Instituto Politécnico de Viana do Castelo

Licenciatura em ENGENHARIA INFORMÁTICA
Graduation in INFORMATICS ENGINEERING

GESFaturacao - FTKode

Project 3

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Orientation:

- Professor Doutor Ricardo Freitas;
- Engenheiro Miguel Guerra;

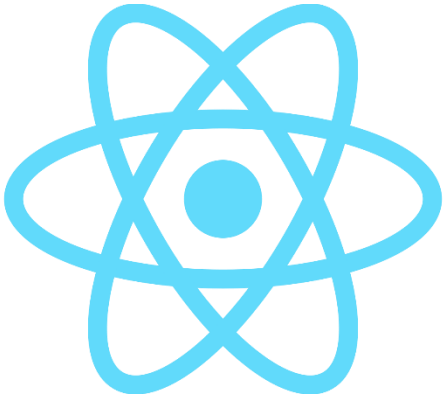
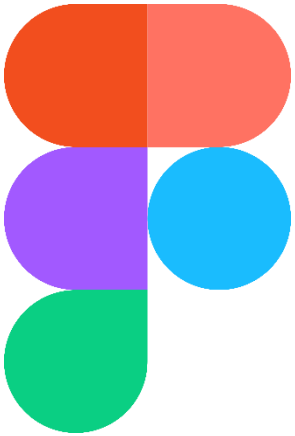
Summary

1. Introduction and Objectives

- With this project, we were challenged to take on the role of mobile programmers in a corporate environment.
- The objective was to develop a mobile application in React Native for business management.
- This project was a challenge for the group, as the development had to be carried out using a tool that can be considered unfamiliar, never having been taught in any class taken by the group.

