Fuel Log

MERN Stack Application

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About the application

The fuel usage data from vehicle assets can provide useful analytical trends for a company so that it can better manage fuel costs over the running service periods of company assets.

Features

- Graphing and tabular reports
- Multi-vehicle tracking
- Trip and fuel usage monitoring
- Individual employee monthly usage report
- Simple and intuitive UI

Purpose

To help keep track of the fuel usages for a company, a fast and easy to use application that is centered around logging instances of fuel refilling of a vehicle can give assistance to determining how much fuel different company assets require.

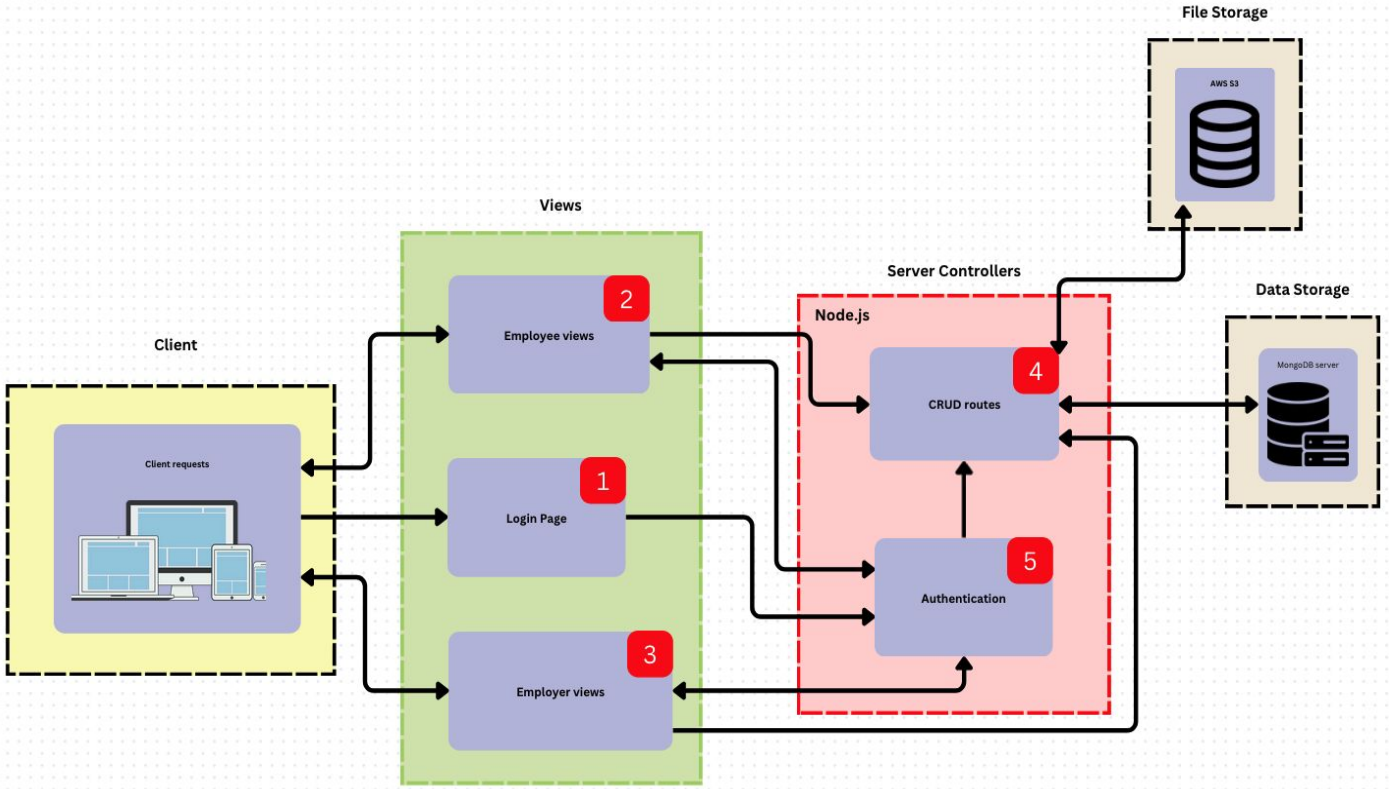
The application uses the recorded data to generate useful reports for the company in an easy-to-understand way, allowing for the company to potentially have the ability to budget and plan for fuel expenses.

Project timeline

- Back-end:
  - Collection modelling. **Duration: 1 day**
  - Basic end-point routes for CRUD operations. **Duration: 1 day**
  - Analytical routes for Logs and Vehicles. **Duration: 1-2 days**
  - Authentication of routes. **Duration: 1 day**
  - Testing and Deployment. **Duration: 1 day**
- Database and storage setup. **Duration: 0.5 day**
- Front-end:
  - Component building. **Duration: 2-3 days**
  - Graphing and Tabular report Components. **Duration: 1 day**
  - Styling. **Duration: 1-2 days**
  - Testing and Deployment. **Duration: 1 day**

Application Architecture

There are two different storage systems that were chosen for the application. A database for storing all the recorded data and a file storage system for storing the vehicle images that will be uploaded for each vehicle.

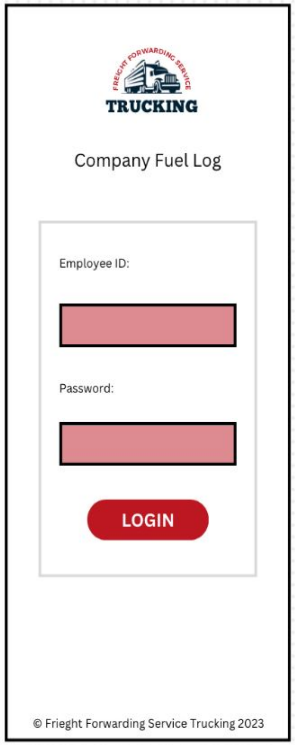


- Access login page, enters details
- Authentication routes query database for password match
- User can access different dashboard depending on account

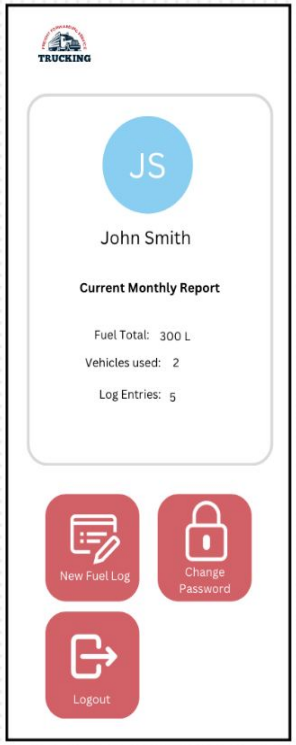
Mobile Wireframes

The employee pages don't have a Nav bar. The Nav bar is replaced with the square buttons at the bottom of the page. This is because the employee only uses the app to record a fuel log.

