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|---|---|
| Arnaud Hambenne | 4047575 |
| Soheil Jahanshahi | 4127617 |

# Research Document

## 1 Introduction

- what is the story?context?

## 2 Problem Domain

### 2.1 Domain Description

### 2.2 Domain analysis

#### 2.2.1 Stakeholders

- who is the stakeholders of the project?
- what are their roles?
- what are their issues

#### 2.2.2 Scope & Objectives

- on line environment for supporting writing reports/dissertation
- owner of the project wanna have full access to information(suggestions,tips,sources,etc) related to the context of the paper
- stakeholders ability to interact seamlessly with each other
- Receive reviews from advisors/peers online.

#### 2.2.3 Interviews

- Nicole Wills
- Some Reviewer
- owner of report(project)

# 3 Research Question

The context of this project is to build an application that acts as an virtual assistant to help bachelor students to write their article/report in the correct manner. In order to design a robust and reliable software we need to formulate a research question to do the technical research and to come up with feasible and optimal solution for developing an application prototype.

Our coach has advised us to develop a web application, We will assume that this is a good choice of platform, however we will do the research to find out why is this an ideal choice.

Our main question is 'How to build a reliable & robust web application prototype to assist students and deliver services to them so that they can write an article/report in a correct manner within the time constraint that is given? '

# 4 Project Requirements

## 4.1 Functional Requirements

1. Many Users: for each project, multiple participants can join the project, owner/owners of the project will be the administrator of his project. the advisor(e.g teacher) will get special attention from student(administrator) comparing to the other members;
2. Template: User must chose a template from list or upload its own template
3. Schedule: Schedule for writing report according to type of the template (Sub schedule each section e.g introduction , etc).
4. Propose Suggestions/Tips: The system should be able to suggest tips and information to the user on how to write sections.
5. Send/Receive Feedback: Feedback on report which will be send by reviewer(or other users) and which will be received by student.
6. Done/Discard: When a user is done/discarding the suggestion/feedback, he should be able to notify that to the system and all other users.
7. Upload Document: Ability to upload the document.
8. In built Chat mechanism: To track the feedback of advisor and follow up the result of conversations.
9. Versioning : keeping track of versions of publications of user.
10. Logging : save user records in a separate log file for usage analytics.

## 4.2 Technical Requirements

1. Mobile Support for Android/IOS
2. Campus ID authentication: login with TUDelft netid
3. Open source
4. Fully Tested System

## 4.3 Usability Requirements

1. System must be fully functional on modern web browsers
2. Efficiency of use: System must facilitate efficiency of use for the user by providing information on the fly for the context
3. Intuitiveness: User Interface must be intuitive and easy to use

# 5 Technical Analysis

## 5.1 Objectives

1. Client rich interaction
2. Full stack framework
3. Scalability
4. Fast Prototyping
5. Proven in Production
6. Reliable
7. high speed database lookup capabilities
8. generally applicable

## 5.2 Project Development Process

1. using Scrum Agile method
   (a) Sprint : weekly
   (b) Sprint reflections
   (c) Product backlog planning
   (d) sprint backlog
   (e) ....

## 5.3 Technical Components

1. User(Client) interaction with web(Asynchrous vs sync)
2. Distributed application structure(clien/server)
3. Scalability is the ability of a system, network, or process to handle a growing amount of work in a capable manner or its ability to be enlarged to accommodate that growth.
4. Build systems
5. Databases(need more research)
6. Continous Integration

### 5.3.1 Synchronous Vs Asynchronous

### 5.3.2 Server-Side Rendering Vs Client/Server

### 5.3.3 Vertical Scalability Vs. Horizontal Scalability

### 5.3.4 sbt Vs. Maven

### 5.3.5 mongodb vs nosql vs mysql vs postgres

### 5.3.6 Template

### 5.3.7 Testing

### 5.3.8 Jenkins

### 5.3.9 frameworks

# 6 Conclusion

say something about why plat framework is the best option and say why those solution proposed is the optimal solution.

# References