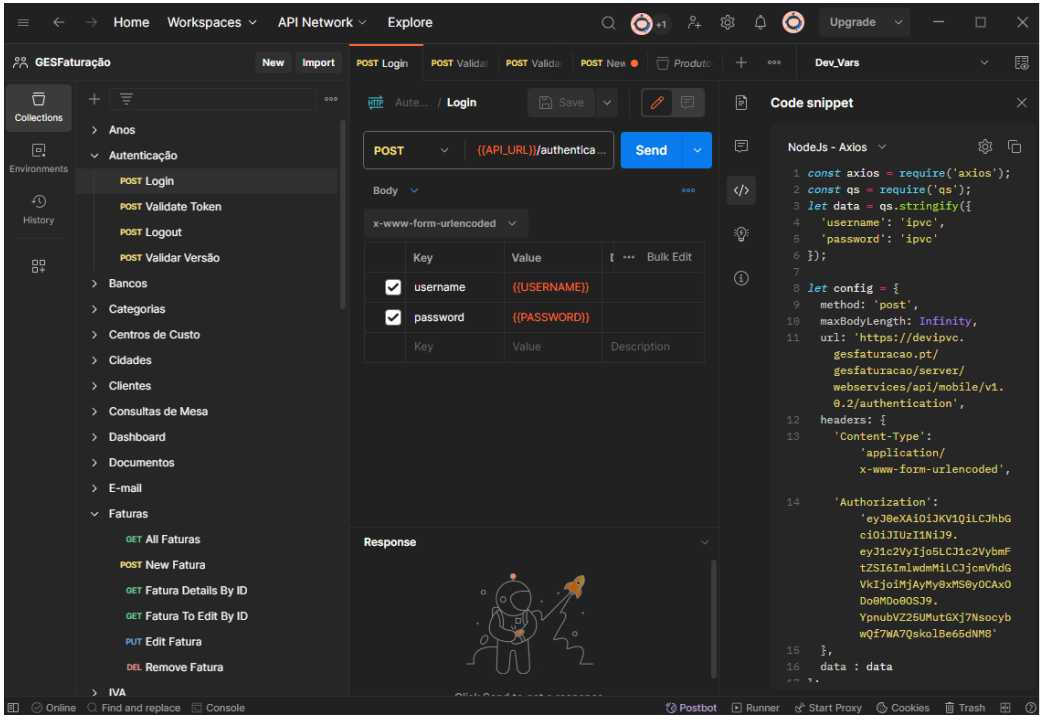
2.Technologies, tools and libraries



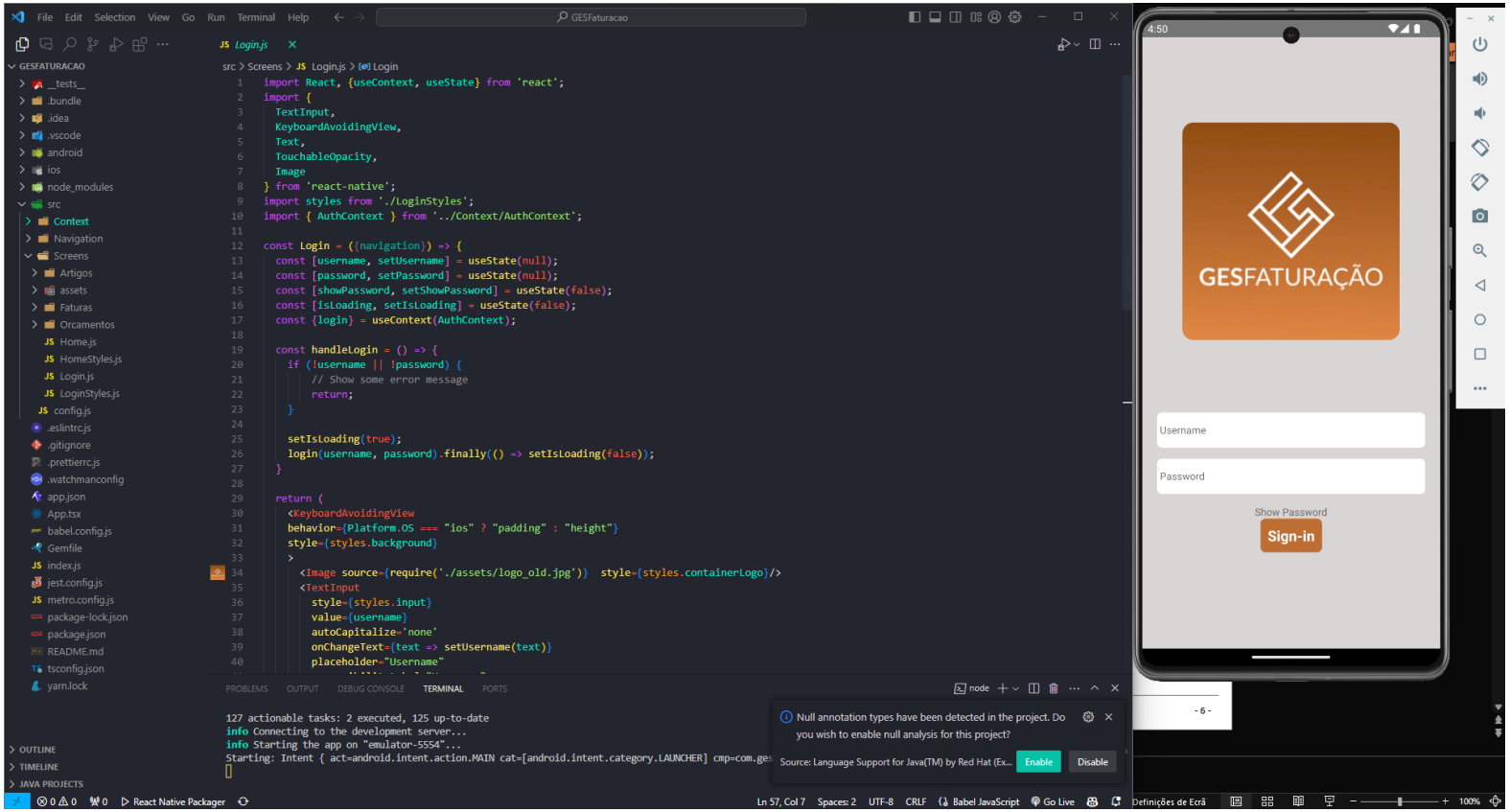

2.1. Programming Environment

- For the development of the application, our data source was the API provided by the company, and we had access to it through the Postman API.
- We could test the requests to the server and implement them in the app too create the functionalities.



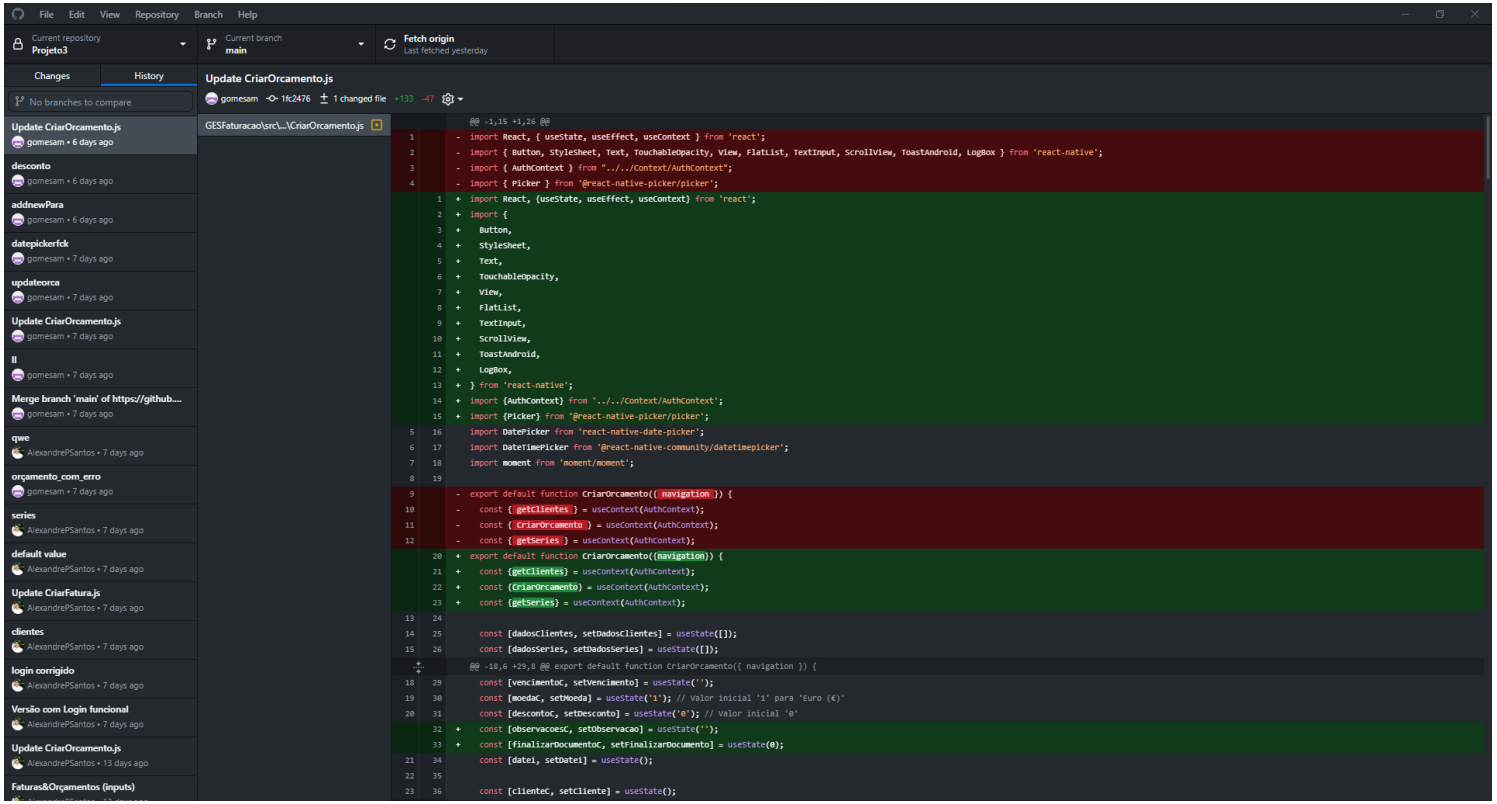
2.1. Programming Environment

- The IDE we used was visual studio code, React Native as the framework for mobile development and Javascript as the main programming language.



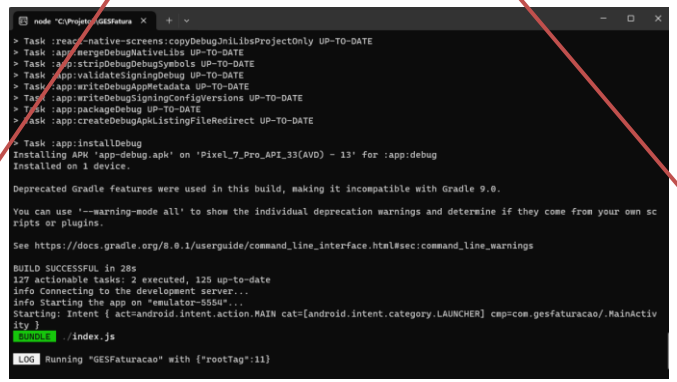
2.1. Programming Environment

- In order to work together as a team and maintain the versioning of the project, we used Github.