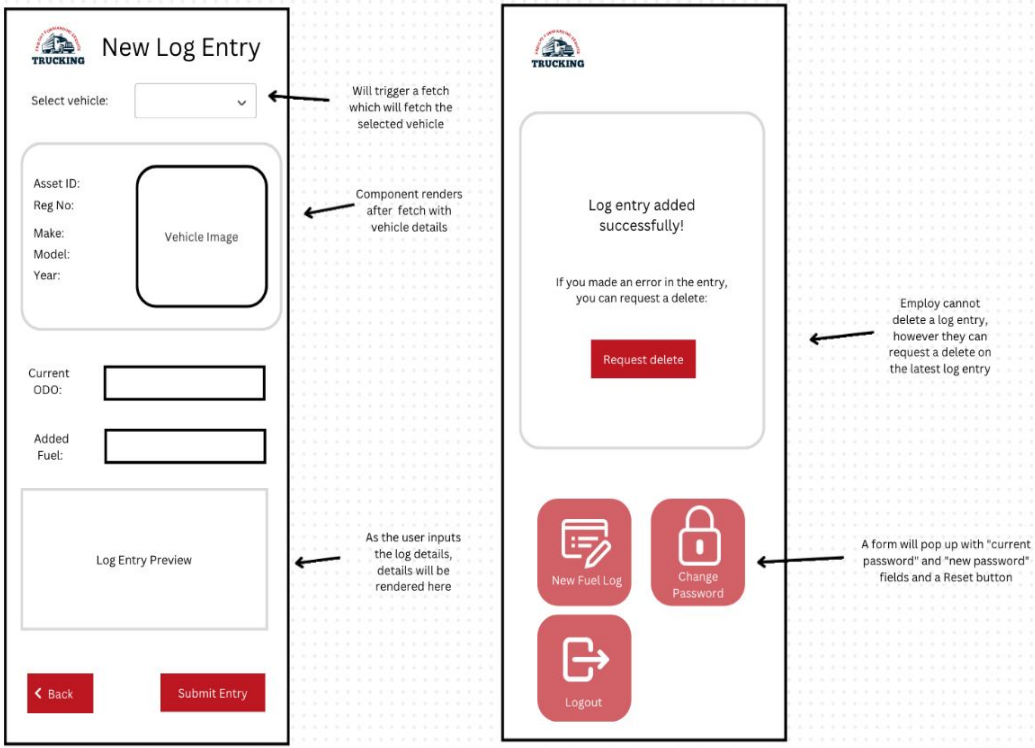
Login Page



Employee Home Page

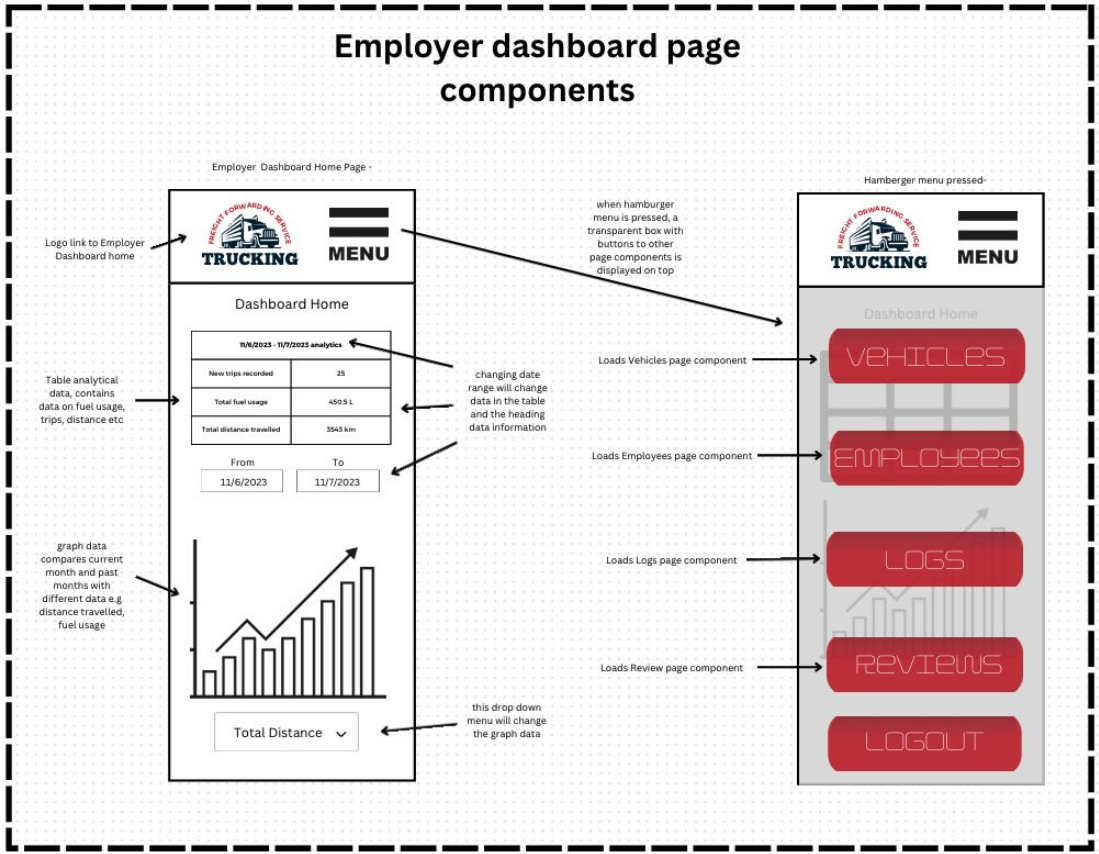


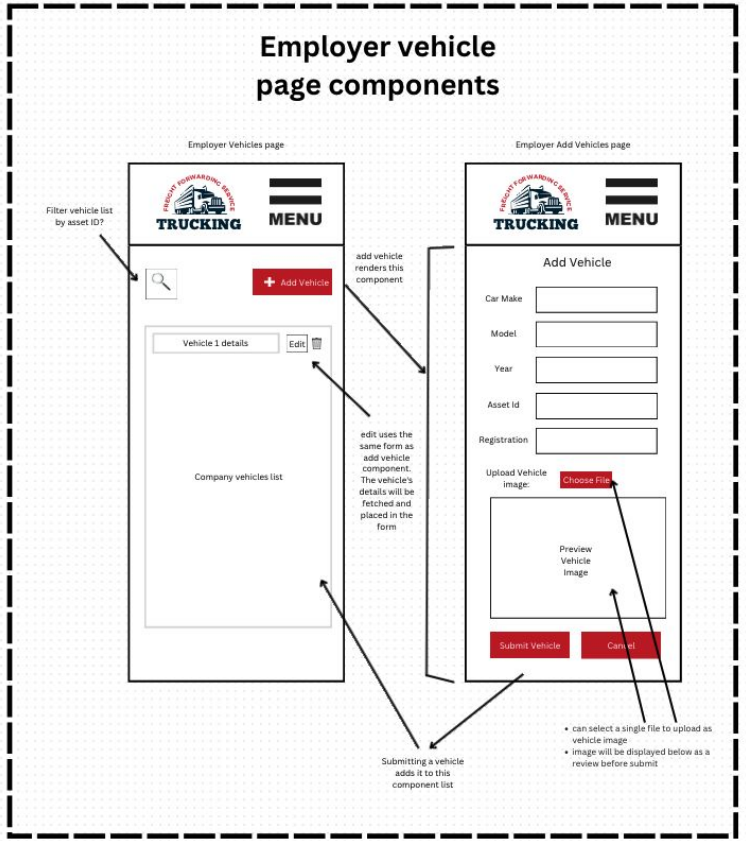
Log record form



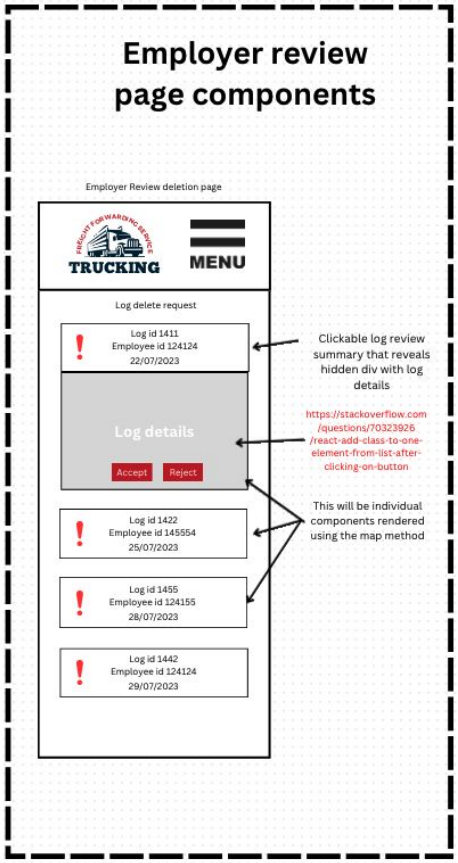
Mobile Wireframes cont.

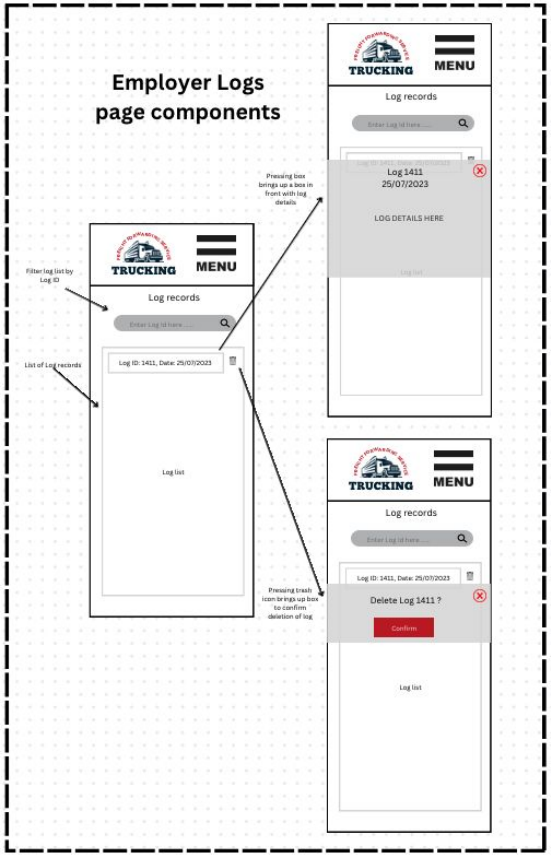
The employer home page was chosen as the page which displayed the analytical graphs and data. Since one of the main features of this application is to do so, it was decided that the reports should be the first thing that's seen and not displayed on a separate page. This could also expanded into its own page once the data grows and allows for more detailed reports, while leave a summarised report on the home page.

