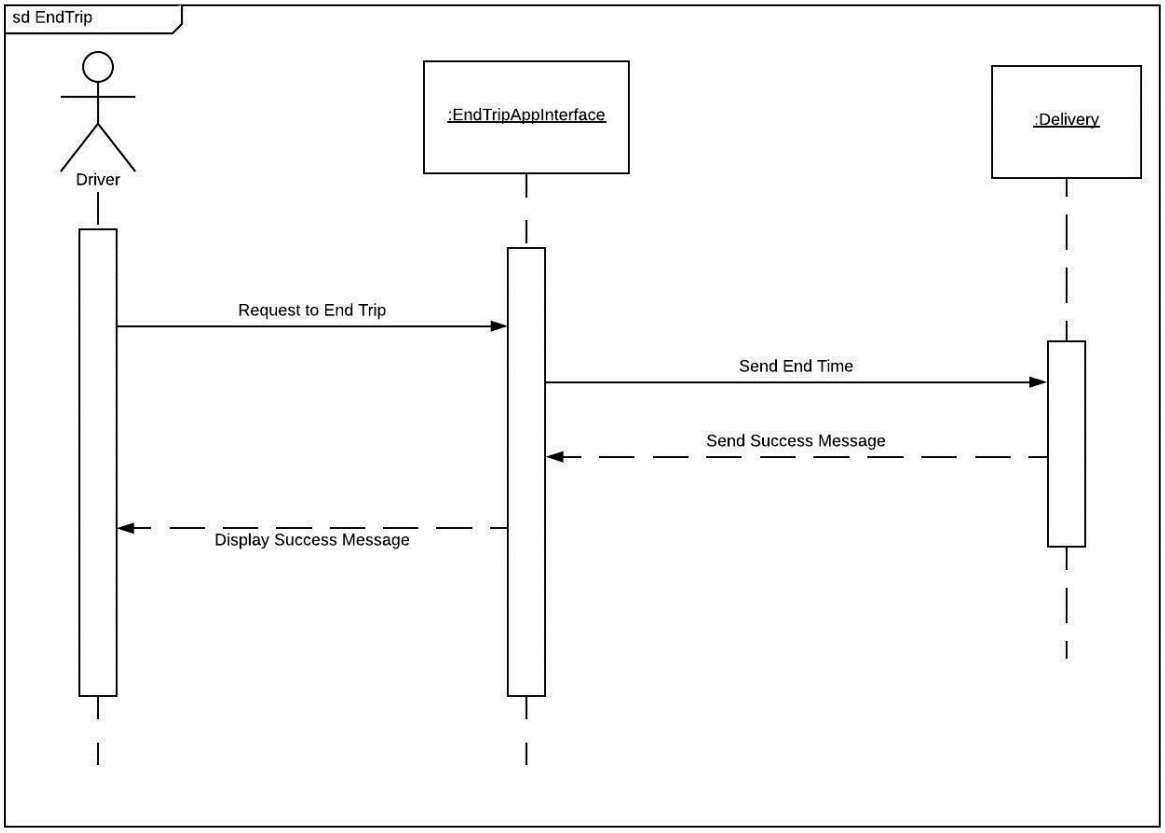
1.6 Delete Truck



Delete Truck Summary

The admin will request to delete the truck via the truck driver interface and the interface will display the trucks provided from the truck class. The admin will then choose the truck to delete via the interface. The interface will then request to delete the truck from the truck class. The truck class will send a success message and the interface will display it to the admin.

