



PATIENT MANAGEMENT SYSTEM

ABSTRACT

OVERVIEW:

The Patient Management System(PMS) is designed to simplify and automate various hospital related activities, reducing the need for manual process and paperwork. This system optimizes patient data management, enhancing workflow efficiency and streamlining resource utilization.

AIM:

This project aims to implement a reliable and user-friendly system that reduces errors, improves access to data, and ensures timely dissemination of important medical information to patients and healthcare professionals.

KEY OPERATIONS:

1. **Patient Registration:** Patients can easily register by providing essential details such as name, age, medical history, and insurance information. This data is stored in the Patient Information table, ensuring a comprehensive record for future reference.
2. **Administrative Management:** Administrators utilize an intuitive interface to manage patient records, including generating and issuing prescriptions. These records, along with administrative credentials and activities, are stored in the Administrator Details table. Prescriptions are automatically generated and emailed to patients in PDF format for easy access and download.
3. **Patient Updates:** Patients have the capability to update or modify their personal and medical information as needed. This functionality is supported by the Patient Information table, which maintains up-to-date records of all changes.
4. **Appointment Scheduling:** The system allows for efficient scheduling of appointments between patients and healthcare professionals. Appointment details, including date, time, and consultation purpose, are recorded in the Appointment Details table.
5. **Treatment Tracking:** The system tracks ongoing treatments and procedures for each patient, recording relevant details in the Treatment Records table. This helps in monitoring patient progress and ensuring continuity of care.

6. **Prescription Management:** Prescriptions are automatically created based on patient needs and are logged in the Prescription Records table. Patients receive their prescriptions via email with a downloadable PDF link.
7. **Billing and Payments:** The system manages billing for medicines and services, recording transactions and payment details in the Bill Details table. This ensures accurate financial tracking and easy access to billing history.
8. **Lab Test Management:** Lab tests and their results are recorded in the Lab Test Results table. This allows for efficient management of test orders, results, and follow-up actions.
9. **Room Allocation:** Information about room availability, status, and allocation is managed in the Room Accommodation table. This helps in efficiently utilizing hospital resources and managing patient room assignments.
10. **Insurance Processing:** The system maintains records of patients' insurance providers and coverage details in the Insurance Records table. This facilitates seamless processing of insurance claims and verification.
11. **Medical Records Management:** Comprehensive medical records for each patient are stored in the Medical Records table, ensuring that all relevant medical information is readily available for healthcare providers.
12. **Data Security and Access Control:** The system implements robust security measures to safeguard patient data and control access based on user roles. Separate logins for administrators and patients ensure secure and appropriate access to information.
13. **Reporting and Analytics:** The system generates reports on various aspects such as patient demographics, treatment outcomes, and billing summaries. These reports aid in decision-making and strategic planning.
14. **Communication Facilitation:** The system provides tools for effective communication between medical staff and patients, including notification of appointments, reminders for upcoming treatments, and alerts for critical medical information.
15. **System Maintenance and Support:** The system includes features for routine maintenance and support, ensuring smooth operation and addressing any technical issues promptly.

TABLES:

1. Patient Information: Stores personal and medical history details.
2. Doctor Details: Stores information about assigned doctors.
3. Prescription Records: Logs all prescriptions issued to patients.
4. Treatment Records: Tracks ongoing treatments for patients.
5. Administrator Details: Records admin credentials and their activities.
6. Appointment Details: Stores information of all the appointments fixed.
7. Bill Details: Records for all medicines sold and billing their billing details.
8. Lab test: Stores information all the tests and taken in the lab with their results.
9. Room Accomodation: Stores information about the rooms and their status.
10. Insurance: Records of patient's insurance provider and coverage.
11. Medical Record: Keeps information of all the patient's medical record.

OUTPUT:

1. Detailed prescription information, including a downloadable PDF link sent to patients via email.
2. Comprehensive medical history and treatment reports for patient reference.
3. Information on assigned doctors and consultation details.
4. Accessible prescription download links for patient convenience.
5. Billing summaries and payment records for accurate financial tracking.
6. Lab test results and related information for follow-up actions.
7. Appointment schedules and reminders for patients and healthcare providers.
8. Room allocation details, including availability and status updates.
9. Insurance coverage summaries and claims processing information.
10. Patient progress reports and treatment updates for healthcare professionals.
11. Analytics reports on patient demographics, treatment outcomes, and system usage.
12. Communication logs, including notifications, alerts, and reminders.
13. System activity reports for administrative oversight and performance monitoring.
14. Security audit logs to track access and ensure data integrity.