Documentation – "eco-tram"

Description

Team based java project, focused on front-end integration with an existing backend. Eco-tram aims to be a tram network simulation software. The backend is a continuation of a previous project, while the frontend was one of the primary focuses of this semester. For demonstrative purposes an internal test network was modeled after Erfurt's real life tram network.

Team name	eco-tram
Project name	eco-tram
Working timespan	2021-05-10 to 2021-08-18
Due date	2021-08-19
Participants	Bünnig, Erik
	Knefelkamp, André
	Martini, Justin (until "Programmieren Java 1")
	Voges, Luca

Resources

Source control	git, git-cli	
	GitKraken	
Development Environment	IntelliJ IDEA (Edu/Ultimate)	
SDK	JDK	15
Build tools	Maven	3.6.3
Test frameworks	J-Unit	4.31.1
Server back-end	Spring	2.4.5
Database	MySql	8.0
Server front-end	Vue.JS	2.6

Feature Set

Eco-Tram have some interesting functionality for managing a tram network. Some of given features are presented here:

- Managing Tram-Stations and connections between
- Creating and testing different simulations with given parameters
- Basic implementation of path finding powered by Dijkstra-Algorithm

Conclusion

Although some goals have not been met such as optimizing internal algorithms, implementing pathfinding on the frontend, etc. The project was overall a success. The team has learned valuable lessons about working with others and the main goal of simulating a tram network and broadcasting it to the front-end clients has been accomplished.