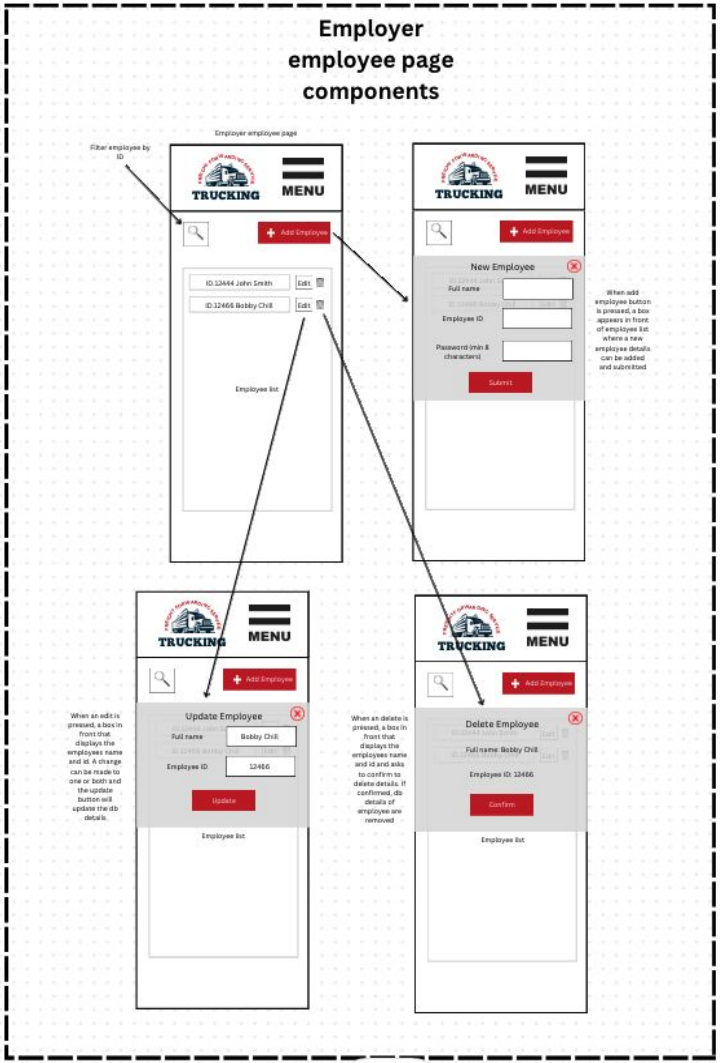




Mobile Wireframes cont.

