HOSPITAL MANAGMENT SYSTEM

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20234004
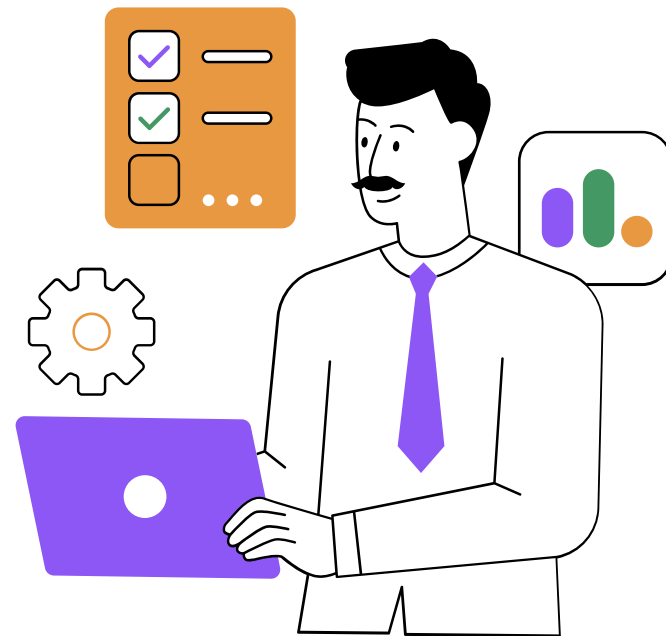
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ADVANCING OF HMS

👉Develop a comprehensive (HMS) to streamline hospital operations.

👉 Improved efficiency by avoiding human errors

👉 Data security

👉 Enhance administrative efficiency.

👉 Facility management

👉 Easier appointment scheduling and access to medical records.

👉 Increased transparency and communication with healthcare providers

👉 Time Saving

TARGET USERS :

Admin

Reciptionist

Doctor

Admins

Users (Doctors, Nurses etc.) Management

View day to day functioning of each department
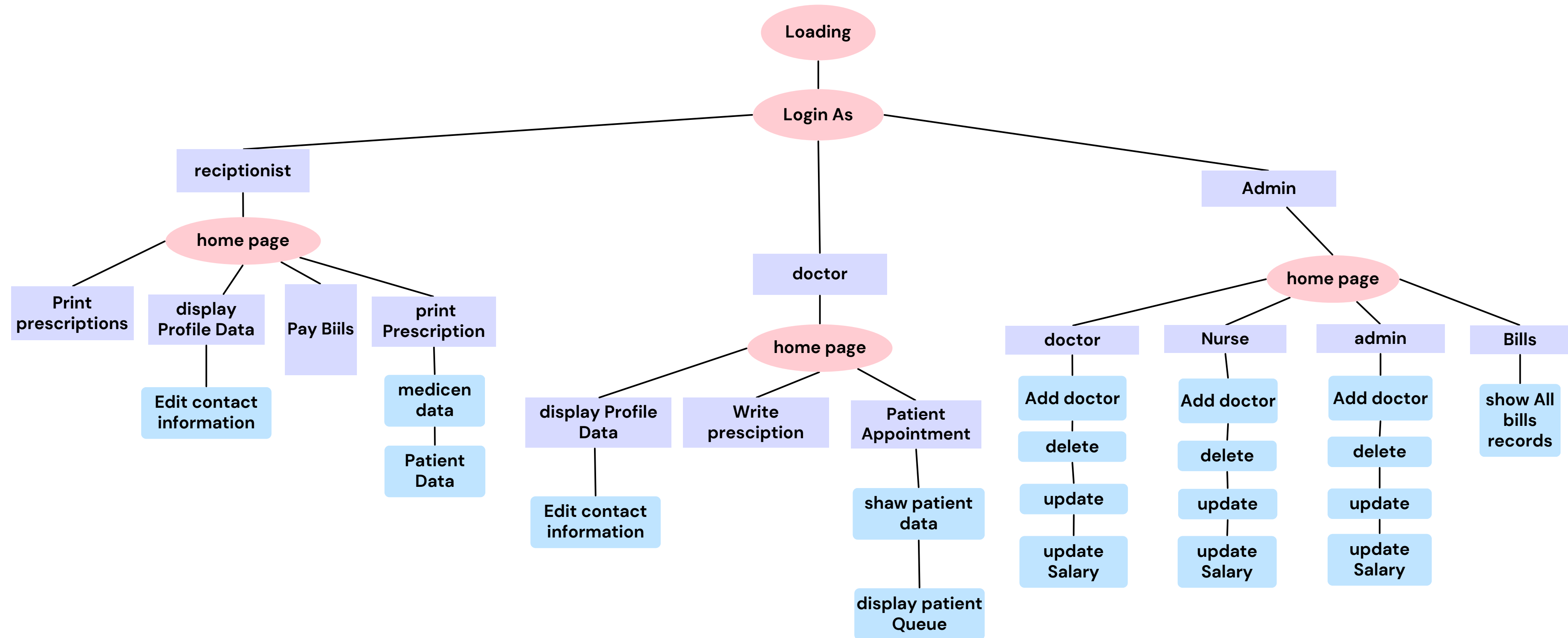
Equipment management track easily

