PLAN AND TEAM ASSIGNMENT REPORT

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IFS4205 Information Security Capstone Project, AY19/20, Semester 1

Team 2

August 30, 2019

Overview

This report includes a timeline of the project and justifications for the various task and role allocations.

1   Project Timeline

Due to space constrains, the right portion of the chart is not shown.
Tasks are delegated as follows: Sean: Blue, Ding Heng: Red, Shengran: Green, Cheryl: Yellow, Team: Black
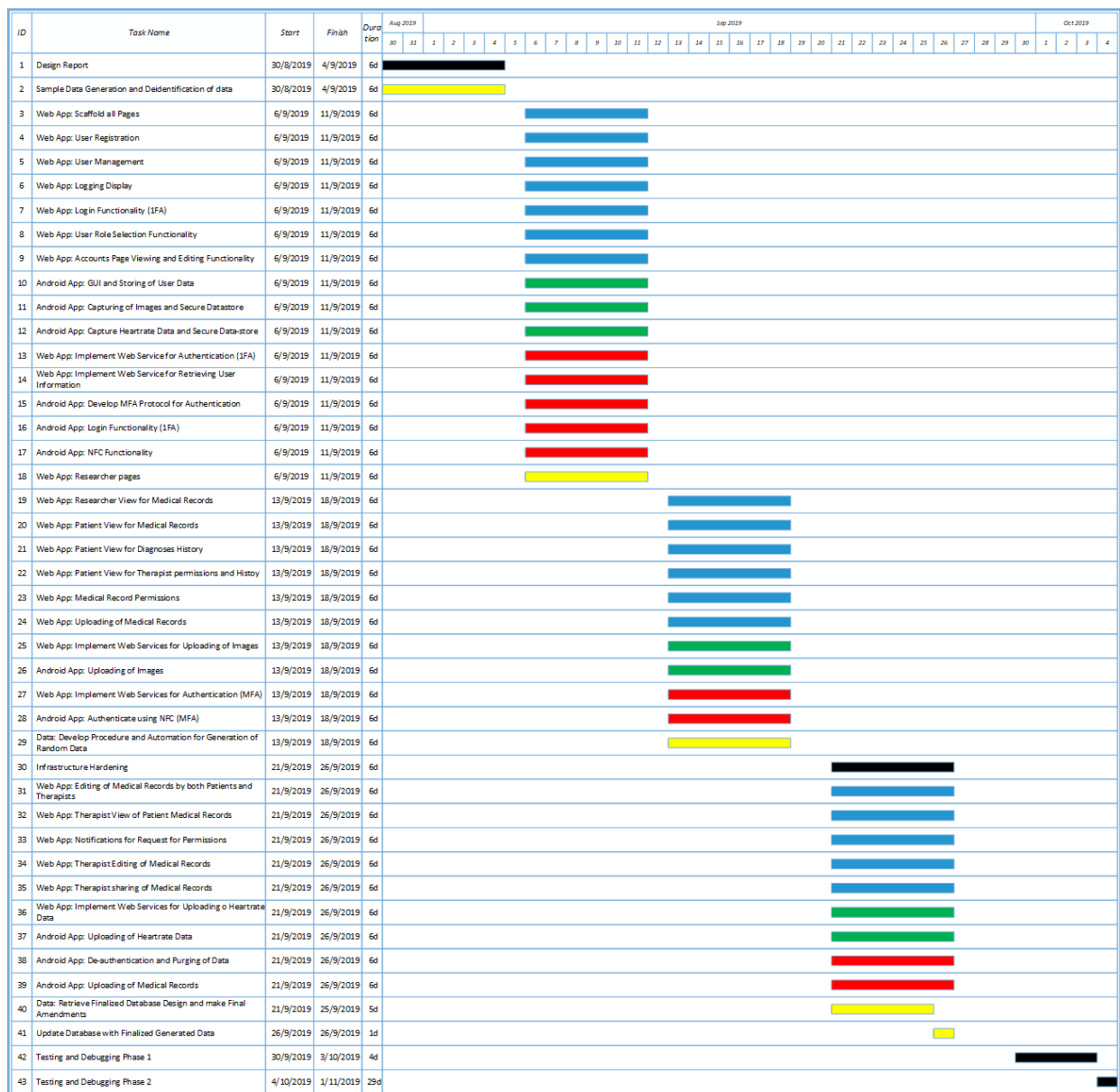

