DIT029 Software Architecture for Distributed Systems

Project Ideas

Platform Name:

Scalable Tool for Diagrams

Main Extension Name:

Diagram Accessible Visualization Experience

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**Main Ideas**

A tool that helps teachers and students visualize UML Diagrams by rendering and animating a diagram represented in a JSON file. Given the file, class, deployment or sequence diagrams will get simulated based on the provided specification. The visualization will also depict the nodes and interactions between them. Once a node sends a message to another node, the process will be rendered in a diagram.

**Extensions**

A for representing a system in the form of a UML SSD (System Sequence Diagram) for students. A teacher will start a messaging network and ask students to join using a PIN, much like the popular web application Kahoot. Students will be able to message other students connected in the network and see their messages represented in a SSD.

The tool’s users will also be presented with a separate extension, which allows the users to alter the diagrams. The change in diagrams will result in a change in the JSON file. The users will have to export the file for the changes to take place.

**Typical users**

The developing tool is aimed towards people studying and working with UML. The main target demographic includes teachers and students in a classroom setting. The target users also include people with an interest for UML, that would like to play around with different UML diagrams.

**External Systems**

DAVE (Diagram Accessible Visualization Experience) requires a web server in order to be easily accessible for the users. Furthermore, the users of the distributed messaging network are required to use a device, such as a computer, a phone or a tablet to use the application.

**Properties and constraints**

The developed tool will require an internet connection to function, the connectivity will act as both a property and a constraint. A JSON file with a correct formatting will required for the tool function.