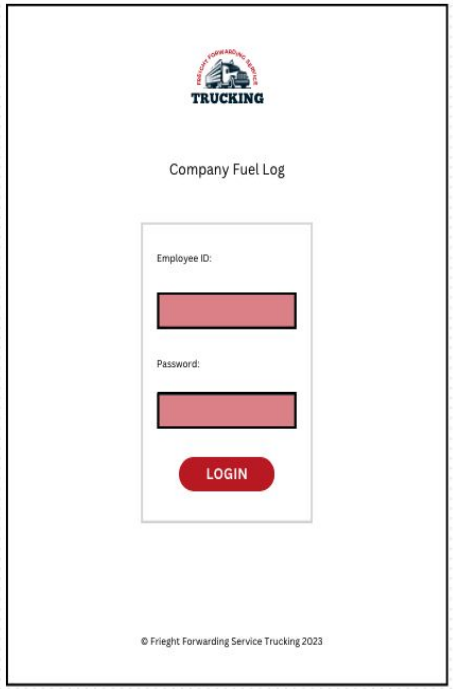




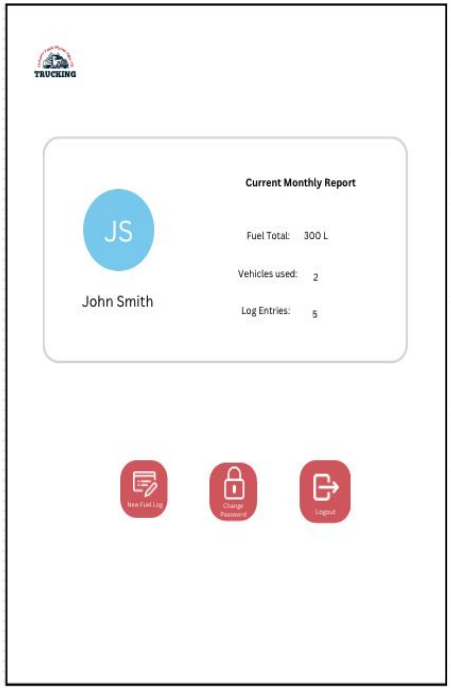


Tablet Wireframes

Login Page



Employee Home Page



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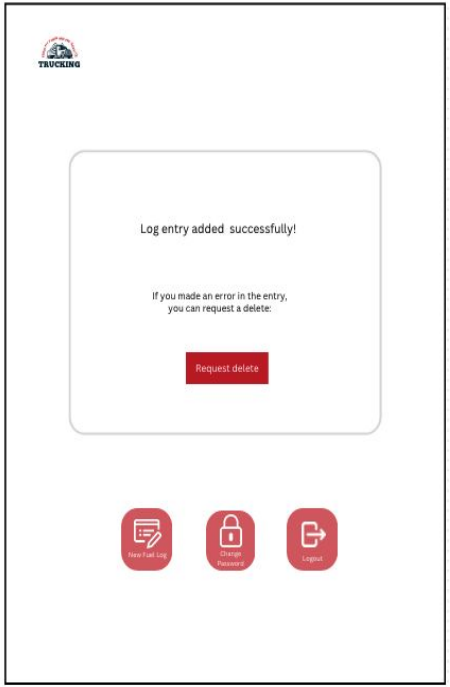
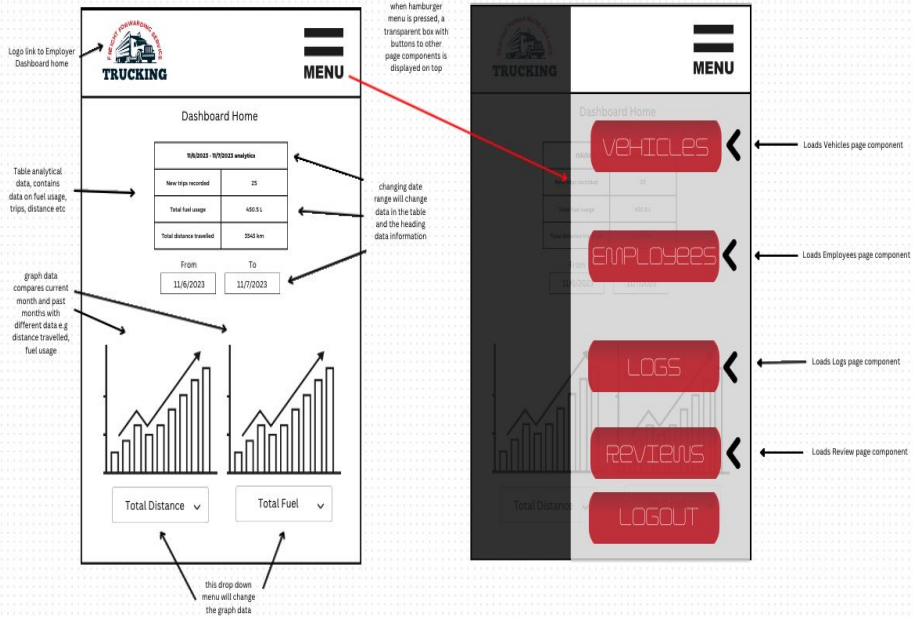


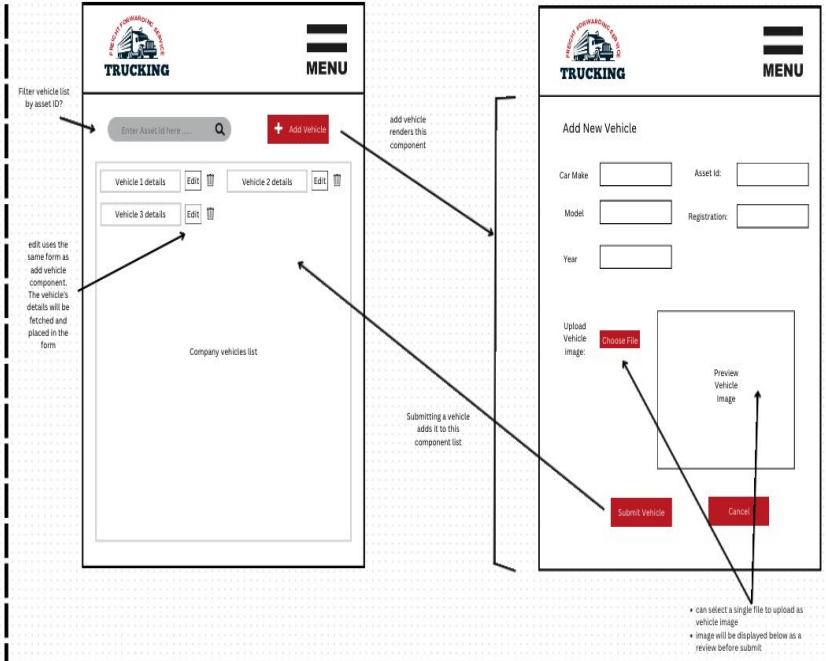
Tablet Wireframes cont.

In tablet view, layout mostly the same except more information displays on dashboard and vehicles displayed across two columns

