Requirements

1.1. Overview

The Patient Tracker System is an innovative application designed to revolutionize the management of patient information and medical records. The primary goal of this system is to introduce a seamless and efficient approach for both patients and healthcare providers to access, update, and manage patient records in real-time. Embracing digital transformation, this system eradicates the reliance on manual paperwork, offering a robust, secure, and accessible platform for managing patient data.

1.2. Features

A. User Authentication and Access Control:
   a. Secure login for patients and healthcare providers ensured with robust authentication methods, safeguarding patient records and regulating access based on roles and permissions, ensuring data integrity.

B. Comprehensive Patient Database Management:
   a. Centralized storage of a wide array of patient information, including personal details, medical history, prescribed medications, diagnoses, and treatment plans for efficient and organized record-keeping and comprehensive patient care.

C. Intuitive User Interface for Healthcare Professionals:
   a. An intuitive and user-friendly interface designed specifically for healthcare providers, enabling seamless navigation and easy interaction with patient records, optimizing healthcare delivery.

D. Data Security and Compliance Measures:
   a. Implementation of strong data encryption, secure data transmission, and stringent compliance with healthcare data regulations to ensure patient information confidentiality, maintaining trust and legal adherence.

E. Advanced Search and Filtering Capabilities for Efficient Care:
   a. Advanced search and filtering options allowing rapid retrieval of specific patient information, such as medications, previous checkup details, diagnostic reports, and medical history, streamlining healthcare processes for enhanced patient care.

F. Customizable Alerts and Notifications:
   a. Customizable alerts and notifications for healthcare professionals regarding new patient submissions, appointment reminders, and critical updates, ensuring timely and informed decision-making.

G. Collaborative Care Planning and Notes:
   a. Collaborative care planning features allowing healthcare providers to create and share patient notes, ensuring seamless communication and coordinated care among the healthcare team.

1.3. Functional Requirements (Use cases)

- As a Doctor, I want to view concerned patient profiles with medical history to prepare for consultations.
    - Action: Access patient records to review medical history, diagnosis and prescribed medications.
- As a Doctor, I want to update my patient's records, upload any related document and add Doctor Notes.
    - Action: Enter/update diagnosis, treatment plans or prescription updates into the patient's record.
- As a Doctor, I want to receive notifications for any creation/update of any concerned patient records.
    - Action: Receive alerts about new patient submissions or updated records.
- As a Doctor, I want to provide prescription updates or treatment plans for patients
    - Action: Update prescription or treatment plans based on consultation
- As a Doctor, I want to access my Daily Appointment List or dashboard
    - Action: View my appointment List for the day with patient name and appointment slot details
- As an Admin, I want to manage system users and their roles for access control.
    - Action: Administer system user accounts, roles, and permissions for data security.
- As an Admin, I want to ensure data security and compliance with healthcare regulations.
    - Action: Implement and oversee data security measures and compliance with regulations.
- As a Patient, I want to view my personal info, history and records.
    - Action: View personal records with medical history, diagnosis and prescribed medications
- As a Patient, I want to view all my appointments
    - Action: View all my doctor appointments with date, time slot and doctor details.
- As a Patient, I want to add/update profile info and patient notes
    - Action: Having Access to update personal info, upload documents and add patient notes if needed

1.4. Non-Functional Requirements

- Performance :
    - To ensure system responsiveness with minimal latency for data retrieval and update actions, ensuring healthcare professionals can quickly access and update patient information during consultations, resulting in efficient patient care.
- Reliability :
    - Maintaining consistent and uninterrupted access to critical healthcare data and system functionality is essential for supporting continuous patient care and ensuring operational efficiency. Healthcare providers rely on this system for accurate, real-time information.

- Security:
    - Implementing robust data encryption, secure data transmission and access control is paramount to safeguard patient records. It ensures the confidentiality and integrity of sensitive patient data, preventing unauthorized access and data breaches.

- Scalability:
    - Designing the system architecture to handle potential future increases in the user base and data volume is crucial for accommodating the growth of the healthcare facility and ensuring that the system remains effective as the patient load increases.
- Usability:
    - Providing an intuitive and user-friendly interface is essential to facilitate easy navigation and use for both doctors and patients. A user-friendly design enhances the overall experience, making it more efficient and reducing the learning curve.
- Compliance:
    - Adhering to healthcare data regulations and standards is critical to ensuring patient data privacy and legal compliance. Compliance guarantees that patient records are handled in a way that meets the necessary legal and ethical requirements, maintaining trust in the system.