

LOMap

LOCATION MANAGEMENT AND PLANNING TOOL

LAB 3 - Group B

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Contents

What is
LoMap?

Goals and
functionality

Constraints

Technical
Aspects: SOLID

Decisions and
Testing

HTTPS and
Docker

Deployment view

Problems

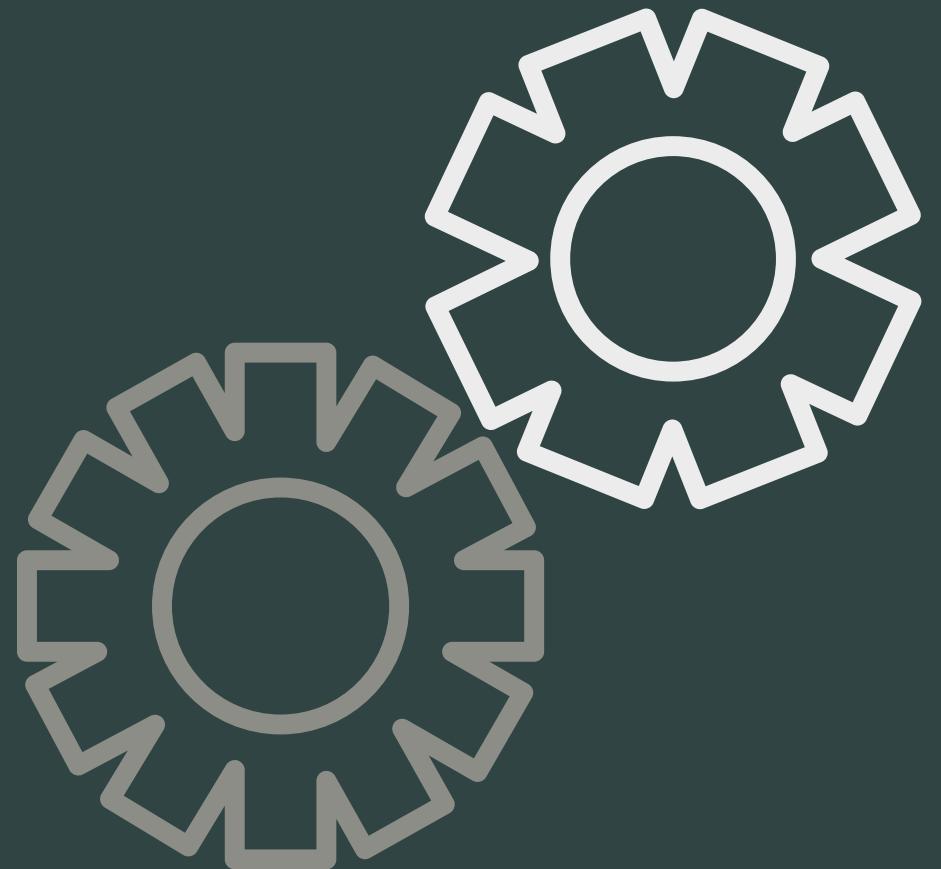
Introduction

LoMap is an application designed for citizens in order to allow them to personalize their city map.

For that matter , users of LoMap will be allowed to do such things as leaving reviews of establishments, monuments or any other place of the city; as well as pinning those places they want to visit or have visited already.



GOALS



Privacy

Data will only be shared with those parties the owner agrees to. We tried to respect this as much as we could making it a big focus in our application.

Usability

LoMap will be intuitive and easily used by both experienced and non-technical users. For that, naming, and content structuring will be specially taken care of.

Responsiveness

LoMap will adapt its size and content distribution to the device it's being accessed to, so usability is ensured.

Maintainability

It will be ensured that documentation is updated as changes take place in code, so it's updated. LoMap will be developed minding the readability of its code and documentation.

Functionality

The main part of the application is a map.

In this map the user can add as many locations as they want. Naming such locations and including a description, a picture and a rating.

They also should give the locations a specific category (bar, restaurant, sight...) and a privacy level (public or private), if a place is public the user friends will be able to see such location.

All the user friends are going to be able to write reviews with comments, ratings, and photos on this location.

The user can filter the locations based on their category.



Constraints

Technical

- Map under full control of the user.
- Use of SOLID.
- Web application.
- Generic software solution.
- GitHub.

Organizational

- No budget whatsoever
- Delivery deadlines

Conventional

- ARC42 for documentation.
- English as the language of the application.

SOLID

The main technical constraint was the use of SOLID pods.

We delegate everything related to storage and authentication to the provider, the login, the manage of the users' profile, the management of the users' friends...

We use **inrupt.net** mainly as a provider as is the one we focused on, but LoMap works with more providers.

Also all of the LoMap data is at the disposition of the user in every moment.



Decisions I

- Implement LoMap in mainly React and Express.
- Javascript as a programming language.
- No need of a centralised database in order to achieve maximum privacy.
- Therefore, no need of a REST API.
- Use of Google Maps API regarding the map of the application.



Model decisions

- Use of schema.org + Inrupt as default schema to create RDF things.
- Use Oviedo as default city for LoMAP.
- LoMAP friends will be the same as POD friends.
- The only media files allowed are image.
- To be able to write reviews in a friends' locations they must logIn in the app.