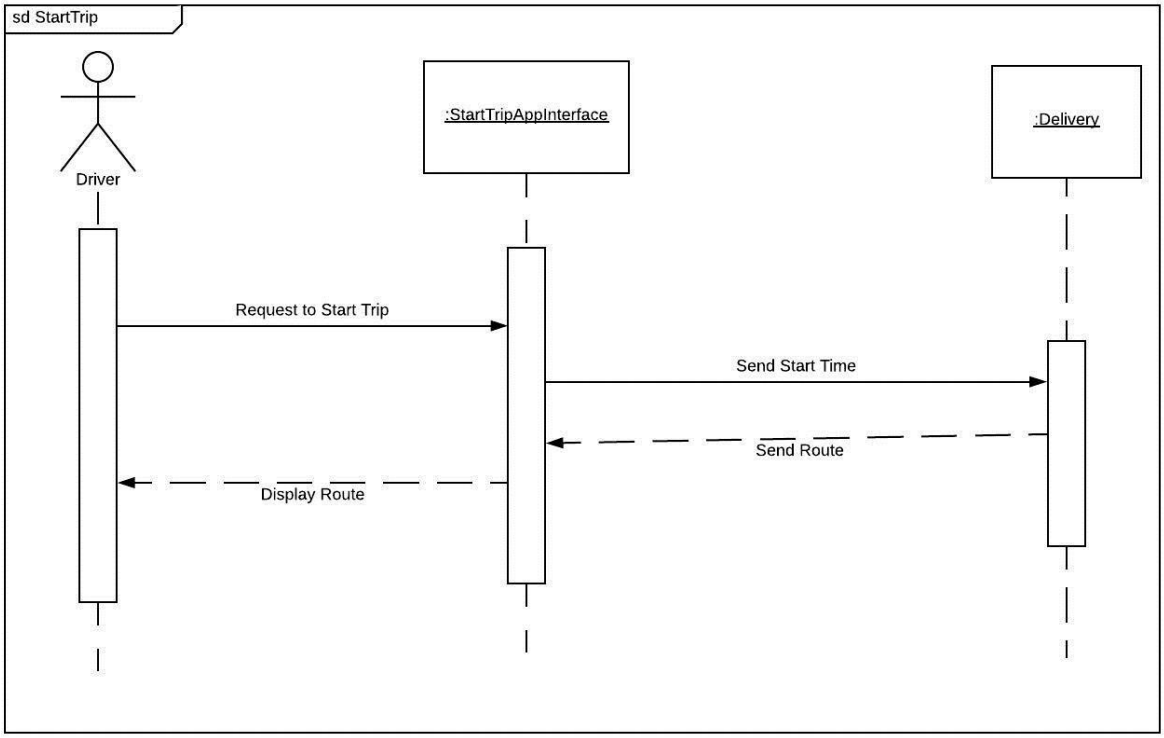
1.7 End Trip



End Trip Summary

The driver requests to end the trip via the end trip interface on the mobile application and the interface will send the end time to the delivery class. The delivery class will then send a success message to the interface which will display a success message to the driver.

