**Project Initial Proposal: WRSPM Analysis**

When designing an application for hospital staff to view their medical records, there are many factors to consider in order to make the application safe and functional. We have to assume that the medical data is accurately maintained and that each patient can be uniquely identified. Only authorized personnel should be able to view sensitive information, and the system should be intuitive and easy to use. Security is of the highest importance, so ensuring proper authorization and security of patient data must comply with HIPAA and other applicable regulations.

Since there will be many types of users for this application there are many requirements to consider. Doctors should be able to login securely, access all patient records, modify medical charts, manage appointments, and be able to communicate with their patients. Patients should only have access to their own medical records, billing information, upcoming appointments, and be able to securely message their doctor. System Administrators should be able to manage user accounts, oversee security measures, and maintain the system. This application should be highly secure with password length and complexity requirements. The system should feature an intuitive and user-friendly interface. Secure uploading and viewing of patient photos for identification and pdf generation for printing bills and test results will also be an important requirement. Data security and access control should be enforced through role-based access. A logging system should also be implemented to track user history for security auditing and compliance.

For this application to work as intended, we need to list some specifications. The doctor’s interface should have a dashboard that shows a database of patients which has search filters. The dashboard should also include appointment schedules and patient medical history. The patient portal should have a much simpler interface with access limited to only their personal information. This interface will include personal health records, bills, appointments, and secure messaging. The administration dashboard should have access to only those with user accounts and no access to medical information. This is to ensure that sensitive data is only viewed by doctors and the patient. Also included in this dashboard will be viewing and system access logs as well as the ability to reset passwords and other critical security functions.

The programs required for this application include PCs that operate on the Windows operating system. The backend will be programmed in Java, and the elements of the front end will be coded in JavaFX and implemented using Scenebuilder. It will be programmed using IntelliJ as the IDE. This application will be connected to a database using Google Firebase. The hardware requirements include being installed on every client-based computer in the hospital’s domain. As the database is stored in the cloud there is no need for a physical server on-site. Although it should be noted that having an on-site server would be more secure for storing medical records and would drastically reduce down time in the even of a blackout or other types of disasters. Hardware firewalls should be used in the system to ensure the safety of critical data.

**Meeting Times**

Our team has decided to meet twice a week.

In person: Tuesdays at 1:30PM

Virtual: Saturday evenings using Discord.

**GitHub Repo Link:**

https://github.com/JasonRandazza/PatientInformation