

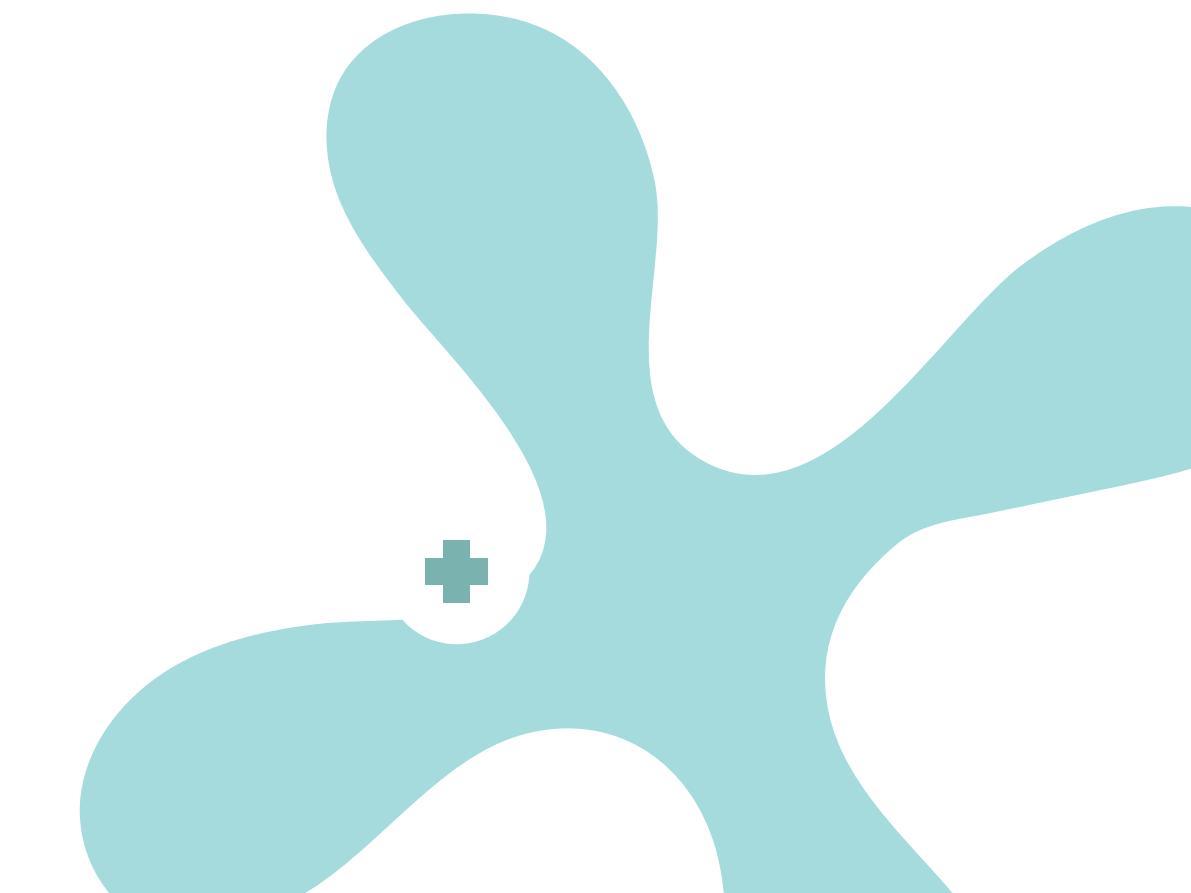
INFO 5100 Final Project

Team RapidResQ

Aditi Ashutosh Deodhar

Anushka Paradkar

Meet Bhanushali



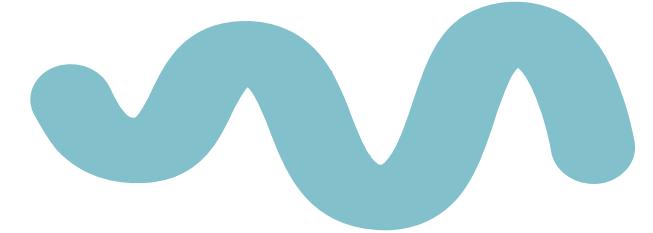
Problem Statement

- Daily emergency incidents threaten lives with untimely medical assistance.
- The EMS sector faces risks, hindering operations.
- A streamlined digital platform is needed for safety, data analytics, and early patient tracking, reducing casualties.





Approach

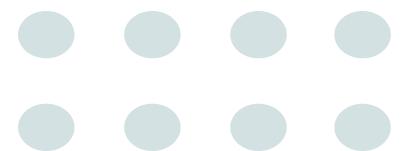
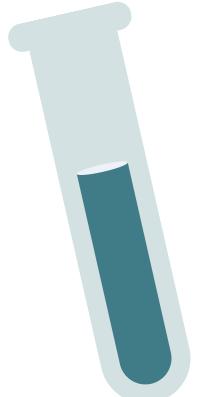


Proposed Solution

Multifunctional single-platform Java-Swing application for managing different healthcare solutions.

Technology Stack

- Java (for the application logic)
- Java Swing (for the user interface)
- Secure authentication and authorization mechanisms
- For database/data storage purpose, use data structures such as ArrayLists, as well as Java Persistence with JSON.