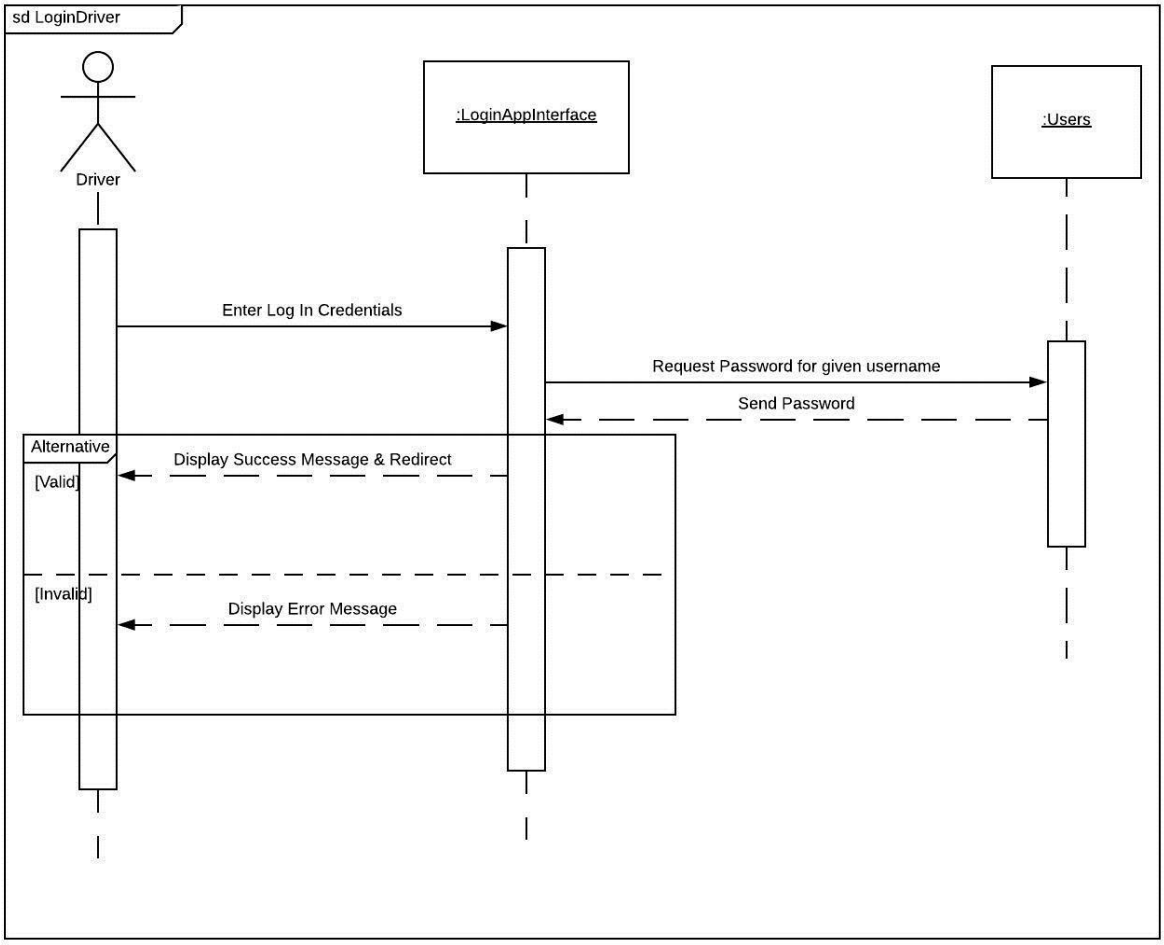
1.8 Start Trip



Start Trip Summary

The driver requests to start the trip via the start trip interface on the mobile application and the interface will send the start time to the delivery class. The delivery class will then send the route information which the interface will show in form of a route on the map.

