FACULTY OF ENGINEERING AND APPLIED SCIENCE

Software Project Management

Lab #2

Course: SOFE 3490

Group 8

CRN: 74667

Due Date: February 20,2024

Name:	Student number:
Best Akinlabi	100837728
Hamzi Farhat	100831450
Fernando Chan Qui	100844946

Introduction

Technologies are taking major steps in today's society that many of us depend on. Similarly, the healthcare industry also needs this technology to improve the efficiency of it. We decided that it is a necessity to develop an efficient patient management system to aid nurses and medics to be more productive when it comes to providing their services. The project addresses this need by developing an Android application designed specifically for doctors to view and inform the status of their patients. This implementation not only will optimize the workflow of medical practitioners, also will improve the quality of care.

The application provides a tailored tool for doctors and nurses, facilitating easy access to patient medical histories and enabling real-time updates of a patient. Its main purpose is to enhance healthcare professionals in making informed decisions by providing them a centralized platform to work with. Some of the key features of the application include data entry, secure login, high-resolution interface, and quick search capabilities.

The reason we chose this as our project is because certainly the healthcare field does not rely fully on technology and rely more on human work. While we might not advance enough to create software that can do surgery, we can develop a system that can aid doctors to optimize their work on things that software cannot tackle.

Objectives

Creating a Android application, we are looking to provide our healthcare providers the best platform to improve their work flow, and we will be achieving this by following these specific objectives:

- Developing an intuitive user interface, it should be designed so doctors can easily understand and navigate through it. It involves creating clear menus, intuitive buttons, and organized layout to facilitate efficient data entry and retrieval.
- Implementing a secure login system, implementing encryption protocols, robust authentication mechanisms, and secure communication protocols to safeguard login credentials and maintain the integrity of user sessions.

- Develop mechanisms for tracking and storing historical patient data, allowing doctors to track changes in patient health over time and make informed treatment decisions. This involves implementing versioning or audit trail mechanisms to record changes to patient records and ensuring that historical data is stored securely and remains accessible for reference.

- Minimize paperwork by digitizing patient records, digitizing patient records reduces reliance on paper-based documentation, streamlines administrative workflows, and reduces the risk of errors associated with manual data entry. This involves creating electronic forms for data capture, implementing automated data validation checks, and integrating electronic signature capabilities to facilitate digital record-keeping.

Measure of Success

To outline the project's measures of success we will consider the following:

- **User satisfaction:** This means how happy both patients and healthcare workers are when they use our app. We'll ask them for feedback through surveys or reviews on the app store. If they find the app easy to use and helpful, that's a good sign.
- **Accuracy and Reliability:** We want to make sure our app gets things right, like tracking patient info and updates without making mistakes or crashing. We'll check regularly to ensure the information in the app is correct and that it works smoothly all the time.
- **Improved productivity:** Our goal is to make the jobs of healthcare workers easier by saving them time on paperwork. We'll measure how much time they save using our app compared to doing things the old-fashioned way with pen and paper.
- **Privacy and Security:** Since we're dealing with people's private health information, it's crucial to keep it safe. We'll make sure no one can access it without permission and that it follows all the rules to protect sensitive data.
- **Cost Management:** We need to make sure we're not spending too much money on the project. We'll keep an eye on our budget and make sure we're not overspending while still getting the job done.

Infrastructure of the project

For the android packet tracker, the necessary infrastructure includes:

- **Mobile Devices:** We'll need smartphones and tablets that run on the Android operating system. Healthcare providers will use these devices to access and manage patient information through our app.
- **Cloud Server:** All the patient data will be stored securely on a cloud server. This server offers a few key benefits: it keeps the data safe, it can handle a lot of information without crashing, and healthcare providers can access it from anywhere they have an internet connection.
- **Security Solutions:** To keep patient data safe from hackers and other threats, we'll use encryption tools and secure communication protocols. These tools ensure that patient information stays private both when it's being sent from the device to the server and when it's stored on the server.
- **Internet connectivity:** Healthcare providers will need a good internet connection to use our app effectively. This allows the data on their devices to sync up with the server in real-time, meaning they always have the latest information about their patients.
- **Authentication and Access Control Systems:** We want to make sure that only authorized people can see the patient data. To do this, we'll have systems in place that check who's trying to access the information and only let in the people who should be allowed. This helps keep patient data safe and private.

Github Link: https://github.com/FernandoChanQui/LabRe/tree/master