

Framework

[React.js \(https://reactjs.org/\)](https://reactjs.org/) with [React Router \(https://github.com/ReactTraining/react-router\)](https://github.com/ReactTraining/react-router) for routing.

The client application will be built on the React-framework. When using React, handling navigation gets really simple with the help of state-handling and React Router. In React, it is also easy to create components that can be reused, which gives a consistent look and feel throughout the application and follows the [DRY \(https://en.wikipedia.org/wiki/Don%27t_repeat_yourself\)](https://en.wikipedia.org/wiki/Don%27t_repeat_yourself)-principle. React also includes some great developer tools that can be installed as Chrome-extensions to facilitate the development.

Design

- UI Component Library: [MaterialUI \(https://material-ui-next.com/\)](https://material-ui-next.com/)
- [CSS \(https://developer.mozilla.org/en-US/docs/Web/CSS\)](https://developer.mozilla.org/en-US/docs/Web/CSS) for styling of all [HTML5-elements \(https://developer.mozilla.org/en-US/docs/Web/HTML/Element\)](https://developer.mozilla.org/en-US/docs/Web/HTML/Element). <div>, <h1>, <p> etc.
- [JSS – CSSinJS \(https://github.com/cssinjs/jss\)](https://github.com/cssinjs/jss) for styling of all imported components such as [Material-UI \(https://material-ui-next.com/customization/css-in-js/\)](https://material-ui-next.com/customization/css-in-js/). All elements in the client code that have a className or id attribute use normal CSS, and all elements that have a style attribute use JSS.
- [Material-UI Theme Provider \(https://material-ui-next.com/api/mui-theme-provider/\)](https://material-ui-next.com/api/mui-theme-provider/) – Is used to provide a [theme \(https://material-ui-next.com/customization/themes/\)](https://material-ui-next.com/customization/themes/). This makes it easy to change colors throughout the application by creating [palettes \(https://material-ui-next.com/style/color/\)](https://material-ui-next.com/style/color/).

Layout

- [CSS Flexbox \(https://www.w3schools.com/css/css3_flexbox.asp\)](https://www.w3schools.com/css/css3_flexbox.asp)
- Screen Breakpoints: [Source \(https://material-ui-next.com/layout/basics/\)](https://material-ui-next.com/layout/basics/)
 - **xs**, extra-small: 0px or larger
 - **sm**, small: 600px or larger
 - **md**, medium: 960px or larger
 - **lg**, large: 1280px or larger
 - **xl**, xlarge: 1920px or larger

Technology

- API-communication – [Axios \(https://github.com/axios/axios\)](https://github.com/axios/axios)
- Websockets – [SignalR Javascript Client \(https://docs.microsoft.com/en-us/aspnet/signalr/overview/guide-to-the-api/hubs-api-guide-javascript-client\)](https://docs.microsoft.com/en-us/aspnet/signalr/overview/guide-to-the-api/hubs-api-guide-javascript-client)
- Video call and streaming – [WebRTC \(https://webrtc.org/start/\)](https://webrtc.org/start/)
- Authentication/Authorization – [JWT \(https://jwt.io/introduction/\)](https://jwt.io/introduction/)

Hosting

At present the server is hosted as an Azure webapp.

Deployment

All changes to the master branch of the repository are automatically pushed to the deployment server on Azure.

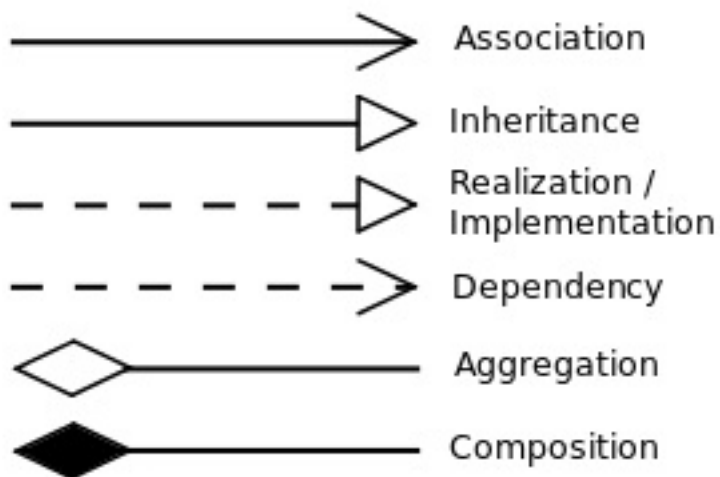
Installation

Installation instructions are found in the repo's [README.md](https://github.com/jimmybengtsson/grupp03-redriver/blob/master/client/README.md)
(<https://github.com/jimmybengtsson/grupp03-redriver/blob/master/client/README.md>)

Architecture

To show the structure of the application/system we use a UML class diagram. A class diagram is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.

The arrows represents the relationship between classes:



For more information about the notation used click here: [Wikipedia](https://en.wikipedia.org/wiki/Class_diagram)
(https://en.wikipedia.org/wiki/Class_diagram)

Full size (<https://github.com/jimmybengtsson/grupp03-redriver/blob/master/documentation/diagrams/png/Client-Architecture-v4.png>)