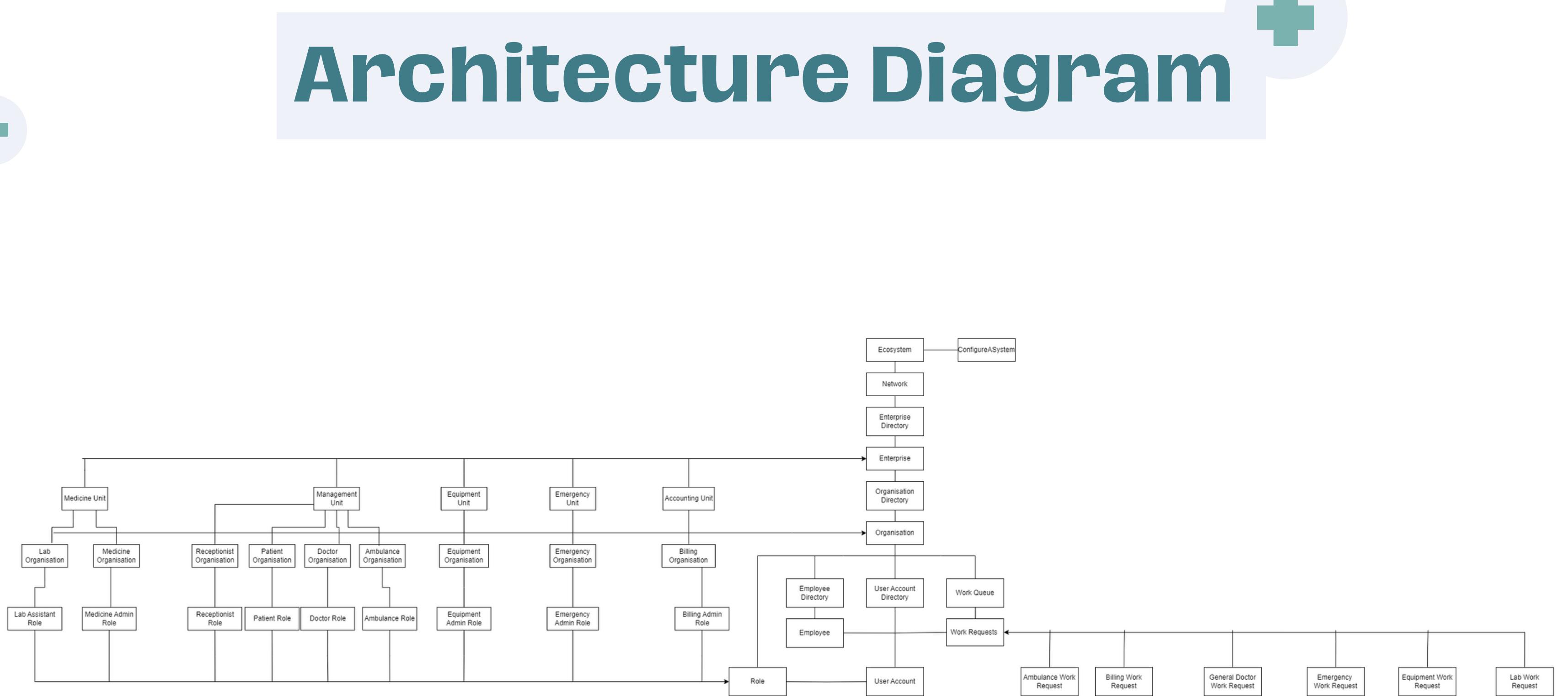


Architecture Diagram

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Features

SOS Tracking System



Efficient Request Routing

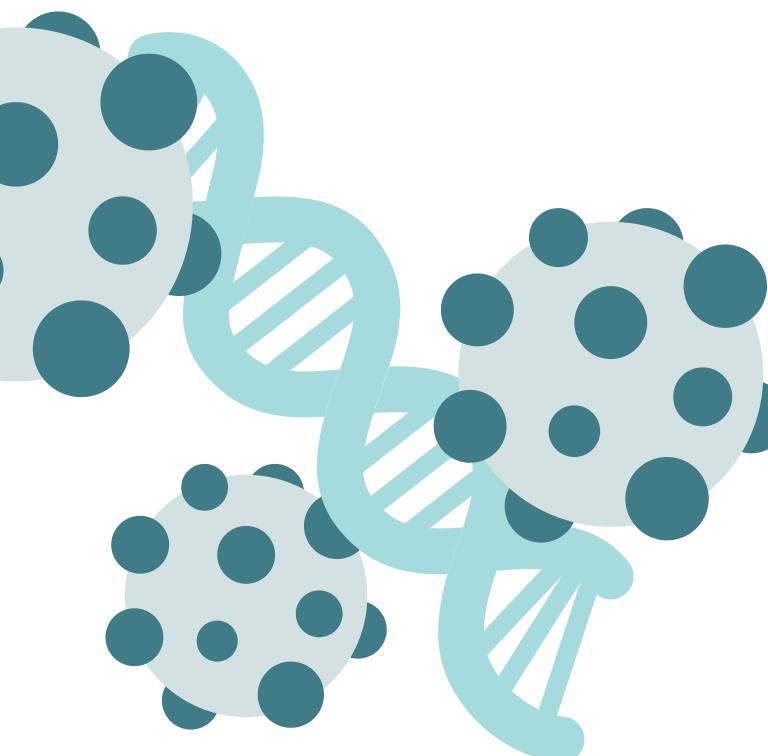


Comprehensive Healthcare Management



Optimized Equipment Request Management





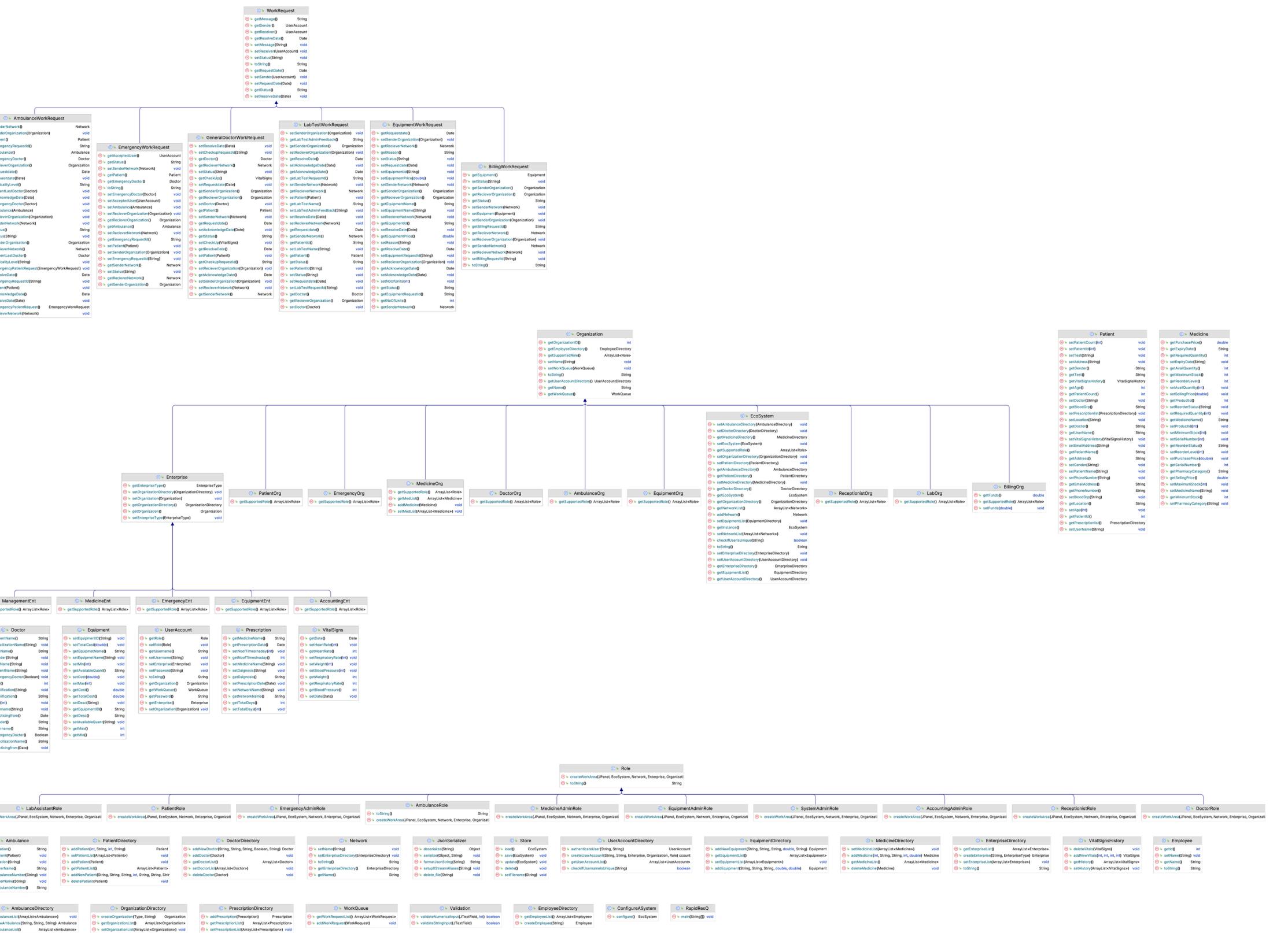
Use Cases



There are the use cases based upon the roles -

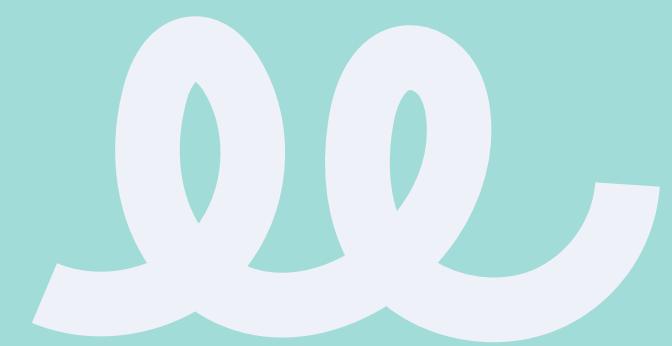
1. System Admin - View enterprises and organizations in the ecosystem.
 2. Reception - Manage doctor and patient.
 3. Doctor - Add vitals for patient assigned, raise a lab test request, create a prescription for the patient.
 4. Patient - See his/her vital history, raise an emergency SOS request and checkup request for doctor.
 5. Lab Assistant - View the test requested by the doctor for a particular patient and provide feedback.
 6. Medicine Admin - Manage medicines availability
 7. Ambulance Admin - Manage ambulance availability
 8. Equipment Admin - Manage equipments and request for bill.
 9. Accounting Admin - Handle billing requests for the equipments.
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UML Diagram