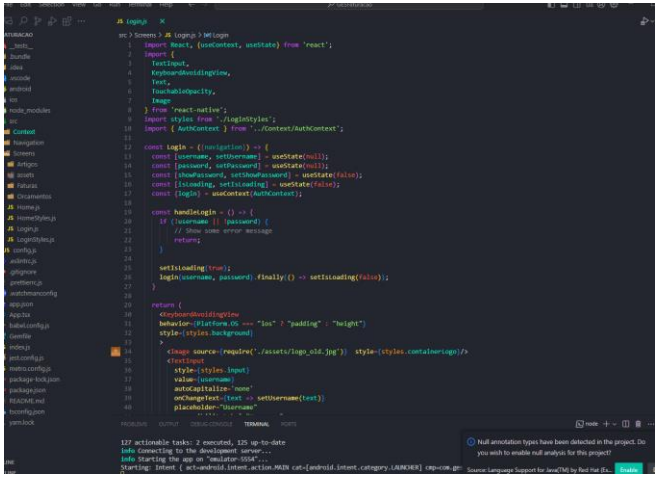
2.1. Development Environment

(2) Build if saved



npx run android

(1) Save code file



Visual Studio Code

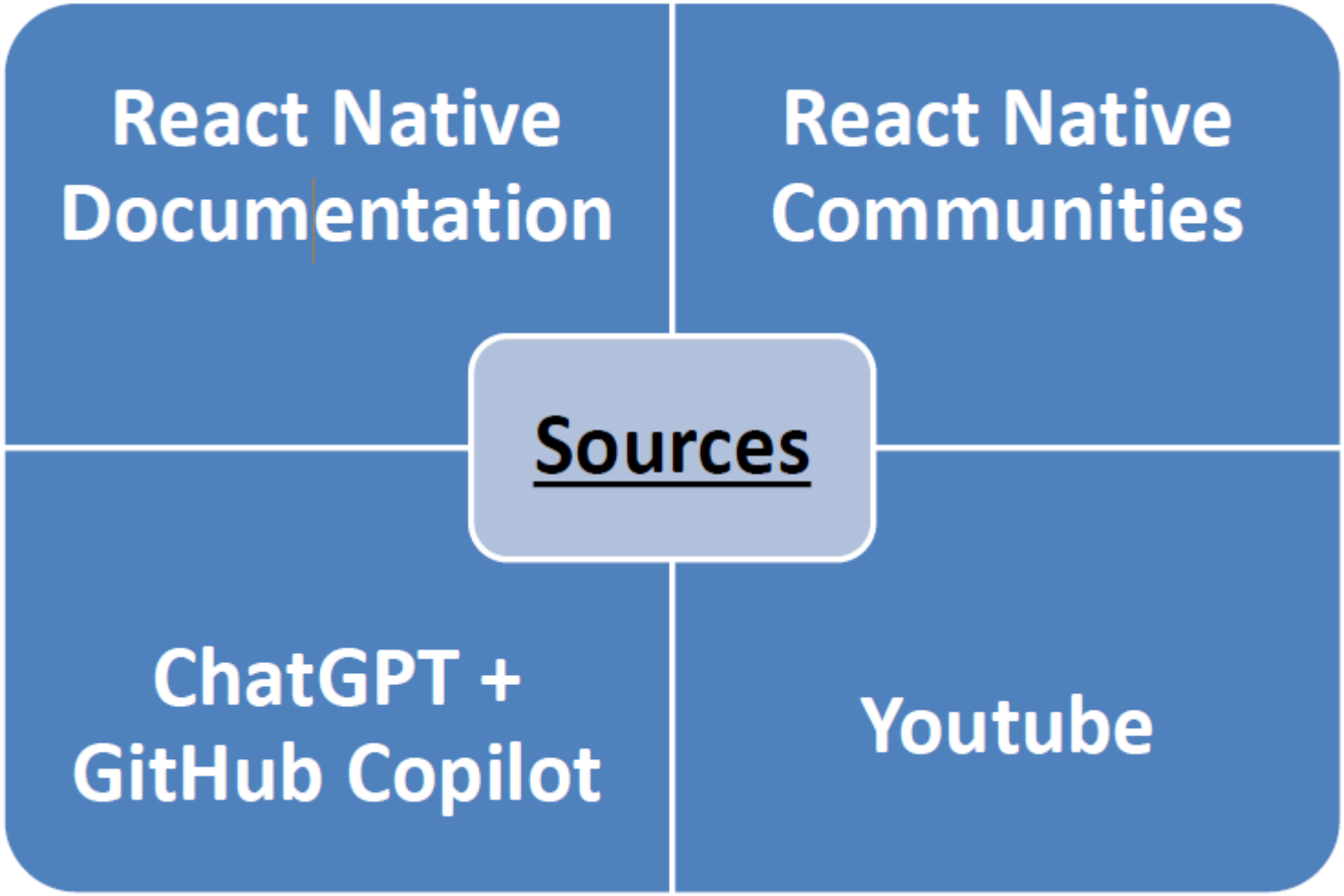
(3) Upload latest project build

Android Studio Emulator

2.2 Methodology

- Week 1: Initial contact with the company and definition of objectives;
- Week 2 to 3: Research for learning the tools to be used;
- Week 4 to 5: Authentication development;
- Week 6 to 8: Development of Invoice, Budget and Product Creation;
- Week 9 to 12: Development of Invoice, Budget and Product Listing;
- Week 13 to 15: Development of Invoice, Budget and Product Editing;
- Week 16: Development of Client creation, listing and editing;
- Week 17: Final touches to the layout and code optimization.