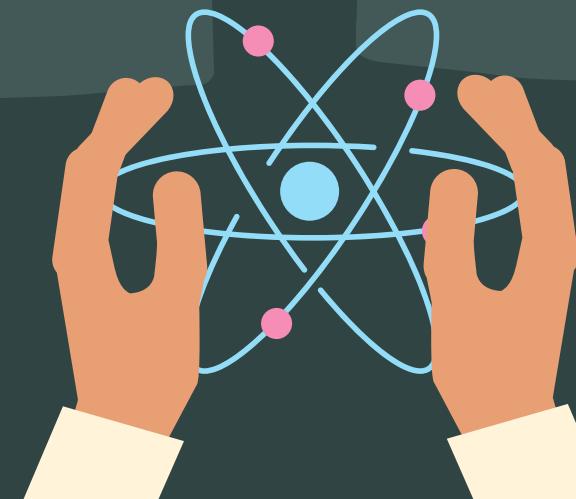
Testing

Unit testing

We mainly focused on unit testing on the webapp. We thought about performing some E2E testing but we found it being not a priority given the state of our application.

Problems

We found it really complicated to test some Material and React components. Also to mock connections with SOLID.



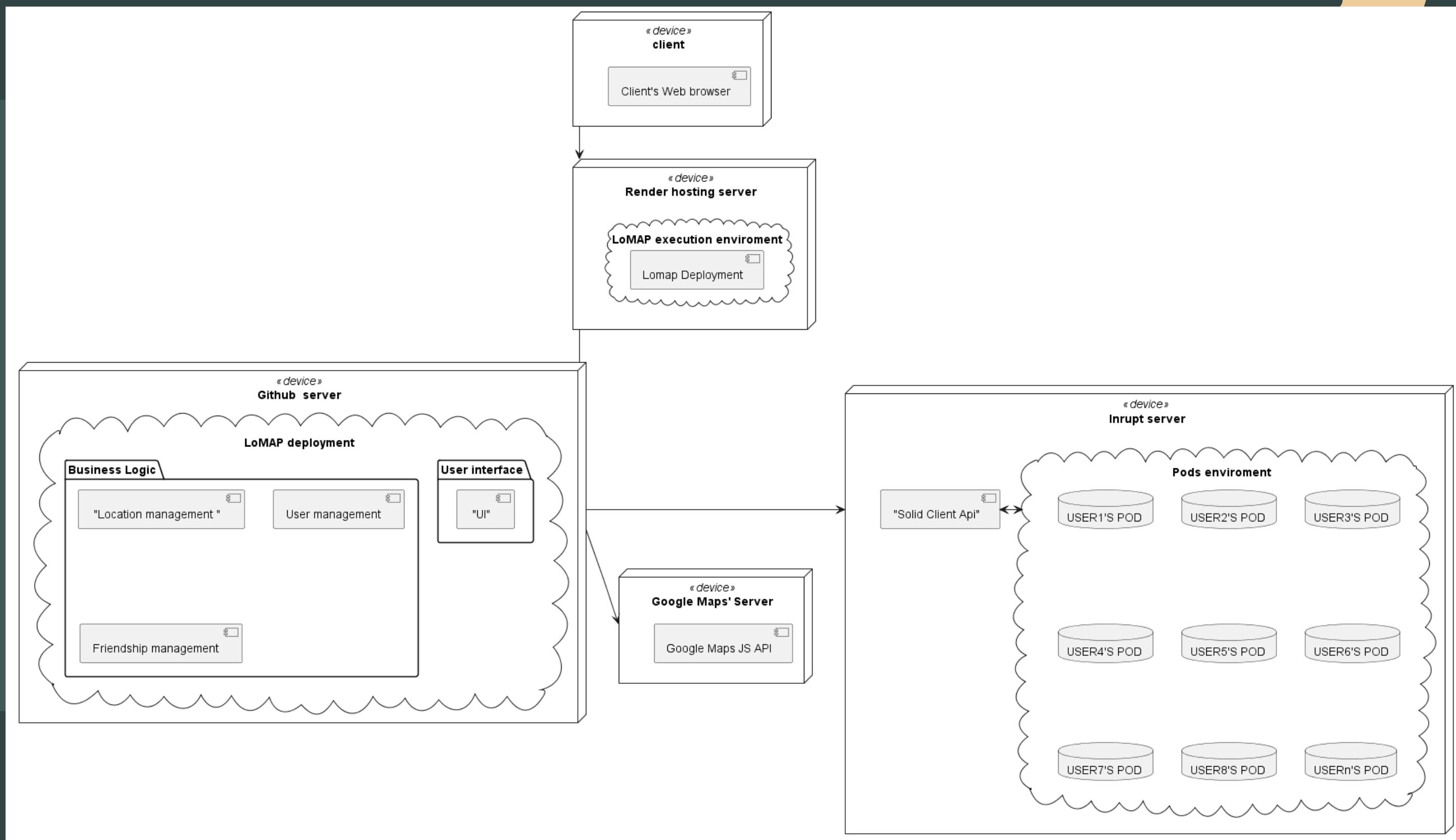
HTTPS and Docker

For the deployment we generate an image of our web app that will later be run as a docker container inside the virtual machine on the cloud.

In order to be able to Log into inrupt from our app, we needed HTTPS .



Deployment view



Problems

- Zero knowledge about any of the technologies used by all of the members of the group.
- Hard understanding of SOLID documentation, especially early on the development.
- Use of SOLID providers that were not working so well early on.
- Inappropriate use of the GitHub repository early on.
- Difficult to achieve continuous integration.
- Difficulties testing react and material components and SOLID connections.



DEMO