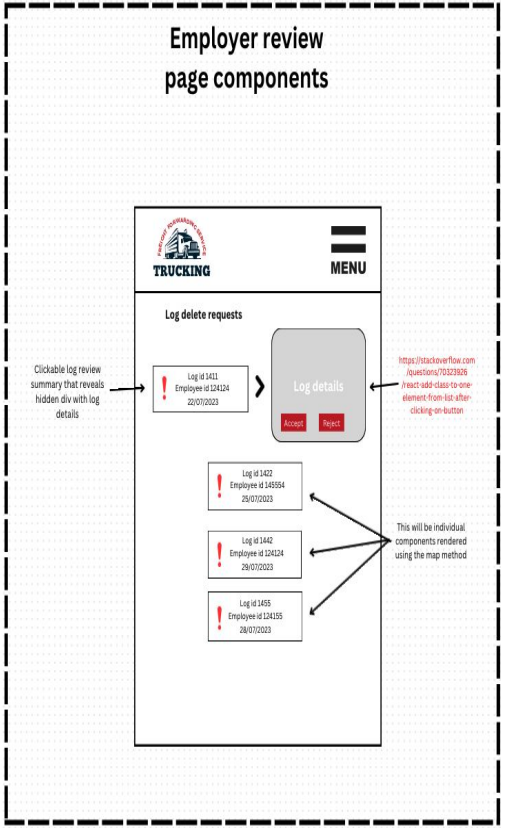
Employer dashboard page components

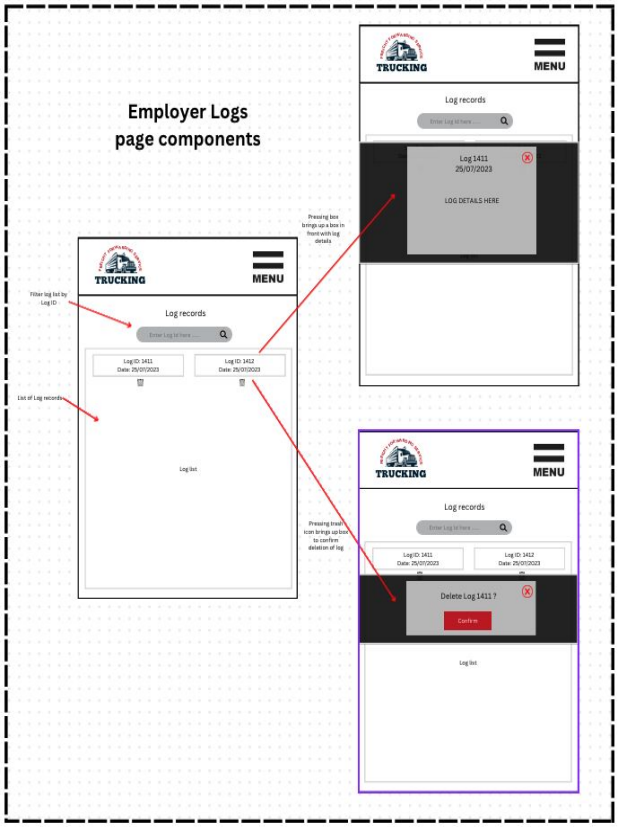


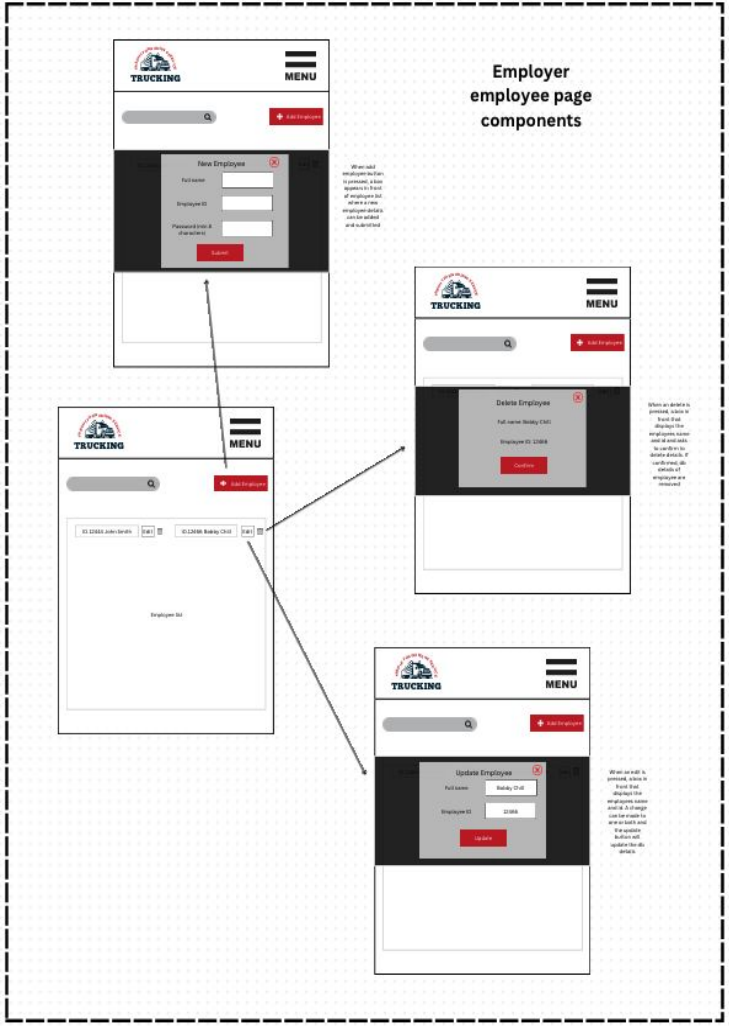
Employer vehicle page components



Tablet Wireframes cont.