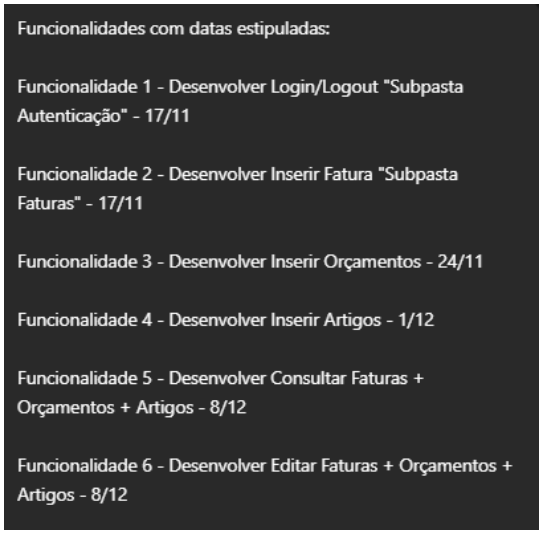
2.2 Sources Used

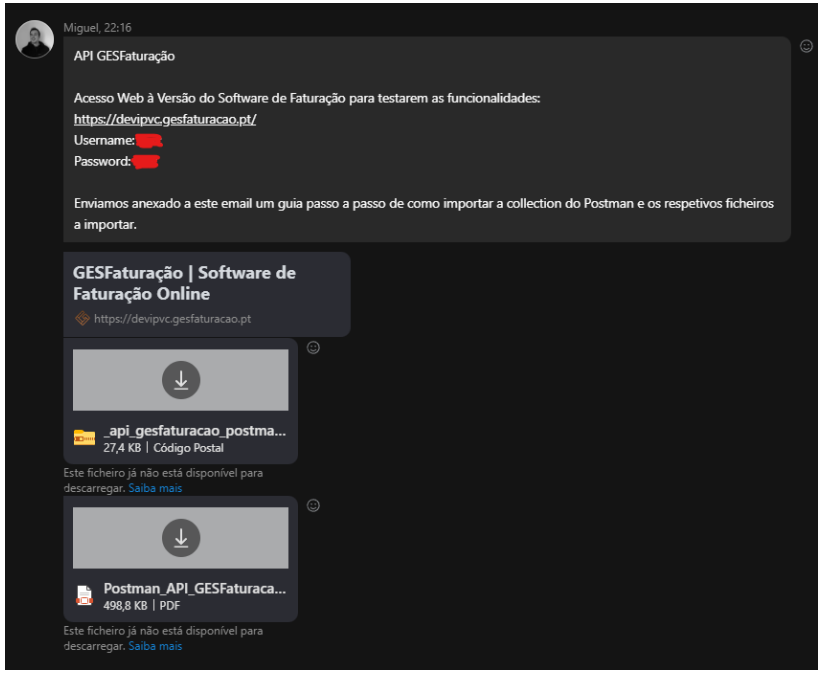


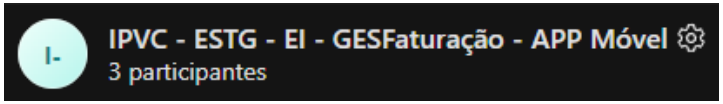
2.2 Project Management

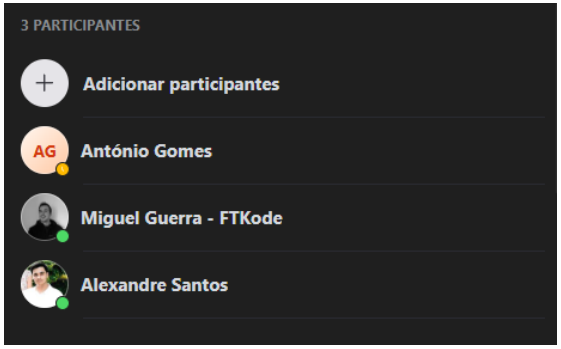
- Via Skype, we collaborated with the company engineer to define tasks and set deadlines.

- Weekly meetings were held with the company supervisor on Fridays, and group meetings were held every Wednesday.



