

React exercise:

Goal:

Build a small web application using Next.js, React, Typescript, ESLint, Prettier, Github, Swagger(With an external API), SWR and Material UI

The small web app can be anything but requires the following pages: register/log in, settings/profile, main page with forms (e.g. Project charter in track on performance)

Tools required:

- Next.js framework version 10 above
- Prettier and ESLint (to format the code and apply top rules) so she'll be using TOP configuration
- Github to host the project and also for Rodrigo to approve PR's
- Swagger to read Rest API documentation and consume it (can also use Postman to test)
- SWR to consume external data from the API and manage "State Management" which is the problem that Redux solves
- Typescript as the superset of Javascript to provide typings and scalable codebase
- Material UI as the styling framework also using styled components

Objectives to accomplish:

- Learn how to use Lighthouse (chrome dev tool) to optimize the website/app performance
- Improve git skills using Github
- Learn more about Typescript/Javascript and programming overall (react aims also to a very strict paradigm which is Functional Programming)
- Learn the importance of a state management and what SWR stands for
- Be able to read swagger documentation and therefore consume a rest api not only to read but to update

Resources to proceed with the project initialization:

- Learn what's SWR and the library created - <https://swr.vercel.app/> (It has all theoretical and practical stuff)
- Typescript <https://www.typescriptlang.org/docs/handbook/typescript-from-scratch.html>
- Creating a new nextjs project with material ui (supporting SSR) - <https://github.com/mui-org/material-ui/tree/master/examples/nextjs> (it does not have typescript but its a boilerplate)
- A book i recommend to help with Javascript learning - [http://index-of.es/JS/Wiley%20-%20JavaScript%20for%20Dummies,%204th%20Ed%20-%202005%20-%20\(By%20Laxxuss\).pdf](http://index-of.es/JS/Wiley%20-%20JavaScript%20for%20Dummies,%204th%20Ed%20-%202005%20-%20(By%20Laxxuss).pdf)
- Redux (<https://redux.js.org/>) It pretty much will serve to understand what it is, you'll not use it but you'll understand the importance of it
- State management (<https://kentcdodds.com/blog/application-state-management-with-react>)
- Swagger (<https://www.credera.com/insights/a-starter-guide-to-swagger/>) and <https://swagger.io/blog/api-development/welcome-to-the-swagger-io-evolution/>

The project will need to consume an API which i referred also from using swagger, that API will be this public one:

<https://petstore.swagger.io/#/>

Petstore is an official project of swagger, therefore you are free to find another project similar, there are thousands of them

What packages should be deliver between?

- 1 - Create a quick structural portfolio of the APP (will be easier to approved your intentions and ability to completion, as well as a practice on creating a E2E new product concept, which will be your job for the next 2 years)
- 2 - You have to create the project and upload to github
- 3 - Your project has to have ESLint/Prettier configured in your IDE/in git
- 4 - You have to use the tools described above and documented
- 5 - Create a Document of all steps (why's and how's) so that you'll be able to explain the project while reviewing. This document should be done side by side the project while you are developing
- 6 - publish a development and production app