Project Proposal - Reservation system

1. Introduction

Have you ever filled some notebooks or called the property owner when reserving a laundry room, sauna, or any other space? We are living in 2022 but that is still considered normal when we are talking about rental buildings. Our vision is to bring all rental living services, including reservations, under one platform. Think about if you can use a product built by yourself.

But let's start with what is Formup. Our mission is to change the way rental properties are managed, and how tenants can manage their housing information using our platform. In Finland, our customers manage over 50 000 apartments in their portfolio, whereas we aim to optimize the way apartments are handled. Our product is a platform, combining all the services tenants and rental house owners need during the tenant lifecycle. With this platform, we aim to digitize the most non-digitized industry, the real estate industry.

In this project, your task is to **build an entire space reservation system**, including the **back-end, a mobile application and necessary management tools**. You will pay special attention on developing a well-tested back-end service that will be used as a part of the larger tenant application in our production software. You will build an application (Android and iOS) that uses the back-end and admin tools for managing the resources.

By choosing this project, you will be able to see how digitalization will be changing the future of the real estate and build something that you might use yourself in the future. In addition, **we are looking for hiring candidates after this project** to continue the further development.

2. Project goals

During the project, you will be building the reservation system application for rental houses. The system has two major stakeholder groups: tenants and property owners. The application should include the following:

- Well-tested back-end service running in Google Cloud
- Front-end mobile application for Android and iOS using a single codebase
- Tenant view of the application where one can reserve spaces from the application
- Property owner view of the application where one can monitor a dashboard including space utilization rate, tenant information, and rights to reserve spaces for example

Optional features:

- Creating tenant profile including all the information of tenants such as contact information, agreements, and communication
- Admin panel including comprehensive overall tenant data, tenant profiles, and a communication channel to tenants

The main goal is to produce a ready-to-use application, where anyone living in a rental house can create a profile and reserve common spaces in a property. In addition, the property owner can monitor and analyze data from spaces and tenants. Secondary goal is to include other elements in

the application where tenants can access all their data in one place as the admins will be able to utilize the more comprehensive data collection.

3. Technologies

In the project, you will be using the most modern mobile application technologies and developer-friendly cloud infrastructure.

- Front-end: React Native, TypeScript
- Back-end: Firebase + Node.js
- Other tools: Figma, Slack, Trello, Git.

The team is encouraged to also choose additional tools that support e.g., file sharing and project management.

4. Requirements for the students

We require some knowledge about JavaScript and Node.js, as those technologies work as the basis of the application. It would be helpful if people in the team have worked previously with React Native, React, TypeScript or Google Firebase. However, mostly we require you to:

1. Have the drive to push through the project even though on the way you may encounter challenges
2. Openness and flexibility to the original project plan. As the company evolves during the project, our strategic outcome can change which means your tasks can alter a little as well.
3. Be able to work as a part of a multi-background team. In addition to your own team, you work closely with our product owner and business development unit.

5. Legal

Intellectual Property Rights (IPR): The client gets all IPRs to the results.

Confidentiality: The client will share some confidential information with the students.

6. Client

Formup is a startup with two founders and a handful of employees. Backed by two investors who believe in our mission, we are soon expanding into European market. Our headquarter is in Startup Sauna in Otaniemi where you are more than welcome to work during the project. In addition to gaining experience in a software project, you will be able to see closely how an early-stage startup is working. If you have ever considered becoming an entrepreneur yourself, this is the perfect first step to open the curtains to a startup's everyday life.

Client representatives:

Rune, the Product Owner, led a software team in the software project course last year resulting in the top-three projects in Quality Awards. He has experience in web technologies with a passion for backend systems and cloud infrastructure. Rune has reserved time weekly for the project.

Elias, the Chief Product Officer (CPO) of Formup, has built web applications for over 5 years. He has founded already two startups and currently being link between our customers and product development.

In addition, Formup has experts in multiple disciplines, such as design and front-end development, who can occasionally support the team as needed.

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