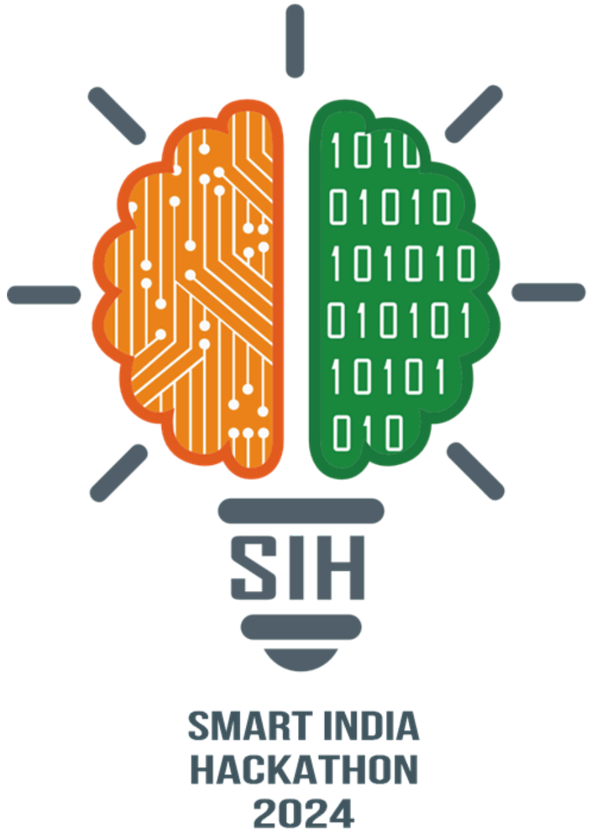
PROBLEM STATEMENT & TEAM DETAILS



Problem Statement -	1620
Problem Statement Title -	Queuing models in OPDs/ availability of beds/ admission of patients. A hospital based solution is ideal which can be integrated with city wide module
Theme -	MedTech / HealthTech / Biotech
PS Category -	Software
Team ID -	
Team Name -	Team Nirvachita's

IDEA/APPROACH DETAILS

PROPOSED SOLUTION

Problem Defination

Hospitals are complex organizations that handle a wide range of activities,
In the absence of a unified system, hospitals face several challenges:

- Inefficient Data Management
- Resource Mismanagement
- Patient Care and Satisfaction

Patients Mobile Application

- User Login and Registration
- Access Hospital Details
- Check Bed Availability
- Request Bed
- Book Appointment
- View Profile
- View Medical History

Doctors Mobile Application

- Authentic Login
- Approve Appointments
- Allocate Bed
- Read Medical History
- Update Medical Data
- Generate Report

Admin Web Application

- Register Patients
- Approve appointments after verification
- Freeze Bed at Check-In
- Free the occupied bed at Check-out
- Allocate the bed according to queue
- Maintain Queue
- Manage Inventory

USPs OF THE PROJECT SOLUTION

- **Centralized Database - Patients Medical History accessible at clicks**
- **Real Time Bed-Availability - Digitally the number of available bed can be retrieved**
- **Appointment Booking - Reduced waiting time for check ups**
- **Bed Availability Queue - Estimates waiting time for the bed**
- **Inventory Manage- Manages the stock of medicine**
- **Prioritizing Queue - Advanced Queueing Model for Bed allocation**

KEY FEATURES

- **Real Time Queue Monitoring**

Get patient queue status and estimated wait times for each OPD department.

- **Appointment Slot Scheduling**

Allow patients to easily schedule appointments at their fingertips.

- **Bed Availability Status**

Get real-time tracking of reserved beds and occupancy rates in each department

- **Medical History**

It will store and analyze patients medical history and records.

- **City Wide Integration**

For ease of access a centralized database is maintained and coordinated

- **Patient Registration**

Allow patients to easily register using an user-friendly UI (application)

IDEA/APPROACH DETAILS

TECHNOLOGY STACK

FRONT-END

React JS

React Native

BACK-END

node JS

JS

django

DATABASE

mongoDB.