Reciptionist

Appointment Booking

print patient bills

print patient Prescription

Doctors

Track on Patients Medication

Access to patient details easily

easly show all patient queue

Hospital Management Sytem Digaram

Loading

Login As

reciptionist

home page

- Print prescriptions
- display Profile Data
  - Edit contact information
- Pay Biils
- print Prescription
  - medicen data
  - Patient Data

doctor

home page

- display Profile Data
  - Edit contact information
- Write presciption
- Patient Appointment
  - shaw patient data
  - display patient Queue

Admin

home page

- doctor
  - Add doctor
  - delete
  - update
  - update Salary
- Nurse
  - Add doctor
  - delete
  - update
  - update Salary
- admin
  - Add doctor
  - delete
  - update
  - update Salary
- Bills
  - show All bills records

PROJECT UML

Legend:
- ASSOCIATION
- INHERITANCE
- AGGREGATION
- COMPOSITION

Person
- Id : int
- name : String
- age: int
- phone : address
- gender : string

- + get Age(): void
- + get name(): void
- + get Age(): void
- + get Gender(): void
- + get id(): void
- + setId(): void
- + set Gender(): void
- + set Phone(): void
- + set Name(): void

Employee
- email: String
- Salary: int
- Password: string
- Status: string

- + setEmail(String): void
- + setSalary(int): void
- + set Status(String): void
- + setPssword(String): void
- + getPssword(): String
- + getEmail(): String
- + get Salary(): int
- + getStatus(): String

AdminHomePage
- emplyee: Emplyee
- userDBname : String
- url :String

- + AdminHomePage(emp :Employee)
- +addDoctor(D :Doctor):void
- +RemoveDoctor(D : Doctor):void
- +UpdateDoctor(d : Doctor):void
- +addNurse(n:Nurse):void
- +DeleteNurse(n: Nurse):void
- +UpdateNurse(n : Nurse):void
- +ShowAllBillsData():void
- +ShowAllPatientData():void
- -DisplayNumberOfEmployees

Reciptionist
- emp :Emplyee

- +Reciptionist(Emp : Emplyee)
- +addPatientInQueue(patient:Patient):void
- +DeletePatient(patient : Patient):void
- +setPrice(int price):void
- +setBillInformation(int amountofpay):void
- +PrintBills():void
- +PrintPrescriptionforPatients():void
- +SetRoomForPatient(Room :room):void
- +SetDoctorForPatient(Doctorname : String):void
- +PrintPrescriptionForPatient(patientId :int):void
- + showProfileData():void

doctor
- + emplyee: Employee

- +doctor(Emplyee :emp)
- +ShowProfileData():void
- +EditOnContactinformation(String):void
- +WritePrescription(String):void
- +SowAllPaitientQueueForDoctor(doctorId : int

Patient
- bloodType : String
- tobaccoUsage : String
- SurgicalHistory : String
- geneticHistory : String
- roomId : Room
- bill : String
- price : int
- Prescription : String
- History : String
- PatientStatus : String