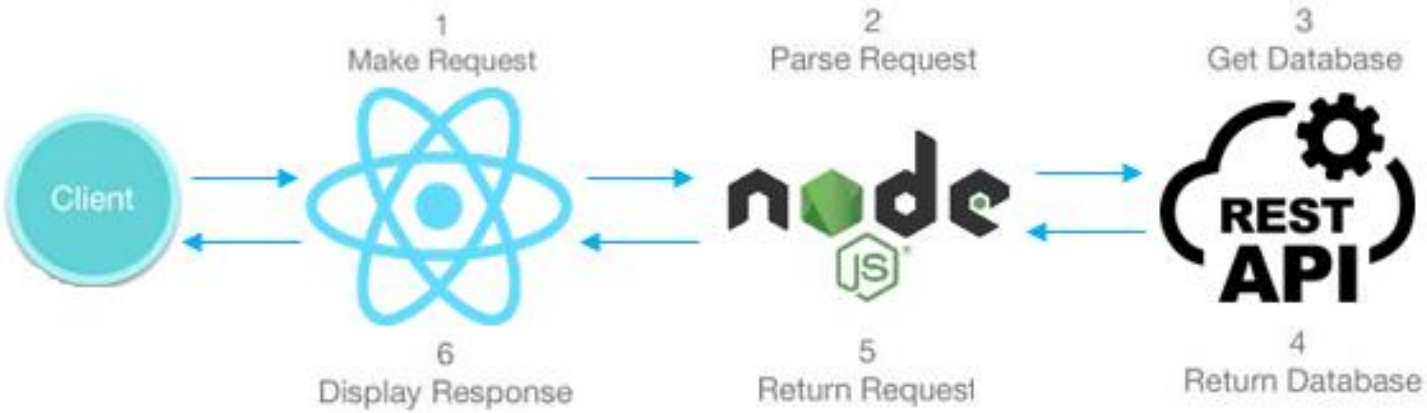






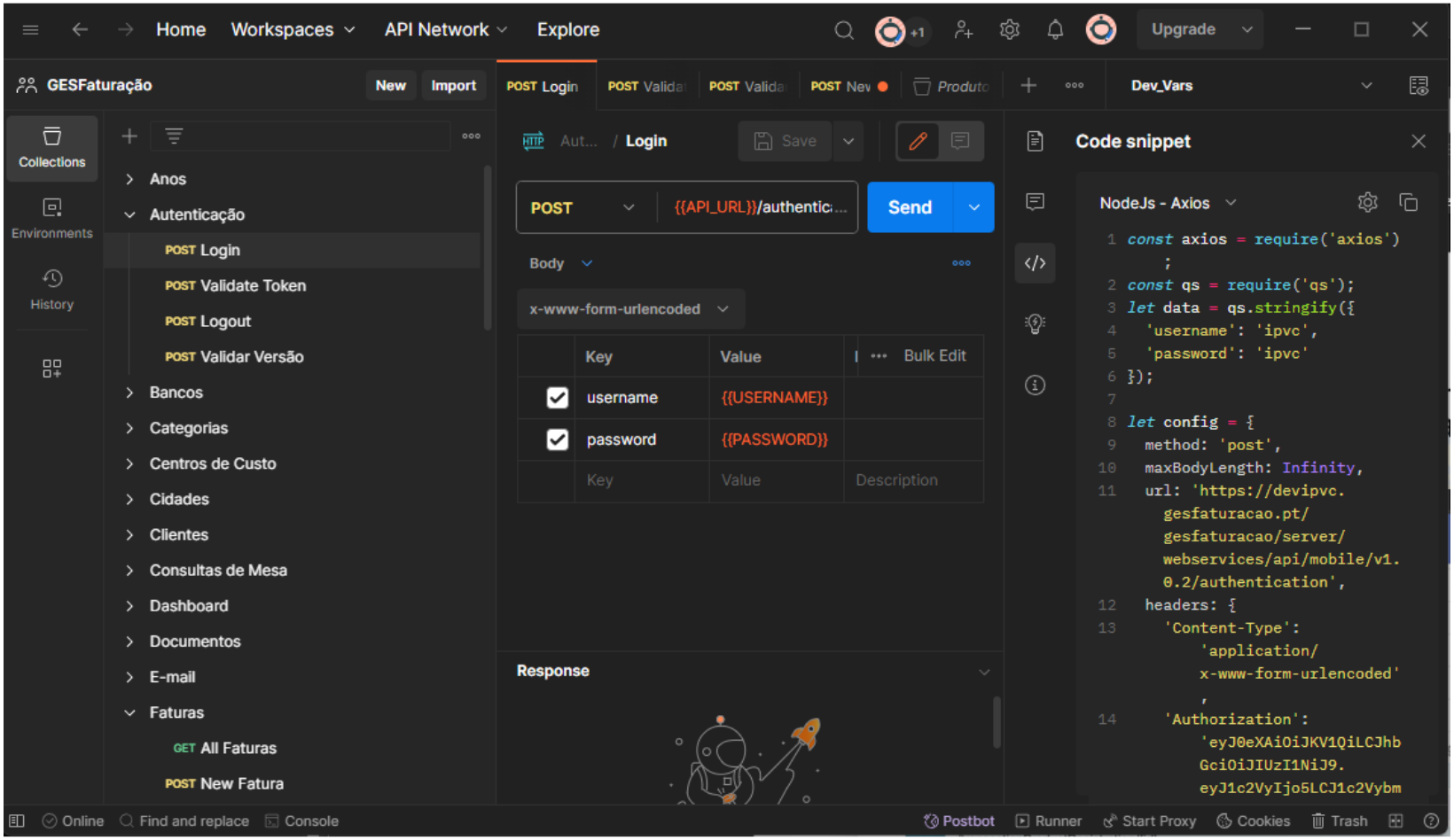
2.3 Architecture

- The environment used for the development of the project consisted in a collection of technologies (React Native, Node.JS and Rest API) associated with JavaScript, which is used to build web-based applications.



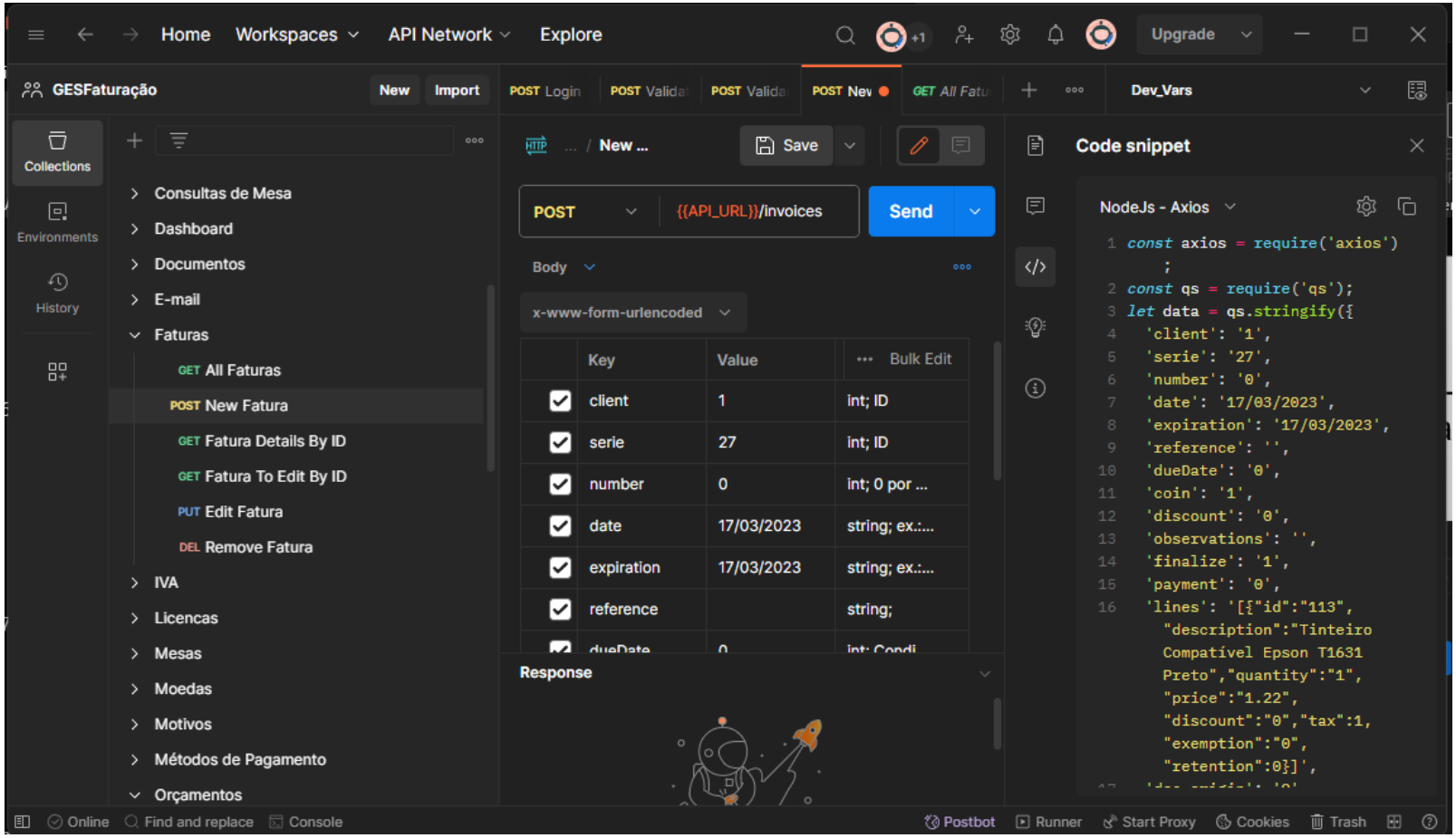
3. Developed features

- API methods for accessing login, token validation, and version.



