ITS Project plan

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S3-CB05

Contents

Project overview

The main idea behind this project is creating a web-based software solution that will help tenants in student houses and their landlords/rental agencies to easily maintain track of announcements and daily chores such as cleaning shared facilities, taking out the trash, etc. Admins will be able to create household and specify house properties (number of bathrooms, kitchens, etc.) and generate codes. The generated codes will be used by tenants to join the household. Once part of it, students will be able to explore both student and admin announcements, post student announcements, check what and when is their next daily chore, see chores planning that include other people's tasks. The chores planning will be automatically-generated based on the household properties. Lastly, tenants will have the chance to rate each other's completed tasks, check their personal rating and how it compares to their housemates.

Team and responsibilities

Since this is a project for the individual track of semester 3 ICT & Software Engineering, there is only one member that will be contributing to the final deliverable – Dimitar Prisadnikov. The team member (also called "Developer" in this document) will have the following responsibilities:

- Implementation, testing and deployment of the software solution(s).
- Documentation related to the project.
- Organization of meetings and communication with teachers.
- Managing supporting tools used during the project (GitLab, Jira, etc.)

Phasing

For each sprint, a sprint backlog will be provided in Jira therefore for more detailed view please refer to the backlog there. The tutors will be provided within the first sprint.

Sprint 1

The main goal of the sprint is to set-up the environment (IDE, GitLab, Docker) used for developing the software solution and come up with an project idea that gets the teachers' approval. Also, Jira project with the initial product backlog will be created and the teachers will be granted access to it. If there is enough time left, Auth0 authentication and authorization will be implemented.

Sprint 2-5

Most of the actual software development and the creation of the relevant documentation should happen in the sprints 2 to 5. This includes implementing new features, fixing issues, testing, enhancing the CI/CD pipeline and more.

Sprint 6

Since most of the project work is supposed to be completed not later than sprint 5, the 6th sprint is mainly meant for final touches, fixes and other improvements. If the project is not on track, this sprint can be used as final opportunity to catch up.

Communication

The communication between the developer and the tutors will happen both on site and online. When done online, Microsoft Teams messages and voice/video calls as well Outlook emails will be used. On site, the meetings will take place in Fontys R10. In all cases, the developer should aim to meet the tutors on site when it comes to the weekly feedback contact moments unless there is an urgent matter or problem that prevent this from happening.

Deliverables

Documentation & others

Project plan (this document)

Provides general information about the project.

Test plan

The developer is responsible for creating the test plan which will be used for QA purposes once there is a working prototype of the application to make sure all features are working as expected. It consists of test scenarios based mainly on user stories.

Backlog

Jira is the preferred tool for keeping track of both the product backlog and the sprint backlogs. The two technical teachers will be able to access the project on Jira. Additionally, the initial product backlog will be submitted in a document (still, all updates to the backlog will happen only on Jira).

Sprint planning

At the beginning of each sprint, a sprint planning will be provided. It will consist of user stories planned for the said sprint as well as brief description what is the main goal of it.

Personal reflection

Personal reflection is document where the develop will take a look at the past few weeks or months and try to analyse how it went. This will happen at least six times – five sprint reflections and one reflection at the end regarding the project in general. By analysing their past actions and progress, the developer hopes to be able to spot any imperfections within the working process.

Presentation

At least one presentation will be held to showcase the final product.

Software solutions

Back-end solution

REST API written in Spring Boot.

Front-end solution

React.js application.

Database

MySQL.

Other

GitLab CI/CD pipeline, design document, applied research document, UX feedback report, security report, web performance review document.

Constraints

Time-related

This project starts on the 29th of August 2022 and is meant to last an entire semester which means that there are approximately 5 months available. However, the final submission should be uploaded not later than 11:59pm CET on the 13th of January 2023, therefore the time for developing is less than the mentioned 5 months. In addition, there are deadlines for each sprint which should be respected by the developer.

Technology-related

The software solution for this project must be a REST API in Java Spring Boot in a combination with a front-end solution written in a modern framework (React.js will be used). The chosen databased is MySQL. In addition, GitLab, Docker and SonarQube must be present in the final CI/CD solution.

Risks

There are plenty of risks which can occur during any of the sprint. The table below shows some of the potential risks, their impact and probability.

Probability	Impact	Risk	How to avoid
Low-Medium	High	Not being able to finish on time due to implementation issue which cannot be resolved on time.	Keep the tutors updates as often as possible so all issues can be resolved on time.
Low-Medium	High	Not spending enough time on the project due to other projects or/and work.	Try to organize the different activities in advance to make sure there is enough time for each one of them.
Low	Medium	Inability to work on the project temporarily due to technical/connection issues	Maintain the available hardware the best way possible and always have a second (backup) network (for example, mobile hotspot).
Low	Low-High	Inability to work on the project due to Covid-19 or illness.	n/a

Table 1, risks

Document version table

Date	Details
09.09.2022	Created the initial version of the document.