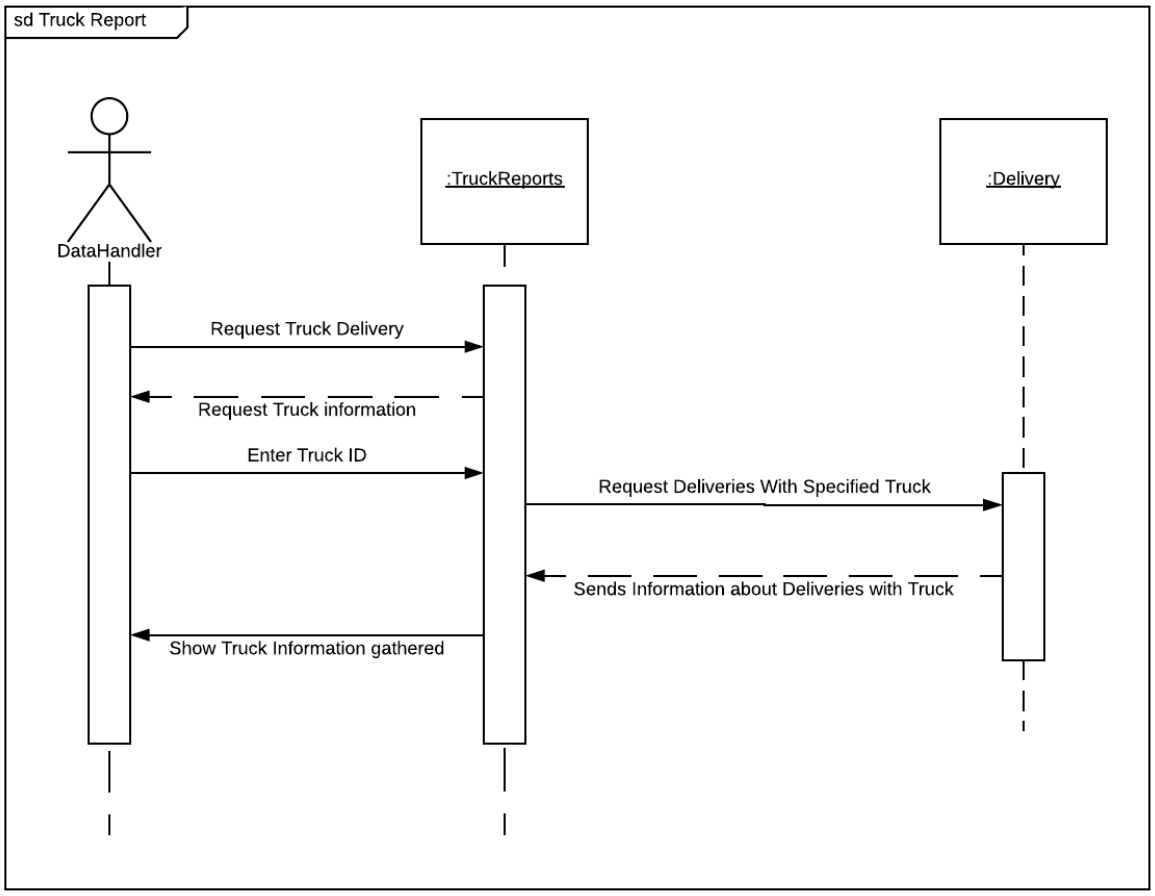
1.9 Login Driver



Login Driver Summary

The driver enters the credentials via the login interface on the mobile application and the interface will request the password for the given username. The users database will send back the password and the interface will validate it. If it is valid, the interface will show a success message and redirect it else it will display an error message.

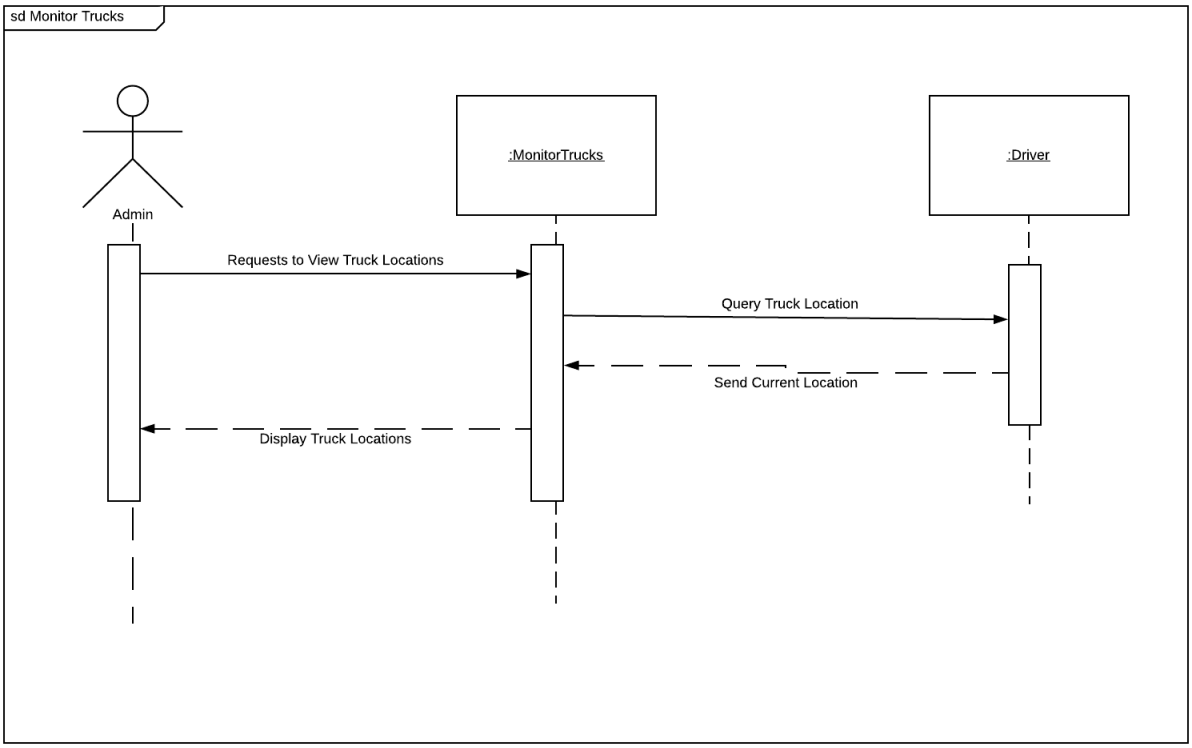
1.10 Generate Truck Report



Generate Truck Report Summary

The Data Handler requests the trucks deliveries via the truck reports interface which requests the truck information in return. The data handler will enter the truck id and the interface will request the specified truck information from the delivery database. The database will send back the information about the deliveries. The interface will then display the information received.

