Statement of Work (SOW)

Project Title: Chikitsa (Medical data encryption system)
Date: 17/02/2025
Prepared By: Team-5

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1. Introduction

This project aims to develop a secure medical record encryption system with role-based access for patients, doctors, and administrators. The system will ensure privacy and data integrity by encrypting patient records and enabling different levels of access for each user type. Patients can view their medical history, doctors can add new prescriptions and view patient records, and administrators will validate and ensure the accuracy of uploaded data.

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2. Scope of Work

- **Project Description:** The project aims to create a web application for securely storing and accessing medical records with role-based access controls for patients, doctors, and administrators.
- **Objectives:**
    - Develop a secure, encrypted medical record system.
    - Implement role-based access for patients, doctors, and administrators.
    - Provide an intuitive interface for viewing and updating records.
- **Key Activities:**
    - Implement encryption mechanisms for patient records.
    - Develop modules for patient record viewing, prescription uploads, and data validation.
- **Technologies Used:**
    - **Frontend:** ReactJS
    - **Backend:** MERN stack
    - **Security :** MongoDB Cloud Based Authentication
    - **UI/UX:** Figma
    - **Database:** MongoDB for secure record storage
    - **Security:** AES-GCM

3. Deliverables

- **Secure Medical Record Interface:** A fully functional web application with role-based access.
- **Patient Dashboard:** View medical history with secure access.
- **Doctor Dashboard:** Add prescriptions and view patient history.
- **Admin Dashboard:** Validate and manage uploaded data.

4. Timeline and Milestones

Milestone	Description	Due Date
Project Kickoff	Initiate application development	07-02-2025
UI/UX Completion	Finalize design and usability testing	03-03-2025
Encryption Algorithm	Hybrid Encryption System implementation	15-03-2025
Beta Testing	Test application with real users	09-05-2025
Final Deployment	Launch the application	18-05-2025

5. Roles and Responsibilities

- **Team Members:**
    - C Srikanth [SE22UCSE062] - Backend Development.
    - Dev M. Bandhiya [SE22UCSE078] - UI/UX Interface, Encryption Algorithm.
    - G Aditya Vardhan [SE22UCSE092] - Backend, UI/UX Interface.
    - K Sai Bharat Kumar Varma [SE22UCSE125] - Encryption Algorithm, Frontend Development.
    - K.Harpith.Rao [SE22UCSE141] - Frontend , Backend Development.
    - Punith Chavan [SE22UCSE310] - Frontend Development.
    - Harsha B [SE22UCSE321] - Frontend Development, Deploy.
- **Client Contact:** Software Engineering course, Mahindra University

6. Assumptions and Constraints

- **Assumptions:**
  - The encryption mechanism will comply with healthcare data protection standards.
  - Users will access the system through web browsers.
  - Role-based access will be correctly configured.

- **Constraints:**
  - Data security compliance with healthcare regulations.
  - Performance challenges with large-scale record storage.