Figure 1: Project Timeline in the form of a Gantt Chart

2   Task Assignment

With four members and four subsystems, we have thus decided to put each member in charge of a subsystem. Allocation of subsystem is determined based on each member's experience and preference which is elaborated on below. Based on the assignments below, Sean and Cheryl will primarily be working together to develop the web application while Ding Heng and Shengran will have to work together to develop the Android application on the Android phone.

2.1   Subsystem 1: Lim Ding Heng

Ding Heng has had experience in developing with Java through various projects throughout his course of study. He has developed Android applications and has implemented two-factor authentication with One-Time-Passwords. Hence, he has been assigned to work on subsystem 1 which is about multi-factor authentication. In addition, his ability to plan projects, map out timelines for them and communicate effectively with all makes him the most qualified to be our Project Manager.

2.2   Subsystem 2: Sean Yap Yu Rong

Sean has many years of working experience under his belt. You can view his outstanding list of achievements here. He has extensive knowledge in developing various types of applications. His leadership capabilities manifest themselves early on in the project when he took it upon himself to assign roles to himself and his fellow group members following a discussion with them about their relevant skills and experiences. An Information Security graduate from Nanyang Polytechnic, he is thus the most suitable person to be the application architect and overall security architect of this project.

2.3   Subsystem 3: Toh Yunqi Cheryl

Cheryl is an earnest greenhorn in software engineering with little experience in developing web and mobile applications. No worries though! She has been blessed with a kindly professor and helpful groupmates this semester who are more than willing to guide her. Due to her limited experience in all areas of this project, she has been tasked to do Subsystem 3 which involves using a k-anonymity algorithm to preserve the privacy of users of the system. She will be working mostly with the database and with Sean in developing the web application.

2.4   Subsystem 5: Sun Shengran

Shengran's grit and capability stand him in good stead. The number of semesters he has spent being a teaching assistant for CS2103 attests to his skill in software engineering. In addition, he has industrial experiences which further contributes to the arsenal of weapons that he has for tackling this project. The tasks involved in Subsystem 5 may be new to him but he is willing to step up to the challenge and work together with Ding Heng to develop an Android application which allows for the authentication of a user and upload of patient records. Shengran is currently doing CS4238(Computer Security Practice) and this puts him in the best position to be our pentester.

3 Allocation of Roles

Along with the task assignment above, the roles of every team member can be derived as such. Other tasks such as lead assignments relevant to this project will also be discussed in this section of the report. Leads will perform managerial roles in order to better facilitate progression towards the envisioned end state, for example, though documentation is a task that is required to be performed by all team members, it is managed by the lead. We feel that it is important for there to be a lead per task in order to ensure both efficiency and completeness.

3.1 Sean Yap: Web Developer, Application Architect, Overall Security Architect, DevOps

Sean will also be the lead for Infrastructure and DevOps. He will oversee the infrastructure of the envisioned system, ensuring that team members are able to access resources, machines are hardened and the CI/CD pipelines are functioning as designed.

3.2 Lim Ding Heng: 2FA tag architect, Mobile Developer, Project Manager

Ding Heng will be the lead for project management, acting as a human task tracker, ensuring tasks are performed according to the timeline. When tasks are not completed on time, he will attempt to inform the team and try to remedy the situation by perhaps altering the timeline or alleviating issues at hand.

3.3 Toh Yunqi Cheryl: Anonymization Expert, Data guru, Web Developer

Cheryl will be the lead for documentation, she will ensure project documentation such as the Github issue tracker and milestones are kept up to date and used properly. When tasks or issues are not documented or communicated properly, she will attempt to resolve the issues by informing respective parties of the violations.

3.4 Sun Shengran: Pentester, Hardware Guru, Mobile Developer

Shengran will be the lead of pentesting, he will ensure that machines and implementations are secured. To do this, he will attempt to perform both penetration testing and functional testing together with them in order to minimise possible security exploits and functional loopholes.

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