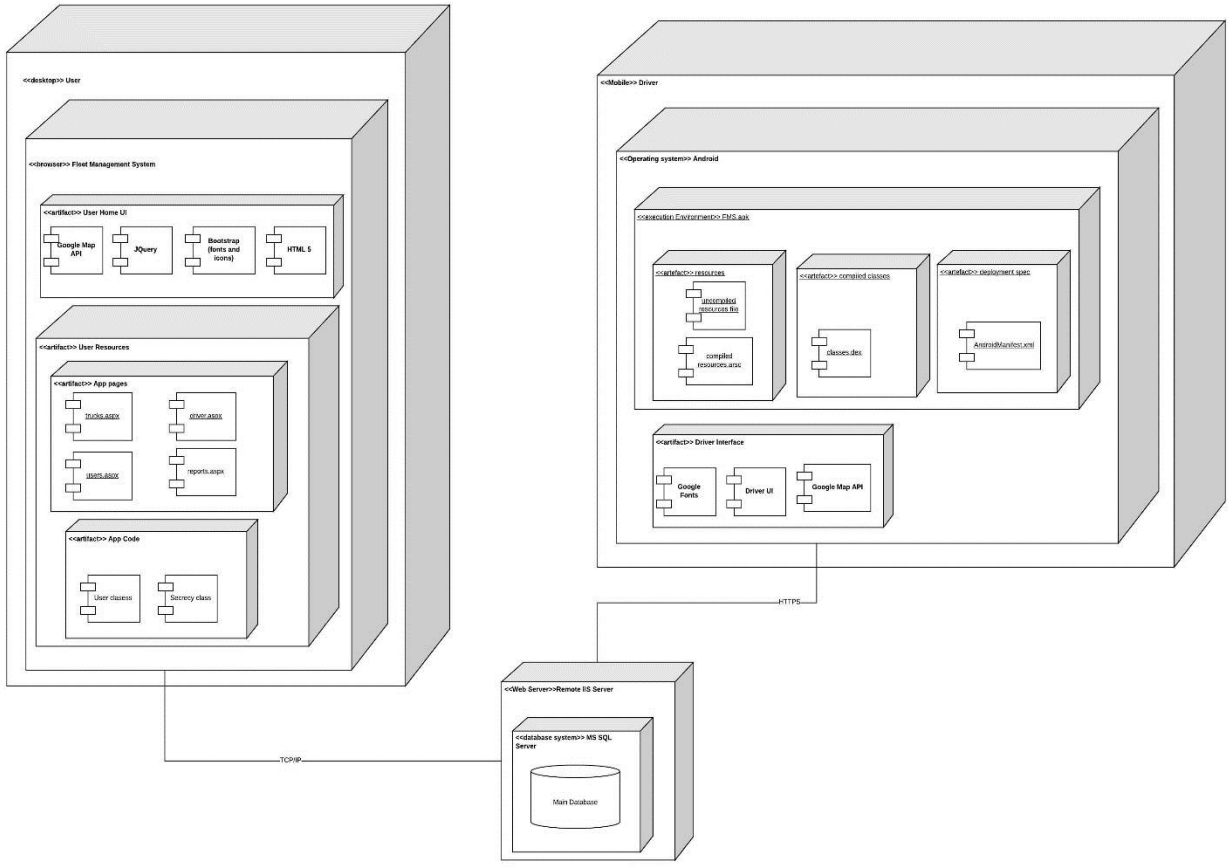
1.11 Monitor Trucks



Monitor Trucks Summary

The Admin will request to see the locations of trucks that are currently on deliveries using the monitor trucks interface. The monitor trucks interface queries the location of the trucks from the driver's GPS. The monitor truck's pins the location on the map and displays it.