Workflow



Login and System Launch Page

The image displays a composite of two main sections. On the left is a screenshot of a medical system's login page, featuring a teal header with the text "Welcome to the system". Below this is a form with fields for "User Name:" and "Password:", each accompanied by a small input field icon. A "Login" button is positioned below the password field. The background of the login screen features a grid of medical icons: a syringe, a mortar and pestle, a briefcase with a plus sign, a stethoscope, and a heart with an ECG line. Below the icons is a row of six diverse medical professionals: a Black female doctor in a white coat, a Black male nurse, a White male doctor with a stethoscope, a White female doctor, a Black male nurse, and a White male doctor with a beard. On the right side of the image is a dark blue rectangular area containing the slogan "Where problems meet swift solutions". Below this text are three photographs of individuals, each with their name written underneath: "Aditi Deodhar", "Meet Bhanushali", and "Anushka Paradkar".

Welcome to the system

User Name:

Password:

Login

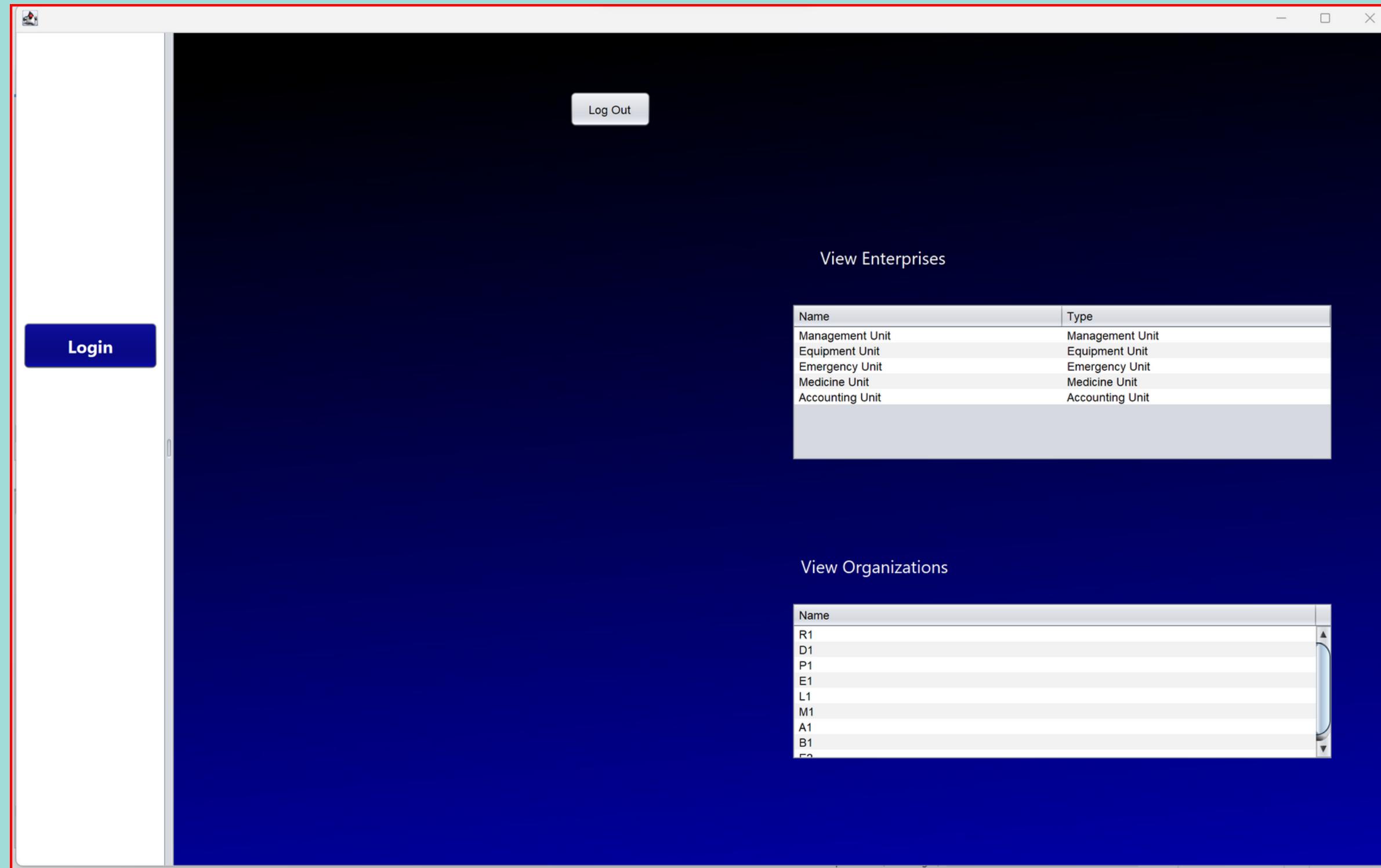
Where problems meet swift solutions

Aditi Deodhar

Meet Bhanushali

Anushka Paradkar

System Admin



Receptionist

Reception Work Area

Patient ID	Patient Name	Age	Blood Group
1	John Doe	18	O+

Doctor Name	Specialization	Qualification
Doctor A	Heart Surgeon	MD

Actions:

- Create Patient**
- Delete**
- View**
- Create Doctor**
- Delete**
- View**

Input Fields (Patient):

- Patient ID: 1
- Patient Name: John Doe
- Age: 18
- Blood Group: O+

Input Fields (Doctor):

- Doctor Name: Doctor A
- Specialization: Heart Surgeon
- Qualification: MD

Buttons:

- Login

Create Doctor



Fields:

- Doctor Name: Pat
- Specialization: Cardiologist
- Age: 50
- Qualification: MD
- Blood Group: O
- Username: pat
- Emergency Doctor

Buttons:

- Login
- Back
- Create Doctor

Create Patient



Fields:

- Patient ID: 10
- Patient Name: Betty
- Age: 21
- Blood Group: O

Buttons:

- Login
- Back
- Create Patient

Doctor

Doctor Work Area

Patient Name	Age	Gender	Message	Feedback
John Doe	18	M	Vitals look good!	Overall Healthy!

Log Out

Login

Request Lab Test

Prescription

Respiratory Rate: 50

Weight: 65

Heart Rate: 100

Blood Pressure: 120

Submit Vitals

Back

Login

Message for Patient

Vitals look good!

Send

Message

i Request message sent

OK

DOCTOR PRESCRIPTION

Name:	John Doe
Age:	18
Gender:	M
Medicine:	Select
Times a Day:	2
For:	2

Add to Prescription

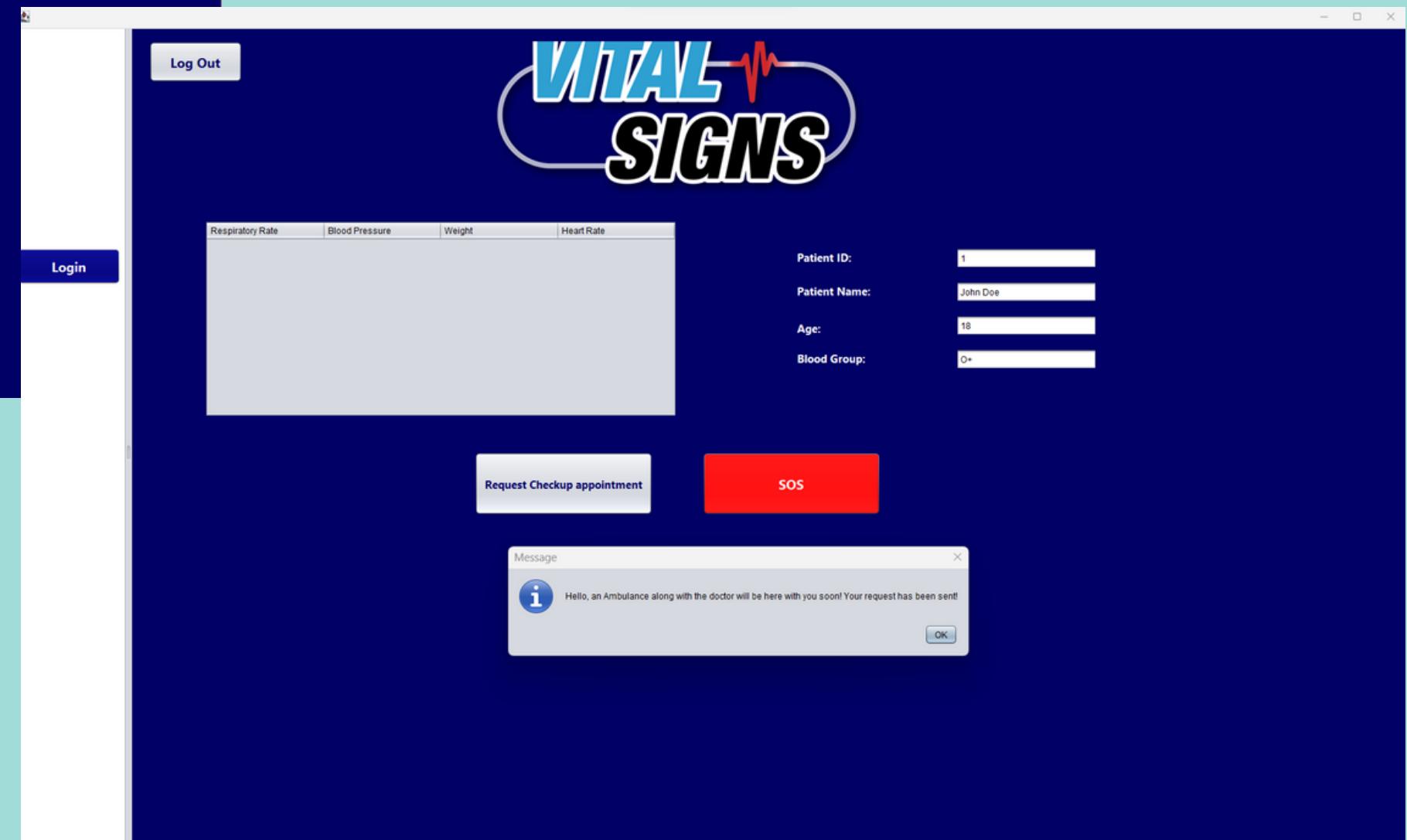
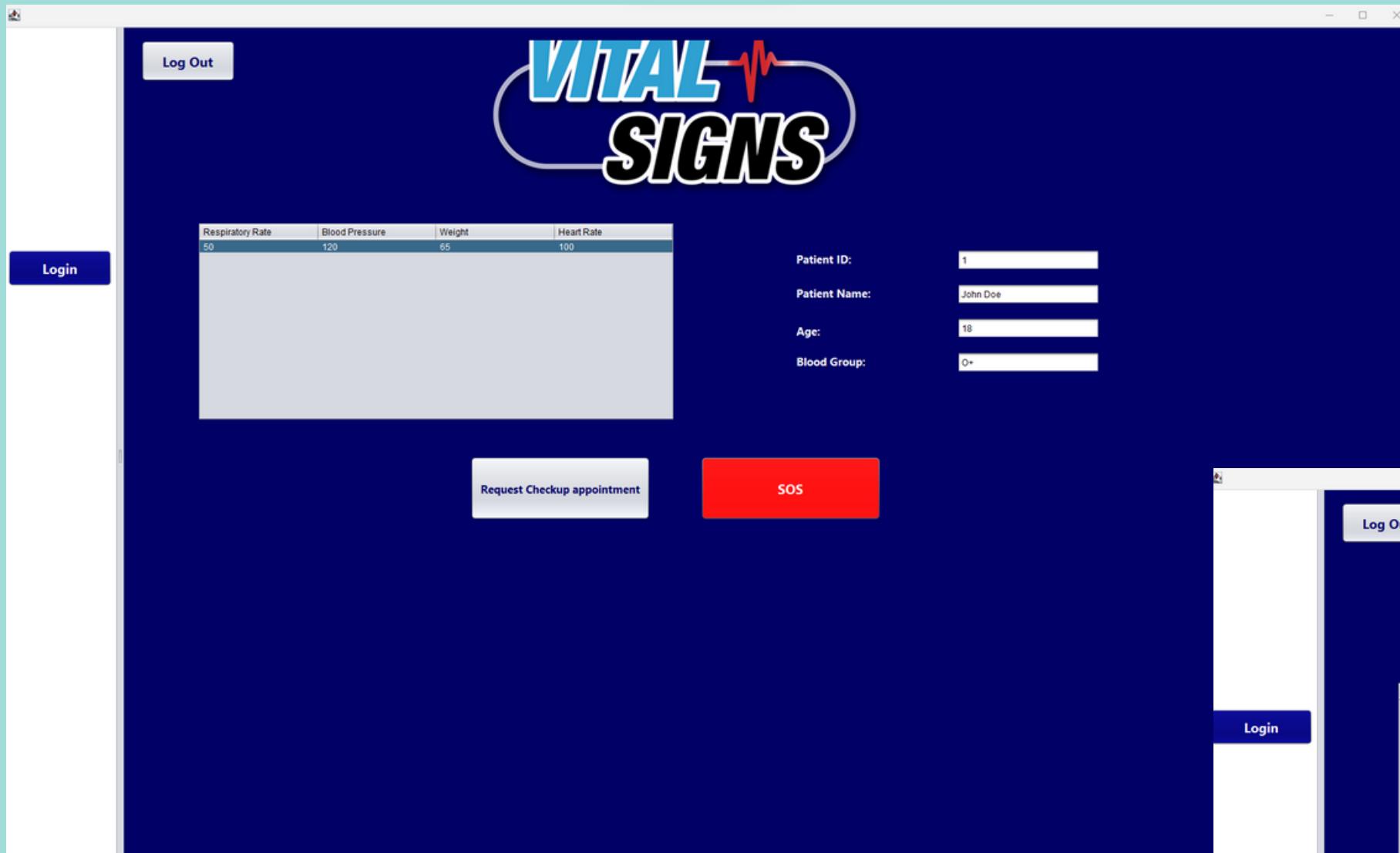
Send Prescription To Customer