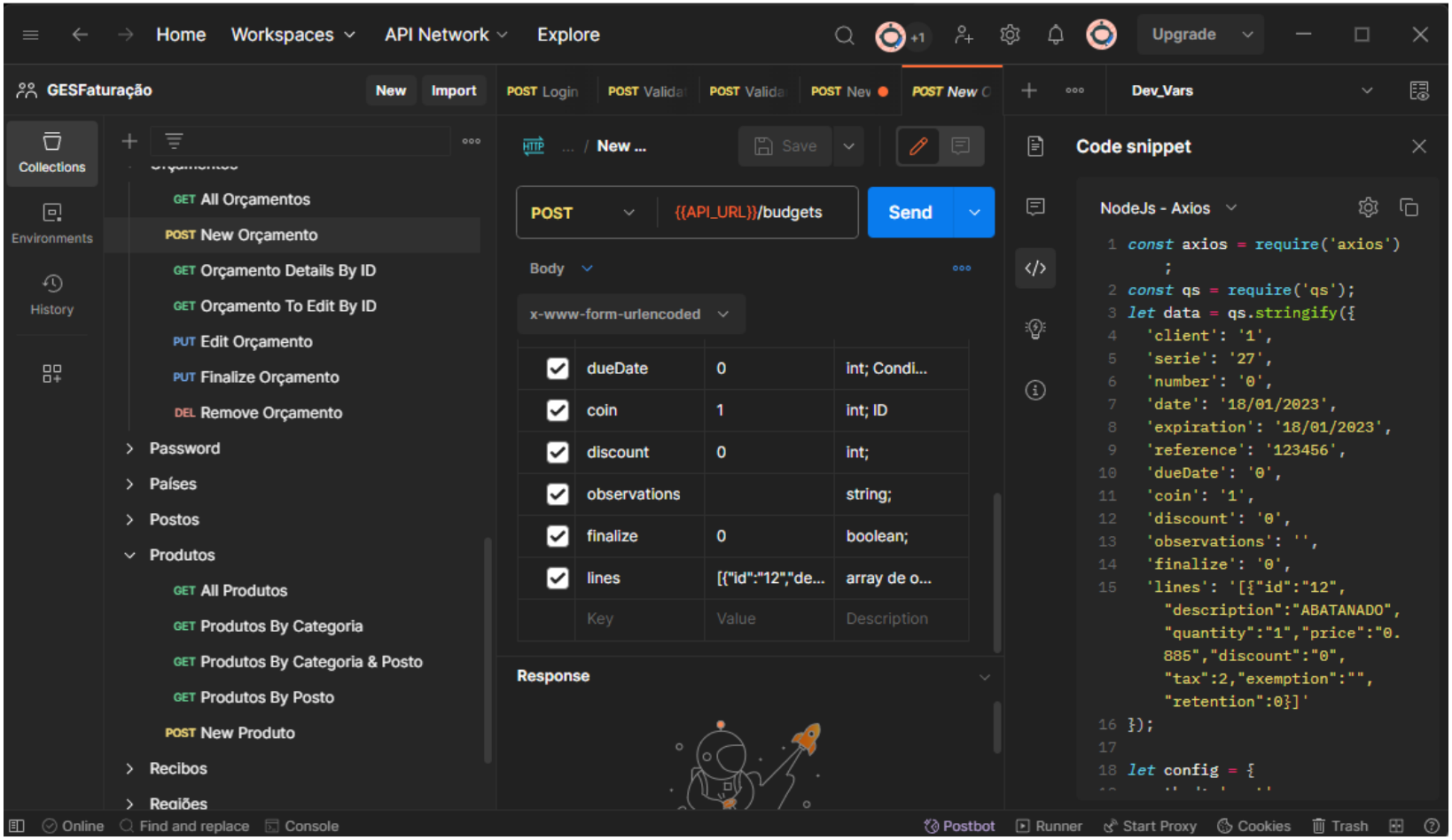
3. Developed features

- API method for invoice creation.



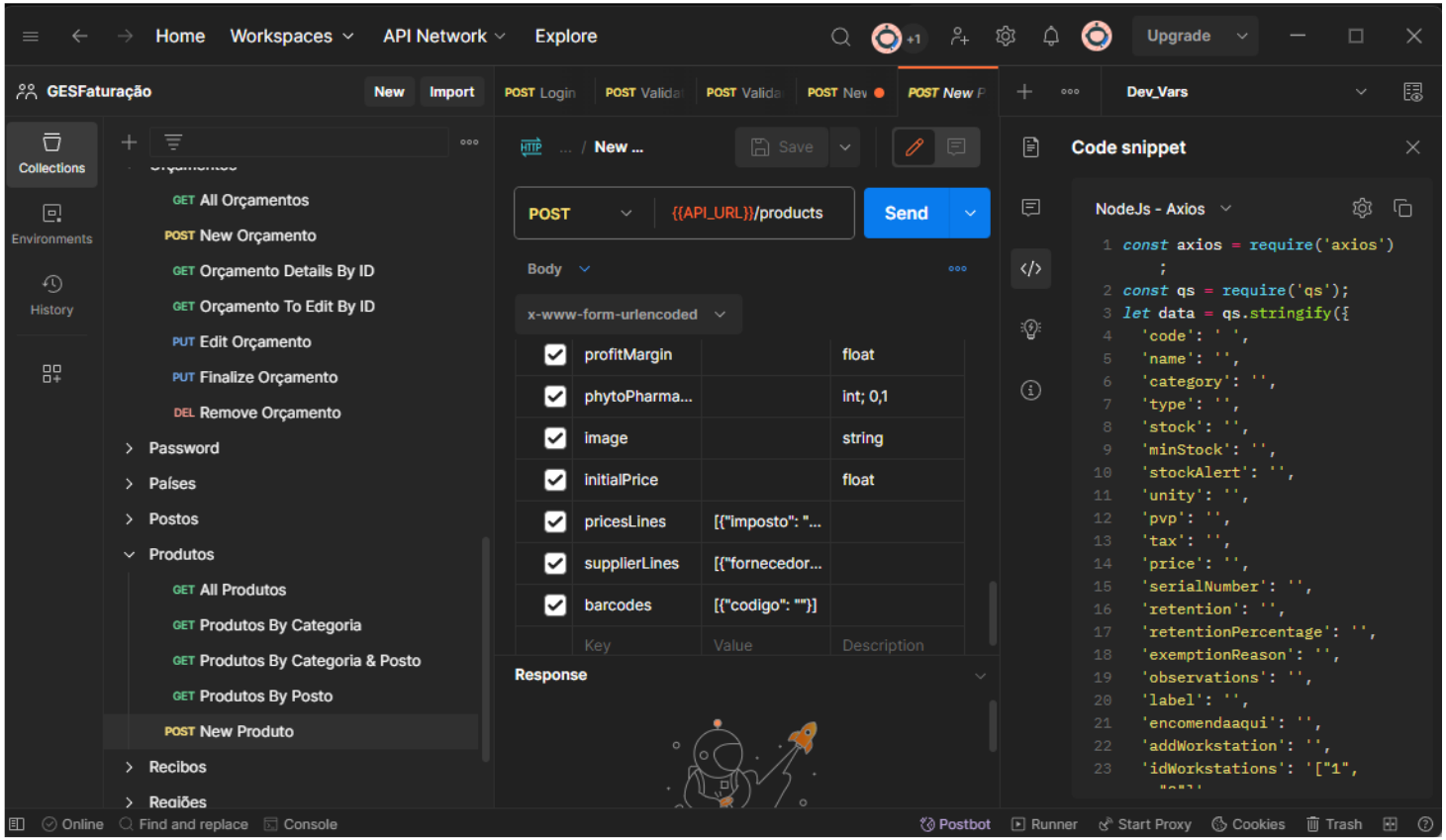
3. Developed features

- API method for budget creation.