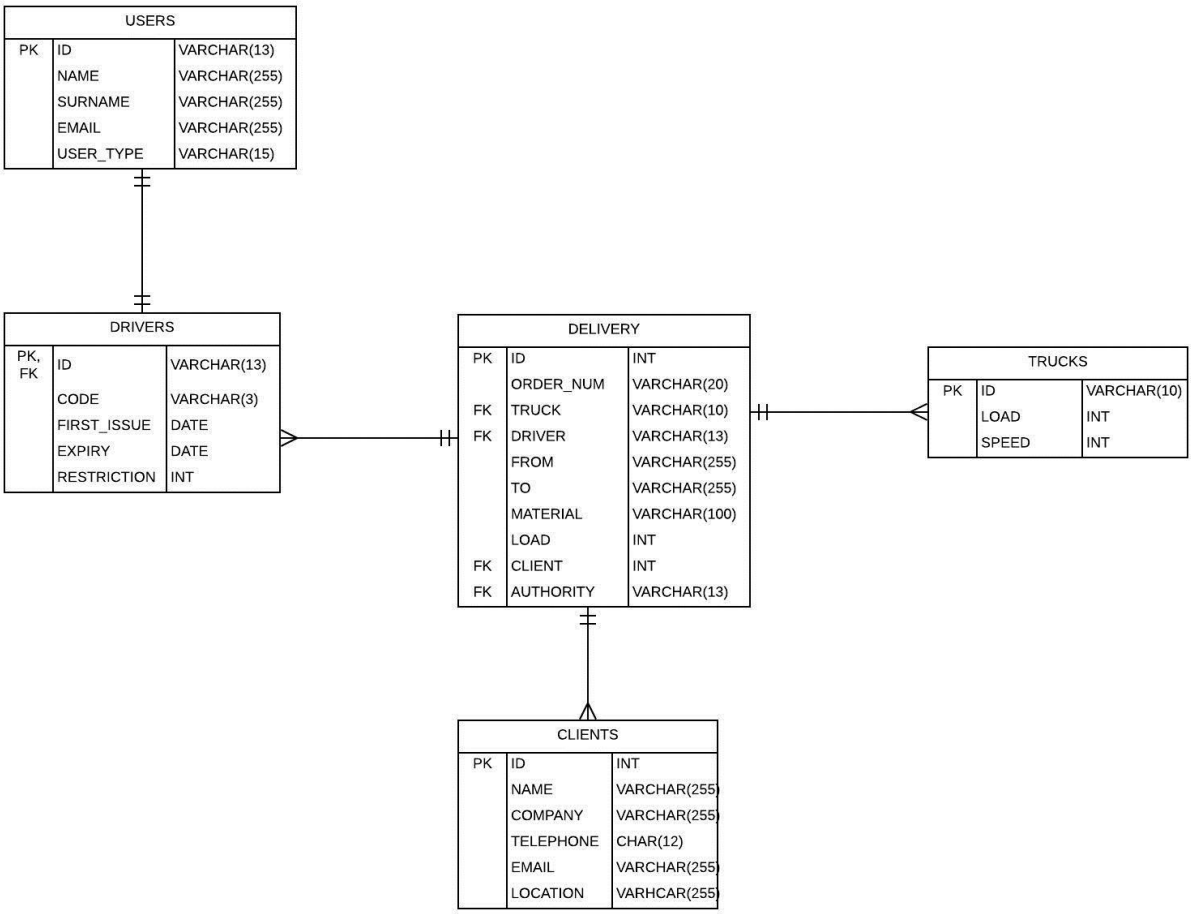
2. Component & Deployment Diagram



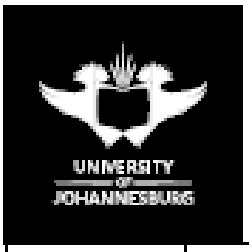
Summary

The component and deployment diagram will represent a N-Tier architecture of the Fleet Management System including all the hardware and software component for the system. It describes the presentation tier, the top-most level of the application (the user-interface). It also describes the logic-tier, this layer is used to coordinate the application with processes of the system. It makes logical decisions and evaluations based on the FMS business rules. After all the decisions and evaluations made, calculations can be performed and reports will be generated. The data-tier, it is responsible for storing and retrieving of data from the database for both the desktop and mobile application.

3. Database Design



4. Plagiarism Declaration



Informatics 3 Year Project

Academy of Computer Science and Software Engineering

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Date	21/04/2018	**Date**	