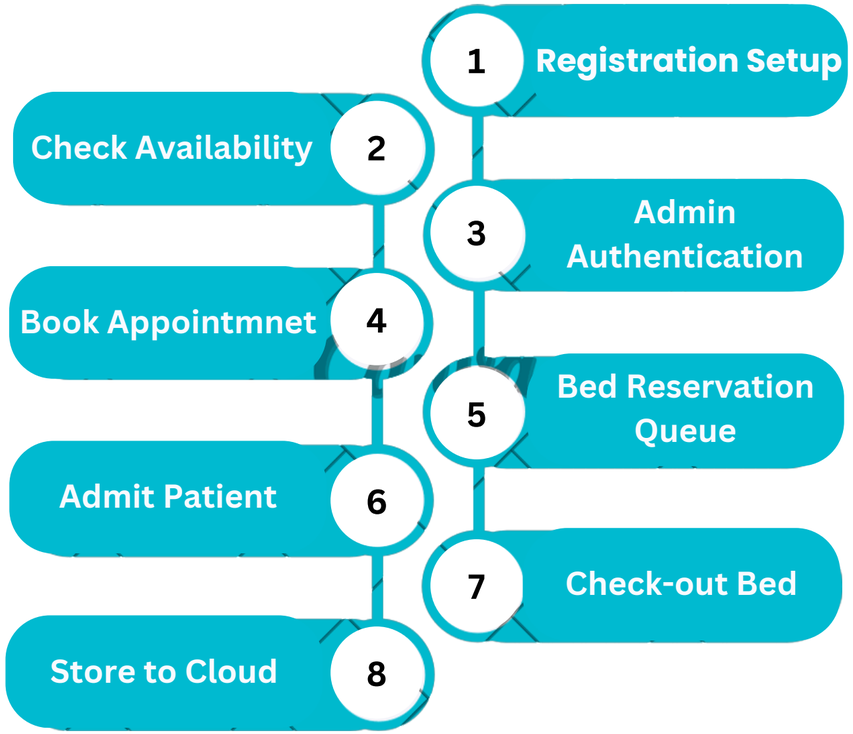
Firebase

CLOUD

amazon web services

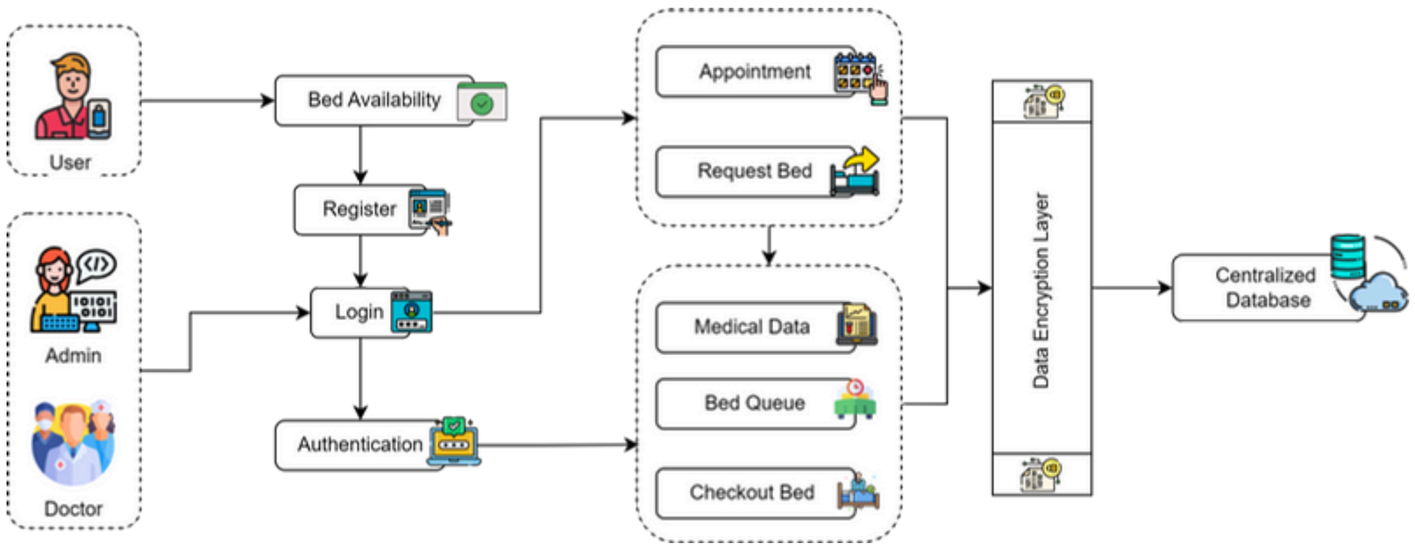
Google Cloud

SYSTEM FLOW

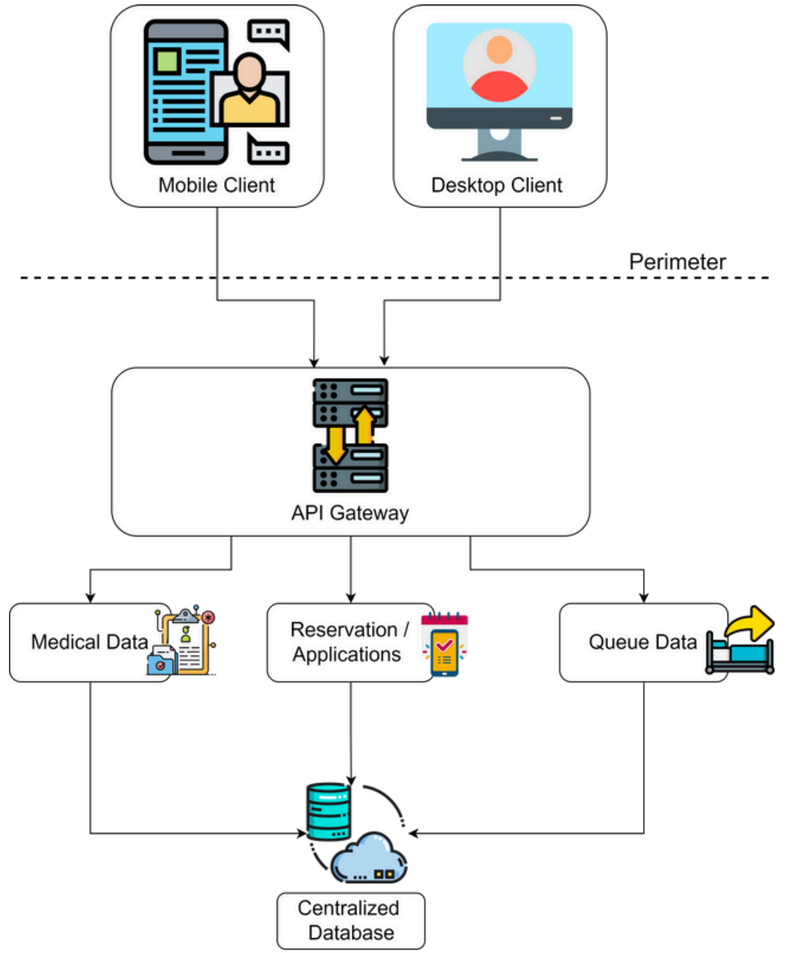


WORKING OF SYSTEM

USE-CASE DIAGRAM



SYSTEM ARCHITECTURE



FEASIBILITY/VIABILITY

FEASIBILTY

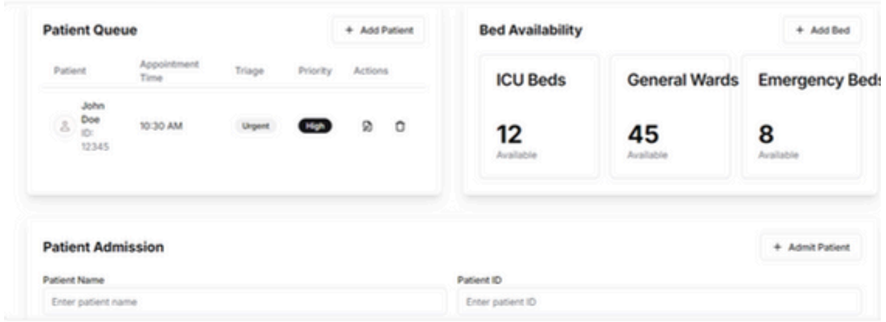
- This system can be **initially implemented for a individual hospital** and further can be scaled to network of hospitals throughout the city.

VIABILITY

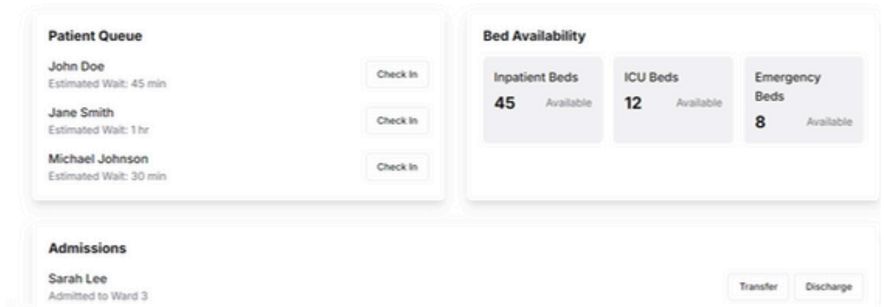