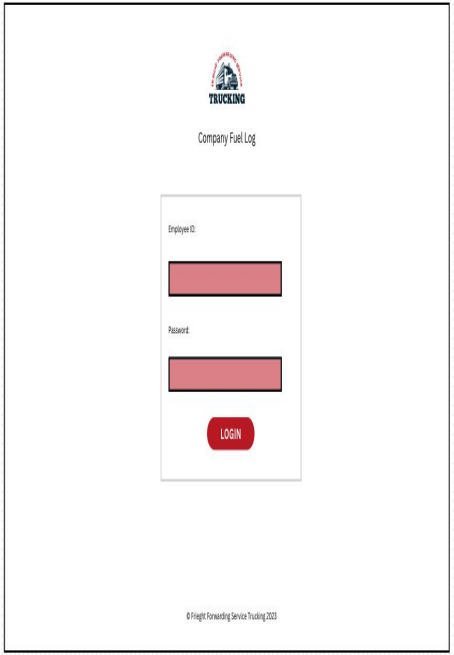




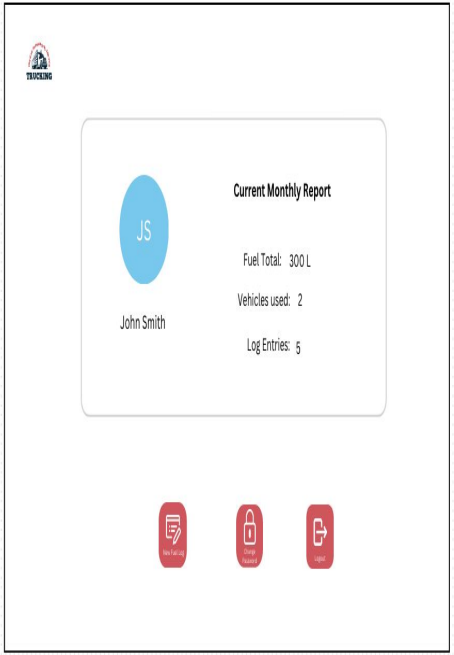


Desktop Wireframes

Login Page



Employee Home Page



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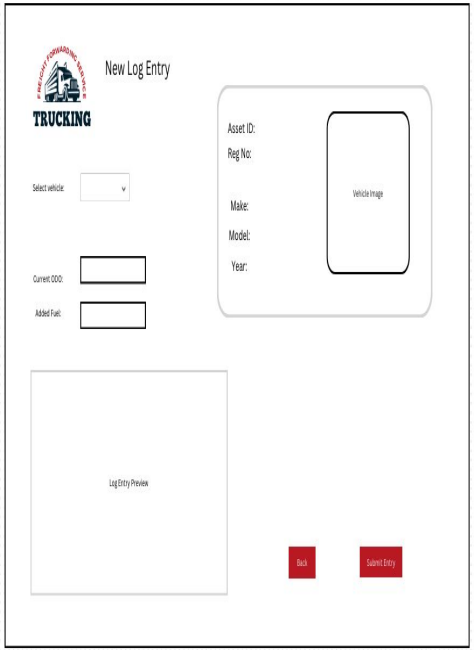
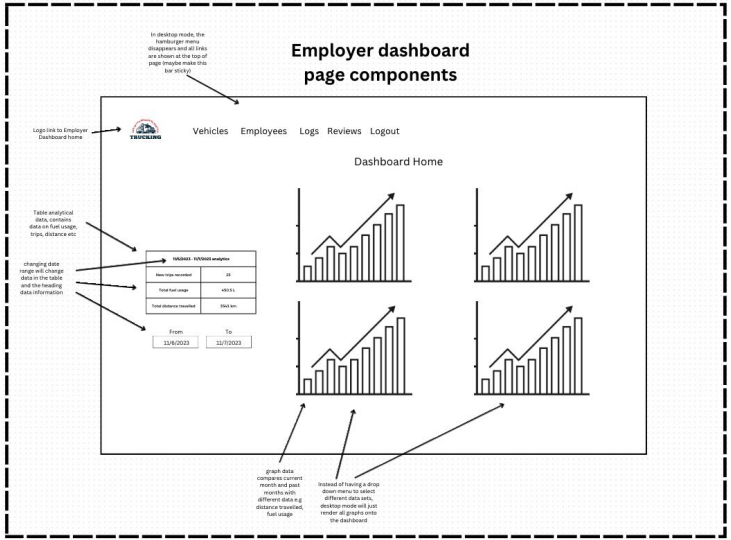
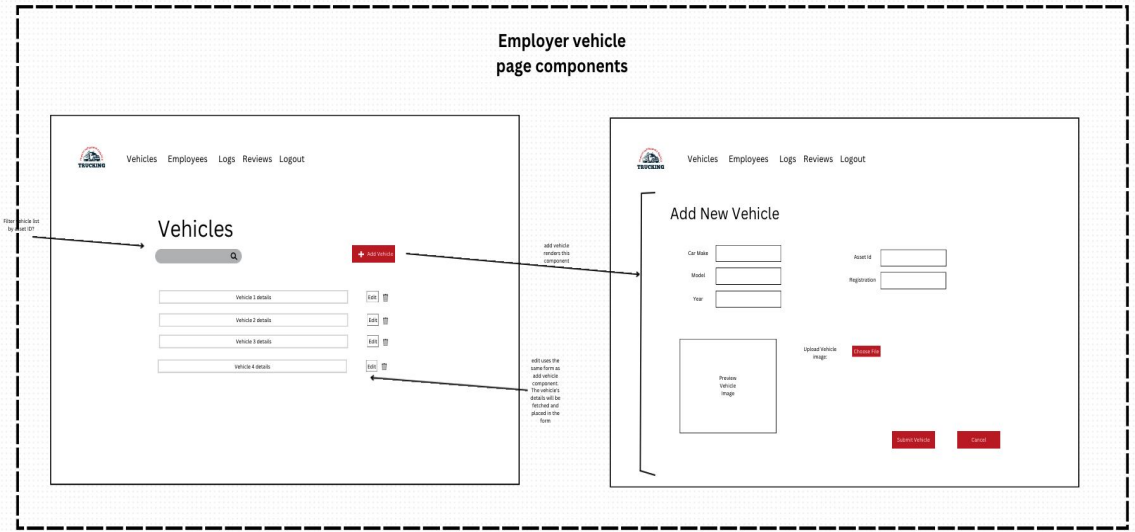


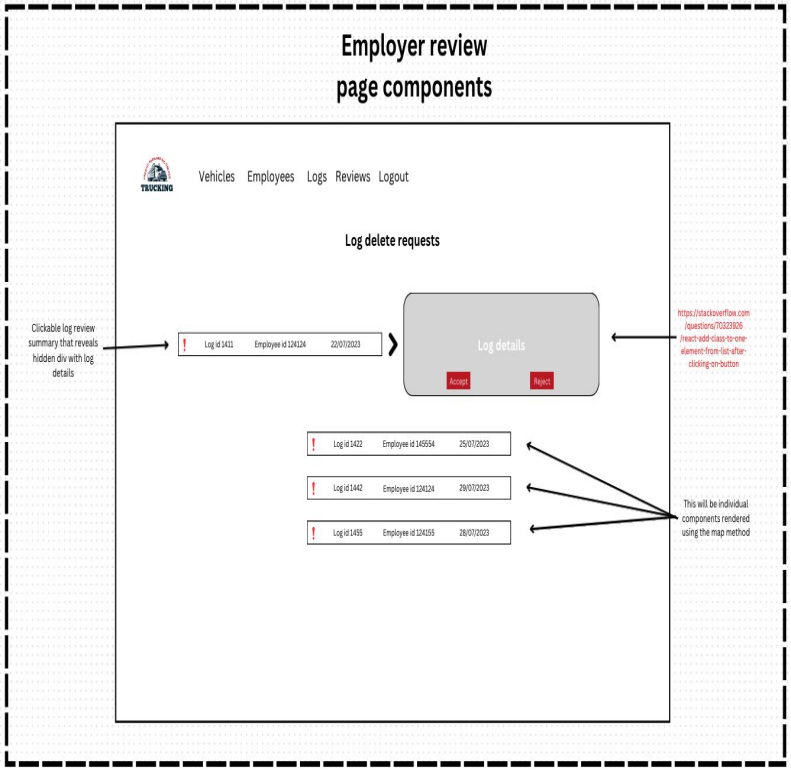
Desktop Wireframes cont.

