TECHNOLOGY / SOFTWARE USED

Mongoose:
- Mongoose is an object data modeling (ODM) library for MongoDB and Node.js, providing a straightforward and schema-based solution for interacting with MongoDB databases.
- Used for backend database purposes.

React.js:
- React.js is a JavaScript library for building user interfaces, developed by Facebook, that allows developers to create reusable UI components and efficiently update the view in response to changes in application state.
- Used for front-end UI and Function development.

Express.js:
- Express.js is a minimal and flexible Node.js web application framework that simplifies the process of building robust and scalable web applications by providing a set of features for web and mobile application development.
- Used for backend data processing purposes.

Node.js:
- Node.js is a server-side JavaScript runtime environment that enables the execution of JavaScript code outside of a web browser, allowing developers to build scalable and efficient network applications.
- Used for installing and managing libraries and packages, used to install react, express, mongoose, typescript, firebase, etc.

Typescript:
- TypeScript is a superset of JavaScript that adds static typing to the language, enhancing code maintainability and providing a powerful toolset for building large-scale applications.
- Helps manage data types on code avoiding type errors.

Firebase:
- Firebase is a comprehensive mobile and web application development platform by Google that offers a range of services, including real-time database, authentication, hosting, and cloud functions, to streamline the development process.
- We use Firebase for uploading and storing files.

GitHub:
- GitHub is a web-based platform that facilitates version control and collaborative software development using Git, providing tools for source code management, project tracking, and team collaboration.
- We use this for version control and storing of codes.

PROJECT FILE STRUCTURE

- **client**
  - **node_modules** (libraries and packages installed)
  - **public** (default static location for index.html which is first to run in a web app)
  - **src**
    - **Components** (buttons, calendars, inputs, etc.)
    - **Hooks** (function and API calls)
    - **Images** (photos, pictures, images)
    - **Layouts** (layout of webapp like sidebar, header, footer)
    - **Pages** (main page of a webapp)
    - **Styles** (contains stylesheets for designing)
    - **Test** (test folder for dev purposes)
    - **App.tsx** (contains all routes and url of the webapp)
    - **Index.tsx** (first to run when the webapp is initialized)
  - **.env** (environment variables that can be customized and used globally)
- **server**
  - **node_modules** (libraries and packages installed)
  - **src** (collection of backend files)
    - **@types** (custom declared types)
    - **api** (used to process data and services)
      - **[module name]**
        - **controller** (collection of module functions)
        - **model** (defines the data structure)
        - **type** (defines the data type)
        - **route** (defines the url for the api request)
    - **middlewares** (miscellaneous tools for assisting in backend services)
    - **utility** (miscellaneous functions for assisting in backend data processes)
  - **index.ts** (the first to run when the webapp is run)
  - **.env** (environment variables that can be customized and used globally)