- The modular design **allows refactoring** the system **to expand and adapt** according to hospital respectively.

AI GENERATED UI

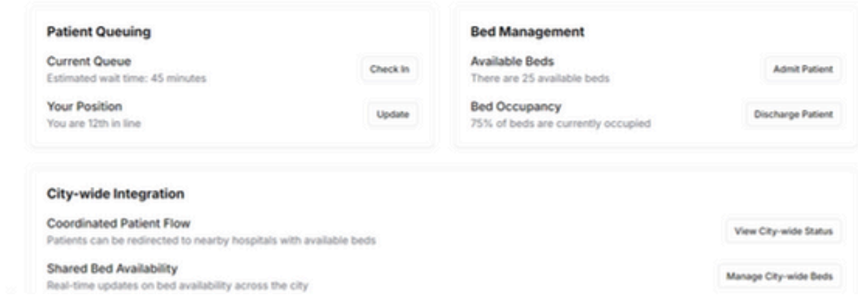
Dashboard



Bed Details



Patient Details



IMPACTS/BENEFITS

IMPACTS/BENEFITS

- Centralized Database - Patients Medical History accessible at clicks

TEAM DETAILS

- TEAM LEADER - KSHATRIYA SWAMI NARAYAN
- TEAM MEMBER 1 - KIKALE SHRAVANI NITIN
- TEAM MEMBER 2 - UKHALKAR SANMATI SUDHAKAR
- TEAM MEMBER 3 - DEORE VIJAY CHINTAMAN
- TEAM MEMBER 4 - DHAGE SANKET DNYANEHWAR
- TEAM MEMBER 5 - KADAM PRADNYA DNYANEHWAR

- MENTOR 1 - PROF. Y.S.PATIL
- MENTOR 2 -