Back

Login



Patient



Lab Assistant

The image displays three windows of the Lab Assistant application:

- Login Screen:** A small window in the top-left corner with a "Login" button.
- Lab Admin Work Area:** A larger window in the bottom-left corner titled "LAB ADMIN WORK AREA". It shows a table with one row of data:

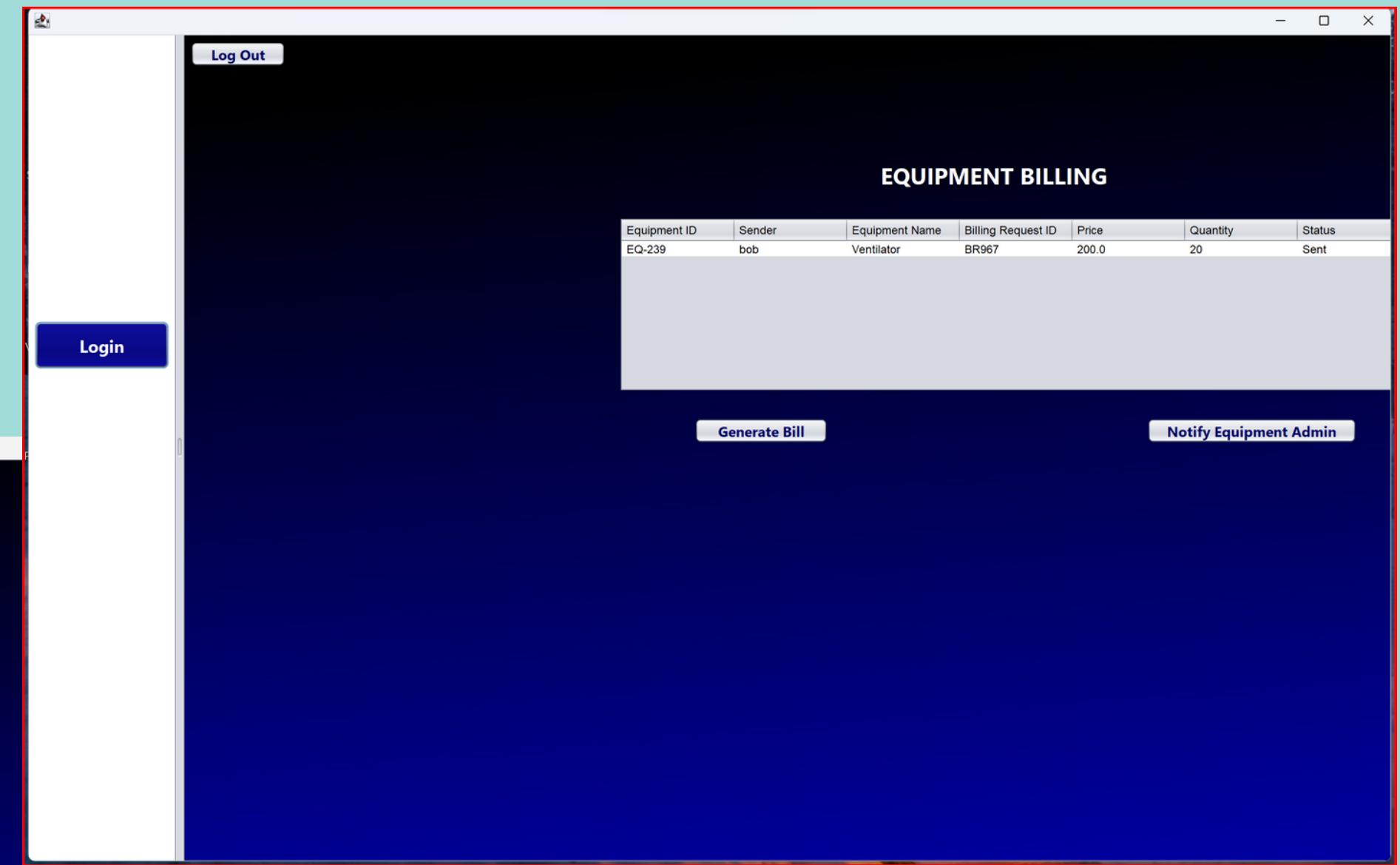
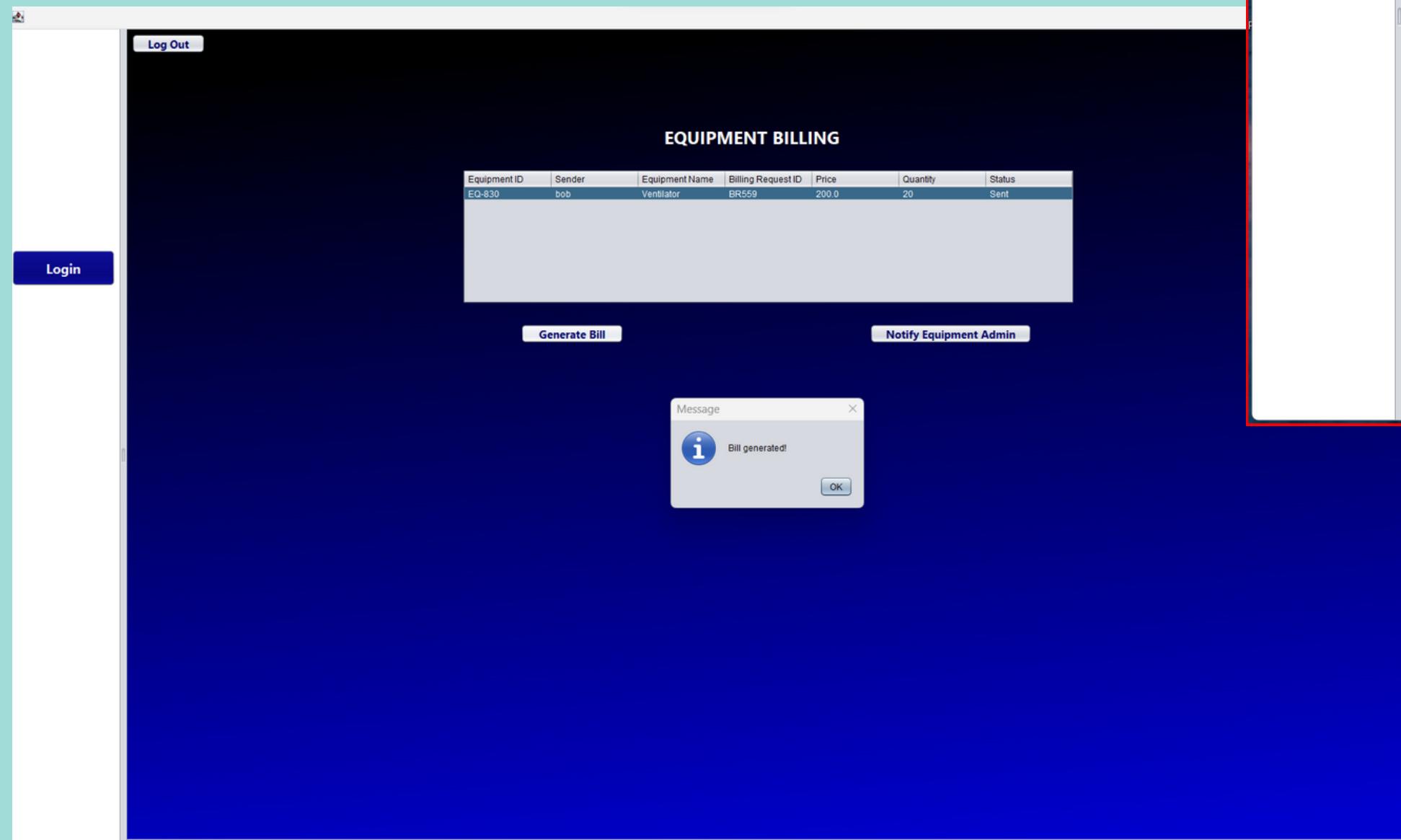
LabTestRequestId	Sender	Patient Name	Patient ID	LabTestMessage	LabTestFeedback
LR194	Doctor A	John Doe	1	Vitals look good!	Overall Healthy!