- + setGenetic History(g :String): void
- + set Surgical History(g :String): void
- + set History(g :String): void
- + setPatient status(g :String): void
- + setPrescription(g :String): void
- + setPrice(g :int): void
- + setBillId(g :int): void
- + Set Roomid (g :String): void
- + setTobaccoUsage(g :String): void
- + Setblood type(g :String): void

Room
- + Size : int
- + Capacity : int
- + Id : int

- + IsFull(): Boolean

Hospital
- + doctorPatientQueue: Map<String, LinkedList<patient>>
- + Prescriptions: Map<name: String, p : Patient>
- + doctorPatientQueue: Map<String, Patient>

- + hospitalContainer()
- + getPatientsForDoctor(doctorName: String): LinkedList<patient>
- + add Apointment(DoctorName :String , Patient): LinkedList
- + addPatientToDoctor(doctorName: String, p: patient)
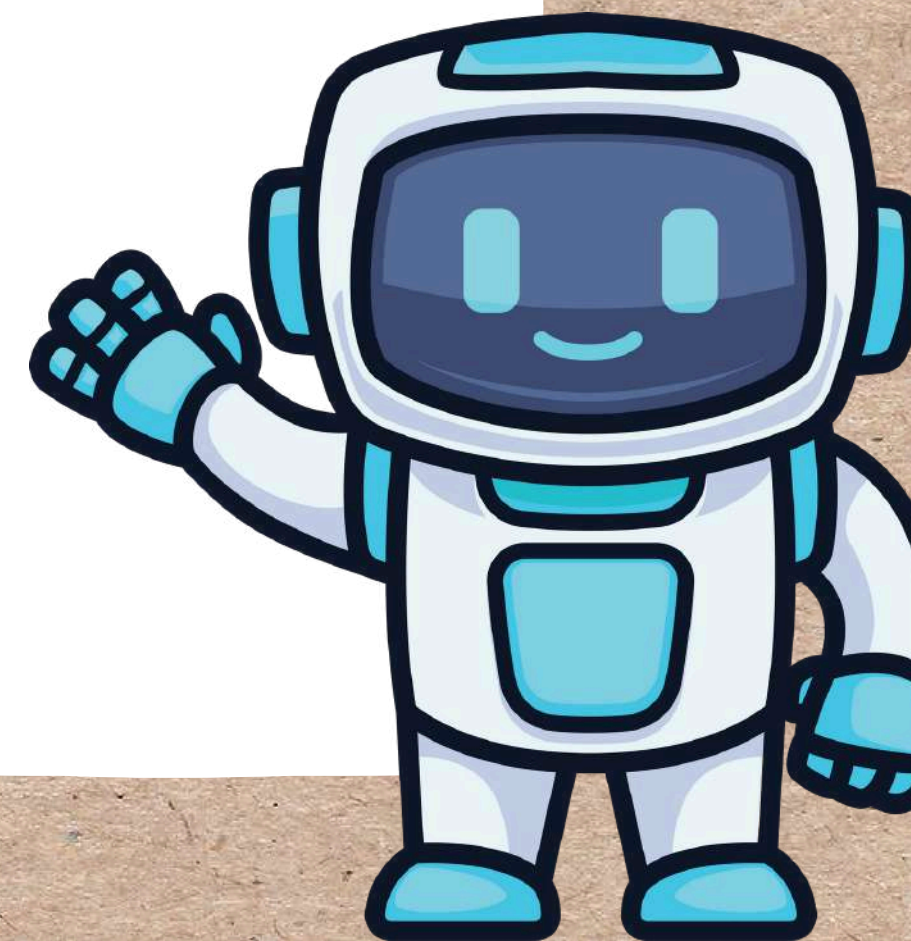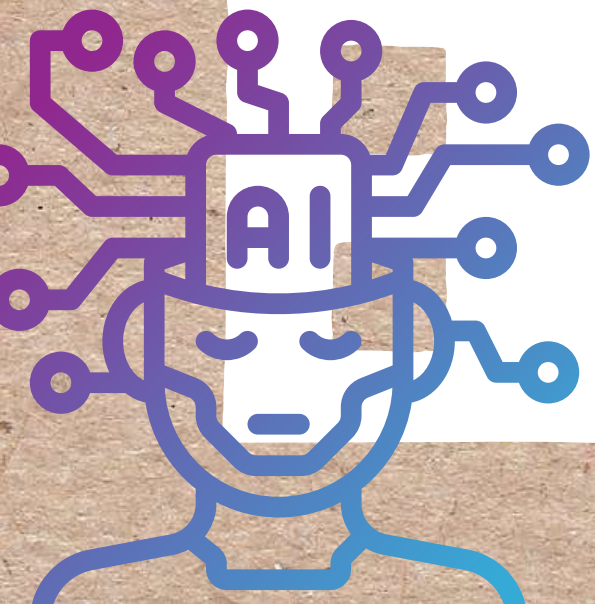
FUTURE ENHANCEMENTS:

- Mobile app for patient self-service and appointment booking

- Formal Chat between all Employees

- AI can be used for tasks like analyzing patient data to predict health risks, suggesting personalized treatment plans, and even automating some administrative tasks.

- These advancements aim to:

- Further personalize patient care: By leveraging AI and big data, hospitals can tailor treatment plans to individual needs and provide preventative care based on risk factors.

- Enhance patient engagement: Mobile apps and patient portals will empower patients to manage their health information and actively participate in their care.

- Optimize hospital operations: Automation and AI-powered tools can streamline workflows, reduce administrative burdens, and improve resource utilization.
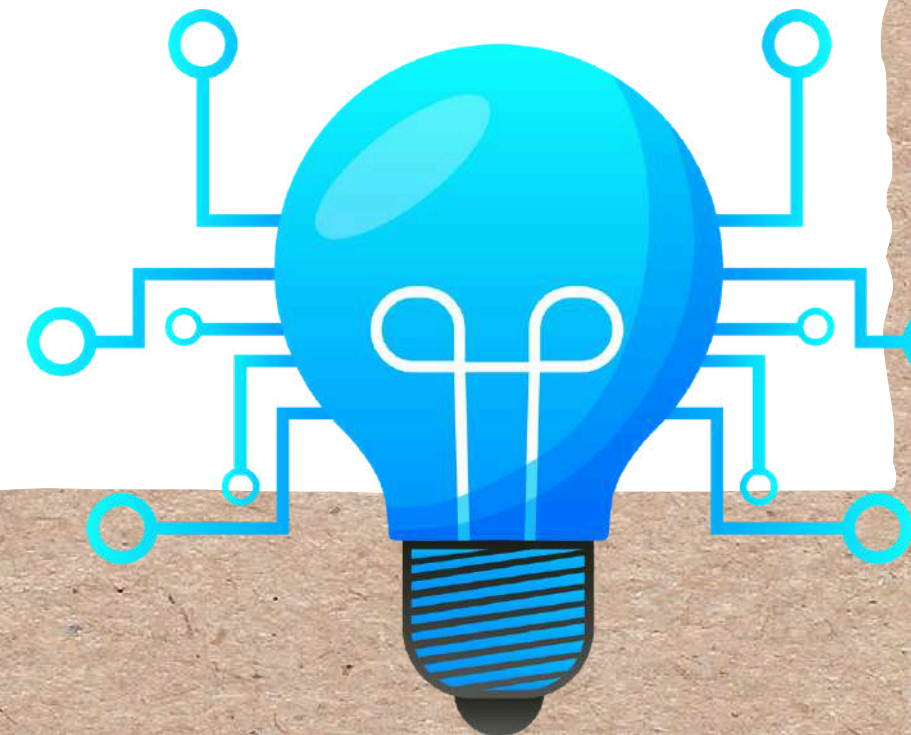
HOWEVER, CHALLENGES ALSO EXIST, SUCH AS:

- Cybersecurity concerns: Protecting sensitive patient data in a connected healthcare environment requires robust cybersecurity measures.
- Data privacy regulations: Hospitals need to comply with data privacy regulations like HIPAA to ensure patient information remains secure.
- Integration challenges: Integrating new technologies with existing hospital systems can be complex and expensive.

THANK YOU!

Any questions? No😃