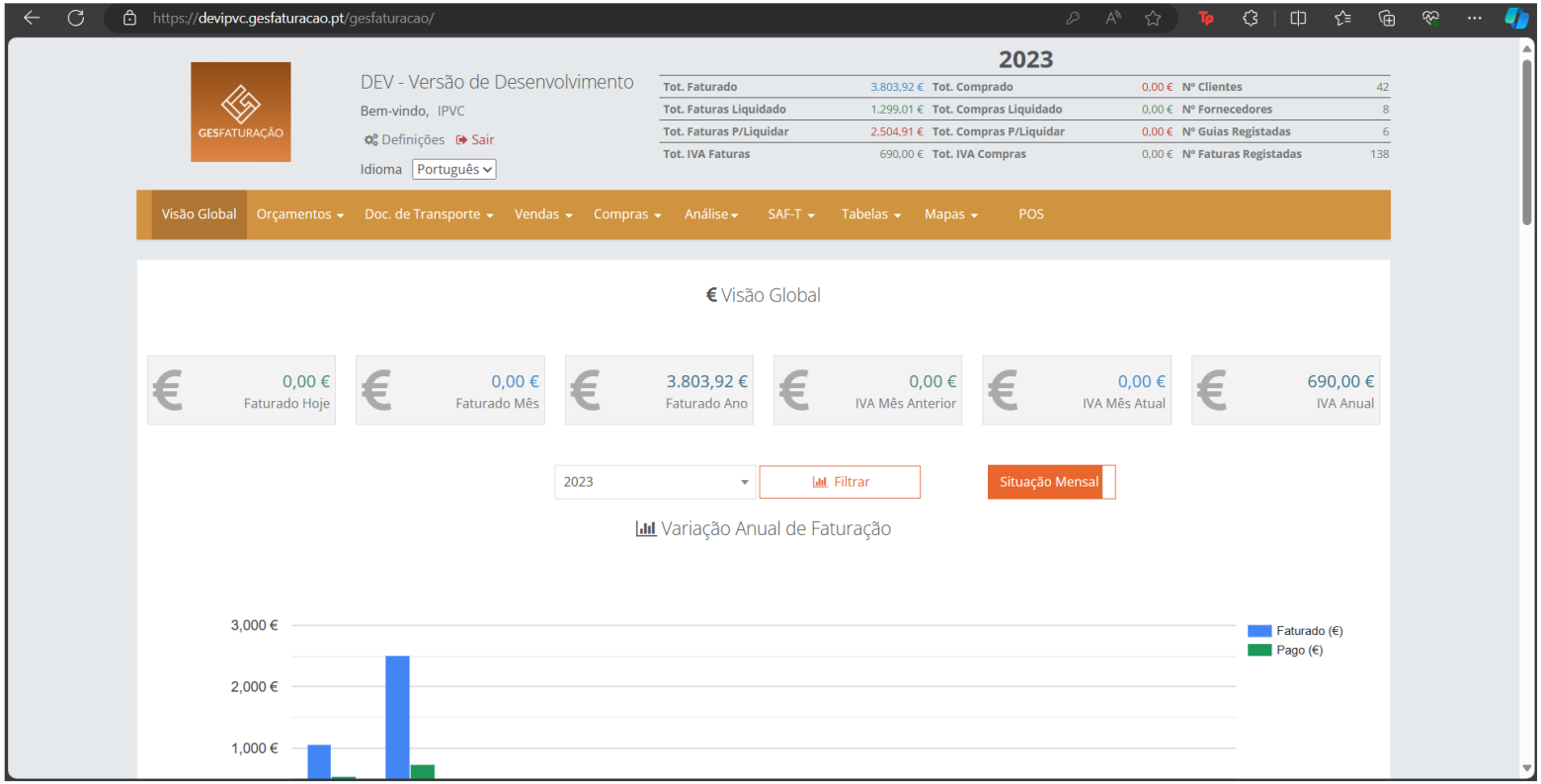
3. Developed features

- API method for product creation.



3. Developed features

- Original website of the company that served as our guide for creating the app and its functionalities.

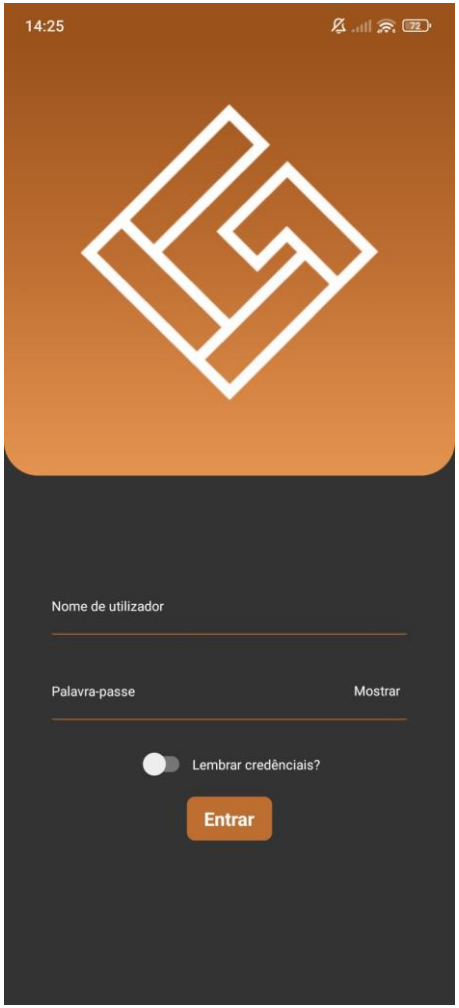


3. Developed features

- Figma prototypes for the UI to be implemented after the development of all the functionalities.

4. Practical Case/Project Developed

- Login Page - Dark mode (Extra):

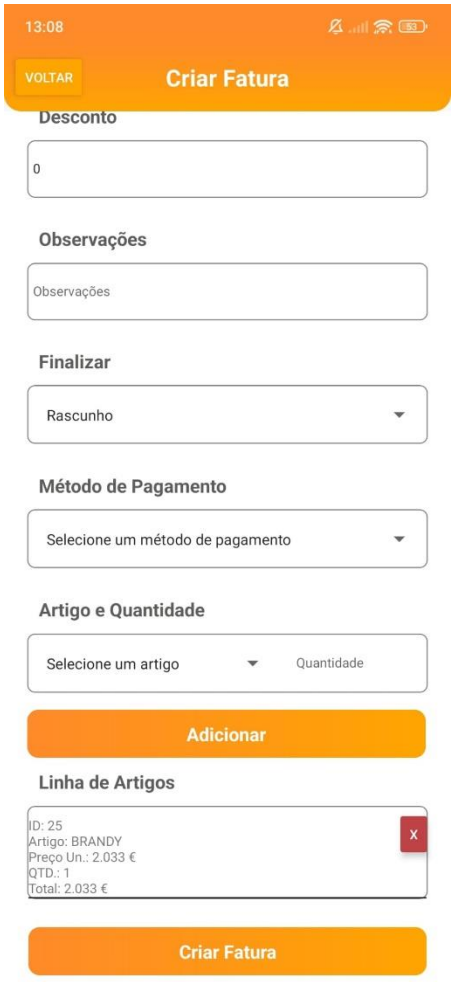


- Login Page:

- Dashboard:

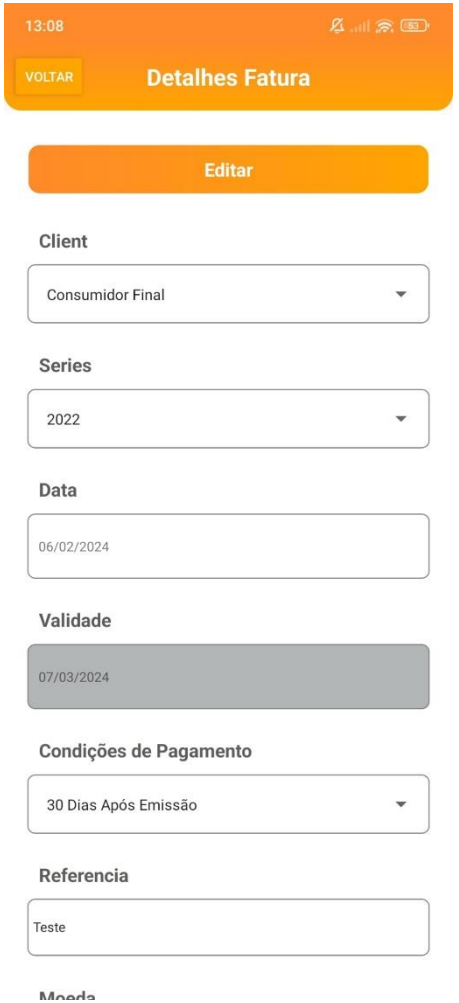
4. Practical Case/Project Developed

Invoice Creation:



Invoice Listing:

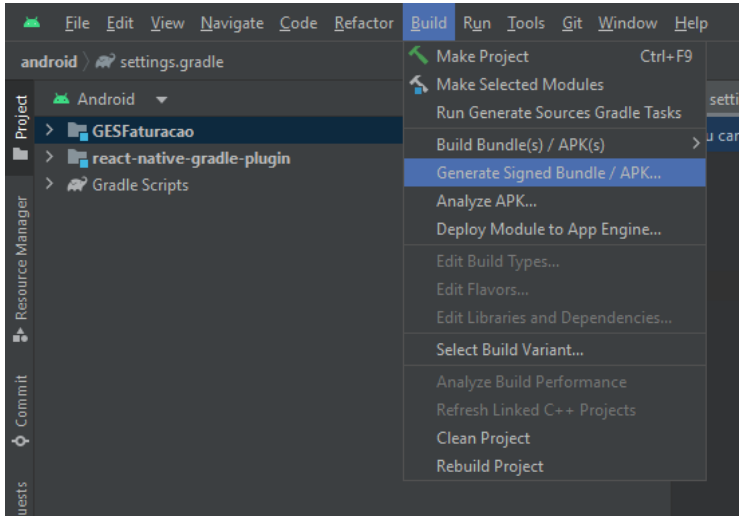
Invoice Editing:

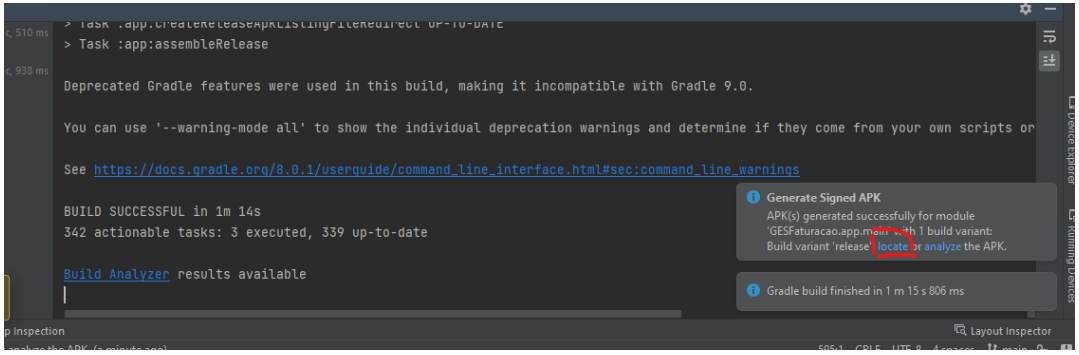


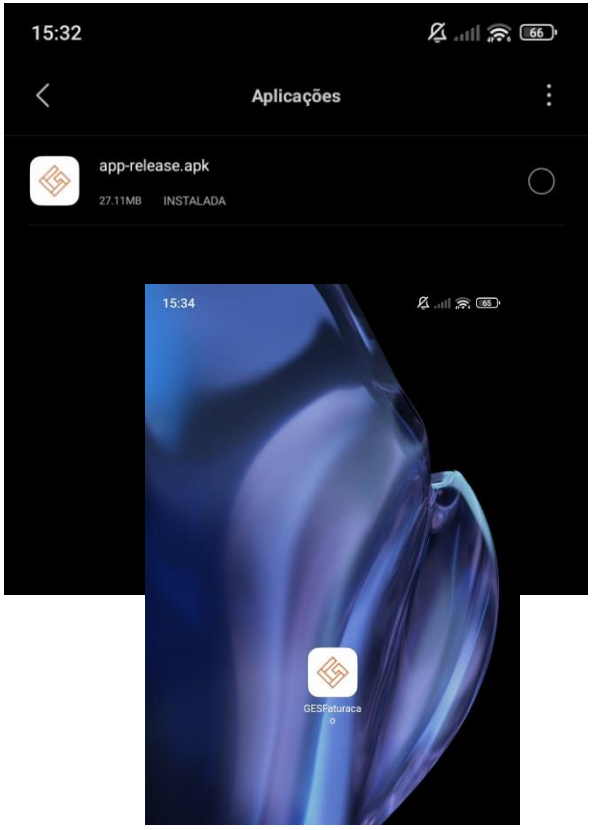
4. Practical Case/Project Developed

5. Installation

- For the installation we had to generate an APK, this APK is used to install the app on mobile devices, and it's generated by Android Studio;







6. Difficulties & future features

Difficulties:

- First contact with the technology, understanding how it works;
- Meeting some of the deadlines due to difficulties arising from the use of an unfamiliar technology;
- Implementation of API functions due to a lack of documentation;

Future features:

- Tables with data representation on the dashboard instead of buttons;
- Tabs to access the functionalities;

7. Conclusion and final thoughts

- We can conclude that this is a project of great importance, not only because it is within the scope of a company but also because it prepares us for the job market as we are exposed to a corporate development environment.
- Despite the difficulties arising from a lack of knowledge in the tool we are used, the project was of great interest to the group, which motivated us to overcome the challenges and develop the best possible project.

8. Bibliography and Web References

- Course to learn Javascript: https://www.codecademy.com/learn/introduction-to-javascript
- Course to learn the basics of React Native: https://www.codecademy.com/learn/learn-react-native
- React Native documentation: https://reactnative.dev/
- NPM documentation: https://www.npmjs.com/
- React Native navigation documentation: https://reactnavigation.org/
- Axios documentation to execute API calls: https://axios-http.com/docs/intro
- React native development methodology: https://markovate.com/blog/react-native-development/
- Figma tool for the UI prototypes: https://www.figma.com/

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