

Software Design  
COMS 3009A  
Group Project • 2020  
Silicon Masterminds



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Project Documentation

## Table of Contents

1.	Introduction .....	3
2.	Aim .....	3
3.	Method .....	4
3.1.	Summary .....	4
3.2.	Mobile and Desktop Applications .....	4
3.3.	DNS Proxy Service .....	<b>Error! Bookmark not defined.</b>
3.4.	Workflow Overview .....	4
3.5.	Network Protocols Used .....	<b>Error! Bookmark not defined.</b>
4.	Project Timeline and Work Items .....	5
5.	Conclusion .....	6
5.1.	Outcome .....	6
5.2.	Items that can be improved upon.....	6

## 1. Introduction

This document is submitted in partial fulfilment of the requirements for the COMS 3009A practical assignment in the first semester of 2020. Its purpose is to detail the functional and technical specifications for the project.

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## 2. Aim

SD Manager is a platform that students can use to manage their software design projects. Lecturers, who act as product owners, can also use this platform to verify sprint details such as which user stories are to be implemented. This platform can be used to award sprint marks accordingly since sprint details need to be verified by the product owner before any changes are saved. This helps prevent students from changing the backlog to suit what they've managed to do over the course of a sprint. Students can also communicate with their product through this platform to make any queries. The head lecturer of the course can also access a group's backlog and track changes made to the backlog to help with awarding marks. A website and mobile app will be required for SD Manager to provide more convenience. The web version will be done in the first semester and the mobile app in the second semester. Both the front and back end will need to be developed.

## 3. Method

### 3.1. Summary

We implemented a mobile and website app to showcase the distributed nature of the program. We also implemented a Google Firebase service to store and retrieve the necessary data from users.

### 3.2. Mobile and Website Applications

Each application will use the same user interface as well as all features will be present.

### 3.3. Firebase Service from Google

The Firebase Real-time Database is a cloud-hosted database. Data is stored as JSON and synchronized in real-time to every connected client. When you build cross-platform apps with our iOS, Android, and JavaScript SDKs, all of your clients share one Real-time Database instance and automatically receive updates with the newest data.

<https://youtu.be/U5aeM5dvUpA>

### 3.4. Workflow Overview

When the application is opened, a user is brought to a welcome page that gives the user a rough overview on how the application works. Sign in and sign out options will be present for user to access the full application.

Roles further explained:

Developers: Tab of projects to accept/decline => once project selected, SCRUM tab, GitHub tab, chat option with client, go back developer homepage, sign out option.

Client: Tab to create project -> add users by email or username, create Github project that will link to project, tab for SCRUM, list of sprints to view, backlog with user stories to view, tab for GitHub screen, chat option with developers and product owner, go back to client homepage button

Product Owner/Lecturer:

## Project Timeline and Work Items

We will be incorporating scrum workflow to reduce the consequences of a complete waterfall workflow.

User Stories:

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As a user, I want to choose my role when I sign up, so that I can access information only specified to my role.

As a user, I want to get access to the help option of the SD-Manager, so that I can access information for any queries i have about the application.

As a developer, I want to see to see all the invitations from clients, so that I can choose which projects to accept or reject.

As a client, I want to create a project given a project name and add users by their usernames or emails, so that I can have a group consisting of people fulfilling my liking.

As a Product Owner/Lecturer, I want to view all projects that have been made, I also want to see the details of all the projects, i.e how extensive has the scrum process been used, so that I can use that data to mark the project accordingly per sprint from the backlog.

As a developer, I want to view my github or scrum page from tabs on top of the page after I have logged in and joined a respective project.

As a client, I want to keep track of the backlog items of each sprint and add a to-do list for each sprint so that I can keep the group up to date on what is required of me.

## 4. Conclusion

### 4.1. Outcome

To be worked on...

### 4.2. Items that can be improved upon

To be worked on...