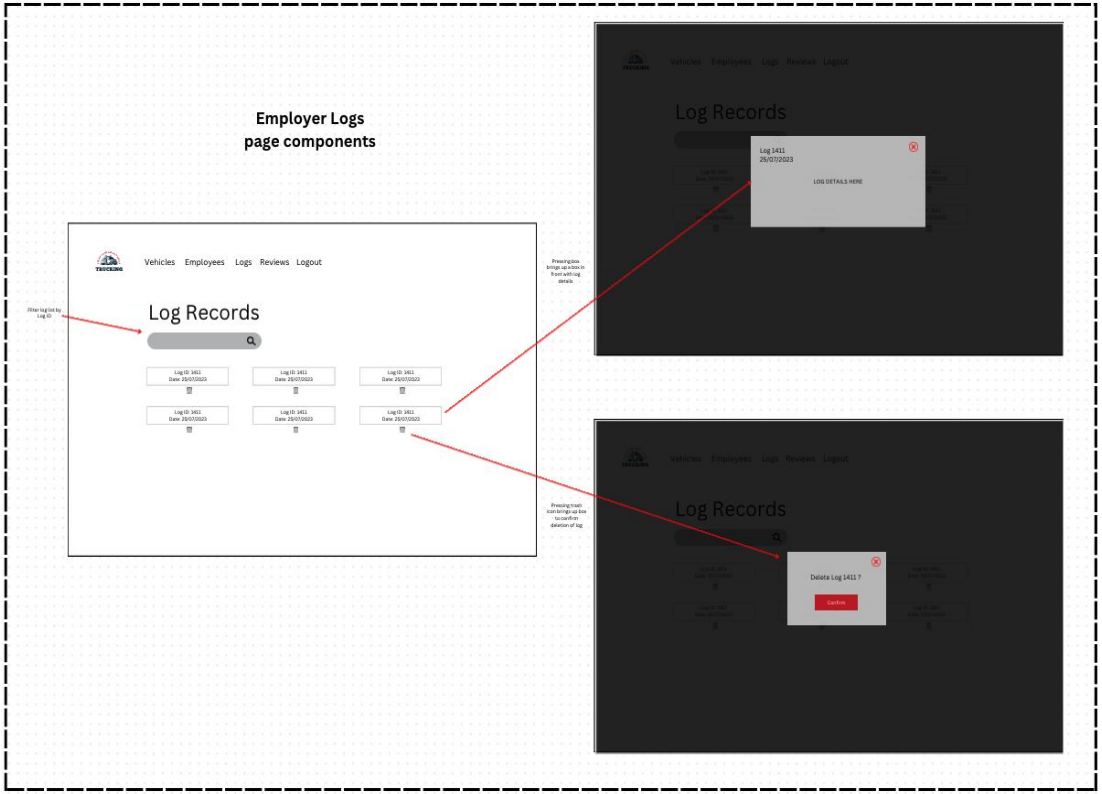
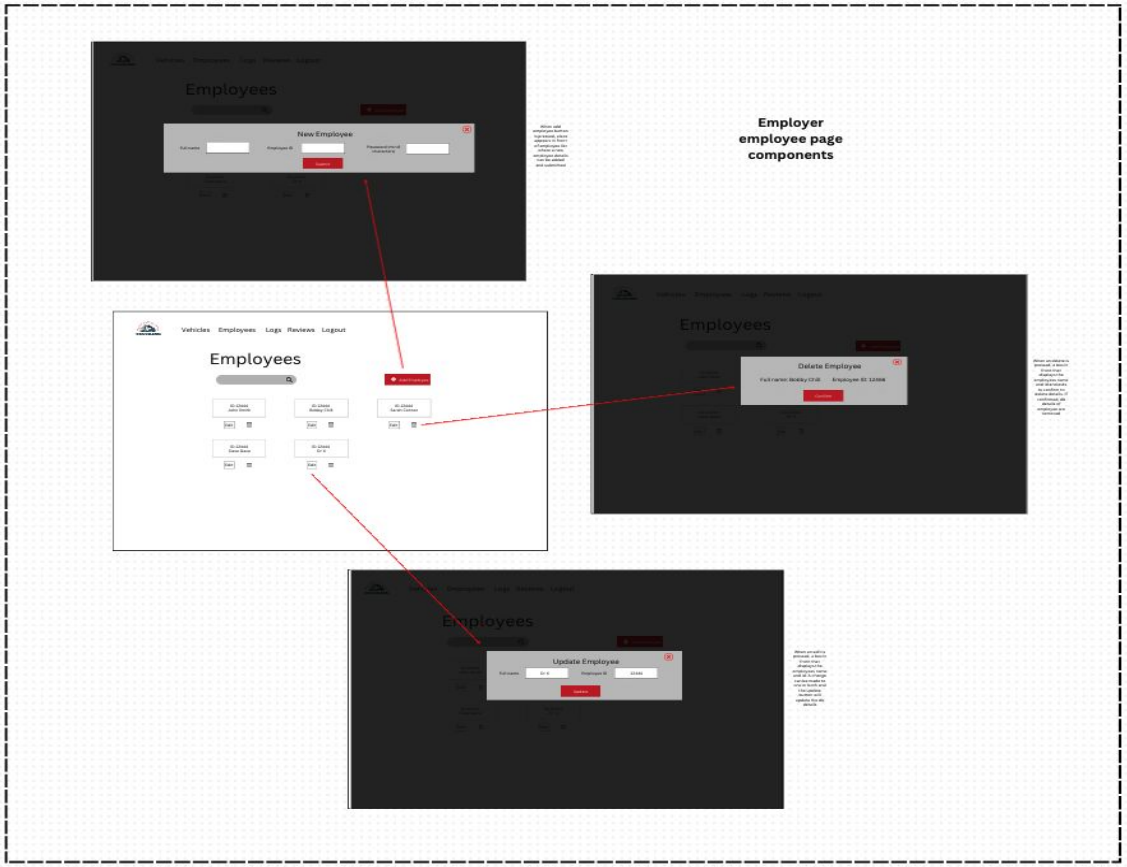
In desktop mode, hamburger menu disappears and instead displays all link at top side by side. Dashboard can also display all graphs in desktop mode





Desktop Wireframes cont.





Desktop Wireframes cont.