Buttons for "Log Out" and "Process Request" are visible.
- Feedback Window:** A full-screen window titled "FEEDBACK" with a "Feedback for Patient" section containing the text "Overall Healthy!" and a "Send" button.

Ambulance



Equipment & Billing

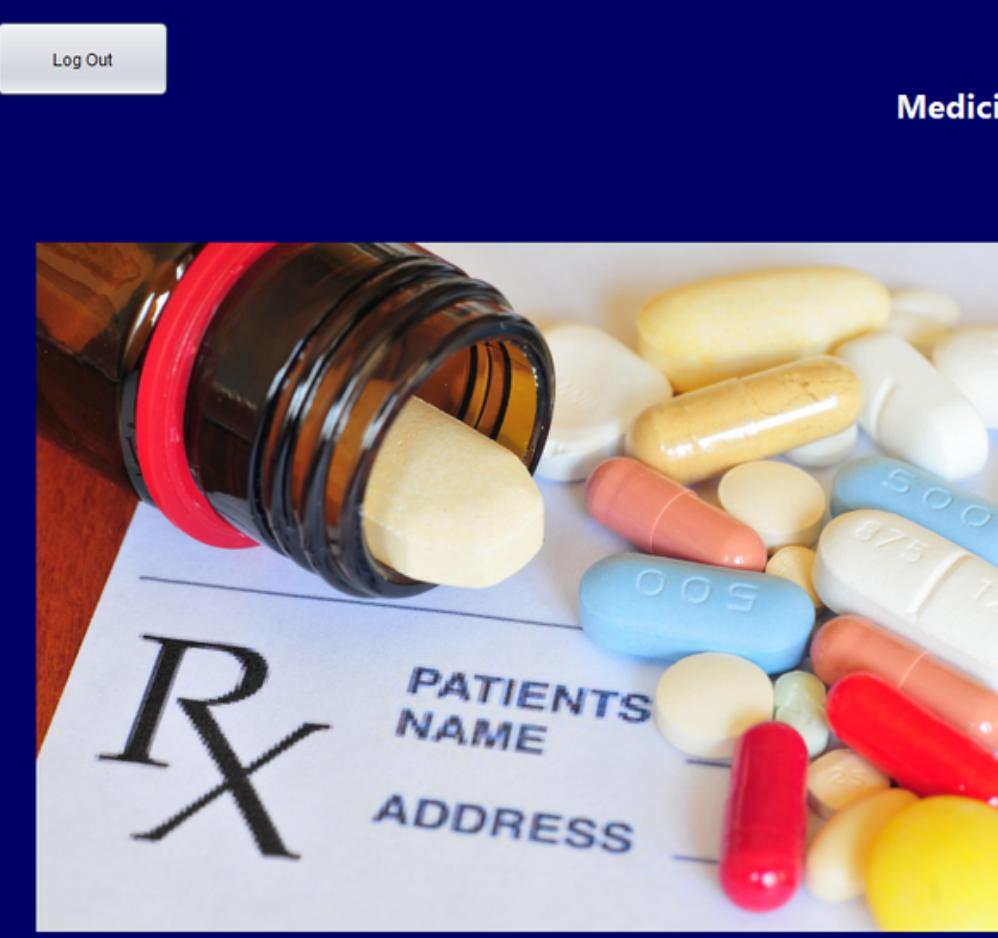


Medicine Inventory and Billing

Log Out

Medicine Admin Panel

Login



MedicineID	Medicine Name	Expiry Date	Quantity	Total Price
1	Paracetemol	12/23/23	5	100.0

Medicine ID:

Medicine Name:

Expiry Date:

Quantity:

Total Price:

ADD **Delete**

Innovations

- Prototype ([Link](#))
- Blockchain for storing patient information
[\(Blockchain Smart contract link\)](#)
- Maps plugin for GPS tracking

Future Scope

- Email functionality for alerts
- Charts for performance measurement dashboard

Thank You :)