North South University

Department of Electrical and Computer Engineering
<u>Project Overview</u>

Course Name: CSE215L

Section: 21

Group:5

Project Title: E-HealthCare Management System

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Project Proposal Overview

i. *Introduction:*

The E-Healthcare Management System is a comprehensive software project designed to streamline and enhance the management of healthcare records and patient-doctor interactions. This system leverages the power of Java, incorporating essential features like loops, Java Swing for GUI development, inheritance, interfaces, exception handling, file I/O, and object-oriented programming principles. The system focuses on improving the efficiency and accessibility of healthcare-related information for both patients and healthcare providers.

ii. *Key Features:*

1. **Add Patient:**

   - Allows healthcare professionals to input and record patient information.

   - Captures essential details such as name, age, contact information, and medical history.

2. **Delete Patient:**

   - Enables authorized users to remove patient records when required.

   - Ensures data integrity and privacy through access controls.

3. **Search Patient:**

   - Offers a robust search functionality for quick retrieval of patient records.

- Supports searching by name, ID, or other relevant criteria.

4. **Doctor Information:**

- Stores comprehensive information about healthcare providers.

- Includes details like name, specialization, contact information, and availability.

5. **Healthcare Information:**

- Tracks and manages patient healthcare records, including diagnoses, treatments, and medications.

- Ensures the confidentiality and accessibility of critical medical data.

6. **Discharge Date:**

- Records the date of a patient's discharge from healthcare facilities.

- Helps in managing bed allocation and resource planning.

7. **Patient Problem:**

- Allows healthcare professionals to document patient health issues, symptoms, and concerns.

- Facilitates accurate diagnosis and treatment planning.

8. **Doctor Recommendations:**

- Records recommendations made by doctors to patients.

- Assists in keeping track of prescribed treatments and follow-ups.

iii. <u>*Technological Highlights:*</u>

We are using:
Java Programming Language: Utilizes Java for robust and platform-independent software development.
As well as:

a) **Java Swing (GUI):** Implements a user-friendly graphical user interface (GUI) using Java Swing for ease of use.
b) **Inheritance and Interfaces:** Employs object-oriented programming principles, including inheritance and interfaces, to ensure code reusability and maintainability.
c) **Exception Handling:** Implements robust error handling mechanisms to enhance system reliability.
d) **File I/O:** Utilizes file input/output operations for data storage and retrieval, ensuring data persistence.
e) **Object-Oriented Programming (OOP):** Adheres to OOP principles for modular and maintainable code design.

iv. <u>*Conclusion:*</u>

In conclusion, the E-Healthcare Management System, developed using Java and a range of essential programming features, emerges as a pivotal solution for modern healthcare administration. This robust system offers an intuitive user interface, facilitating efficient patient data management, doctor information tracking, and healthcare record maintenance. By adhering to best practices in software design and embracing object-oriented principles, it ensures code reliability and maintainability. This system promises to optimize healthcare

processes, enhancing patient care and streamlining healthcare facilities' operations. With its adaptability and potential for further enhancements, it stands as a valuable asset in the ever-evolving healthcare landscape, poised to drive efficiency and patient-centric care.