

Project Plan

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Express yourself

Kwetter

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# Description

Kwetter is a simplified version of the popular social media platform Twitter. This web application will contain some of the features included in the popular platform in order to show that the learning goals for the semester 6 have been achieved. The process of implementing these features includes planning the use of appropriate frameworks and technologies, planning the backend and frontend structures to include extensibility for the future and optimal solutions for performance and user experience.

This project will focus on a well-structured database, on a proper security system (registration, login, logout), multiple user roles and user functions (access to specific functions of the application based on role) and on an adaptive and extensive design, that can use and reuse multiple elements and be responsive based on the user’s screen of use.

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# Project Assignment

## Context

As mentioned in the *Description* of this document, the project will represent a copy of the popular Twitter platform. As creating such a complex platform takes not only a lot of resources, such as finances, professionals that can create and implement different types of features, it also takes time. As this will be only a short project, it will only consist of the implementation of a number of features, showing for more of an `*alpha*` stage product, that will let the user have a taste of what the application is trying to achieve.

The most important aspect regarding the user for this project is communication. At the end of the project, the user shall be able to communicate not only privately, but also publicly, via posts (or so called ‘kweets’) with different followers and friends.

## Goal of the Project

As mentioned in the second paragraph, at 1.1, the goal of the project is communication. The main achievement of this project is that a set of users will be able to create accounts and start communicating one with another. The idea is not only to use a chat system, but also create posts, mention one another, give ‘heart’ reacts to posts and be part of different trends.

The goal of the project goes although beyond simple communication, as small societies also need moderators and administrators. People can behave badly and refuse to obey different rules, therefore such a system of users having higher roles, that permit themselves to control posts and even ban other users who disobey the rules, is needed and will be implemented.

This project as a whole, represents a learning goal for the student and will show not only the current abilities but extended research on frameworks, technologies and ways to implement the systems needed to run such an application.

## Strategy

The project will be implemented using the Agile Scrum Methodology. This means that sprints, iterations of 3 weeks, will be used to work on the project. During each sprint goals will be set on specific timelines.

For the project implementation, several technologies and frameworks will be used, for back-end, front-end, database and the server. These will help with fast development of the project, as well as extensibility in the future.

## Research Questions

The research questions are very important, as they look on what technologies will be used during the project, architecture of the system, databases or any task that is unknown/ unresearched at the start of the project.

* What is the best suited front-end framework?
* What is the best suited back-end framework?
* What is/ are the best suited database(s)?
* What is the best suited technology for messaging (specific to the back-end technology)?
* What will the initial architecture look like?

# Activities and Time Plan

## Phases of the Project

As mentioned at 1.3, the strategy will consist of an Agile Scrum Methodology for development of the features. Mainly, there will be two phases of the project. The first phase will be focusing on the actual development of the features of the application and implementation of everything that is planned, and the second phase which will focus on testing and ensuring that everything works as expected.

Essentially, the first phase of the project should end by 10th of April 2022, as the second phase will start, lasting until June 5th.

# Testing Strategy and Management

## Testing Strategy

As mentioned at 2.1, the project will be divided into two phases, the second of which will consist of testing. Although this will represent the major testing phase, when everything will be seen to perform correctly, tests will be written along side the development process. For each feature completely implemented, a test or a set of tests will be written to ensure consistency in case of any further changes.

Moreover, the testing strategy will include a tool that will improve the process of testing, such as Jest or Selenium, selected based on the chosen back-end framework.

## Management

Management will play an important role in this project. Therefore, in order to provide exclusive access to teachers as well, Fontys’ GitLab will be used ensure version history and maintainability during the development. Multiple branches will be used, that will be merged to development branch and finally to master branch, to provide stability of the project and to make sure that only finished and stable features go onto development.

Moreover, a CI pipeline will be used for constant automated tests on each push or pull request.

A Docker instance will also be setup.