OOAD PROJECT

Review - 1

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STAKEHOLDERS

The stakeholders like doctors, patients, covid warriors, management staff and the government faced lot of challenges. Covid crisis created the biggest problem of managing quarantining system. With the pandemic management of patients and their quarantining was the need of the hour. Doctors also needed a good environment where they can treat the patients intensively. Management staff of hospitals needed more workforce as the number of patients increased exponentially during different phases. Government had to save the lives of the people so they needed a system where they are able to provide services and patients have a transparent and accessible system

ACTORS
- *Doctors*
- *Patients*
- *System*
- *Admin of the system*

NON - ACTORS
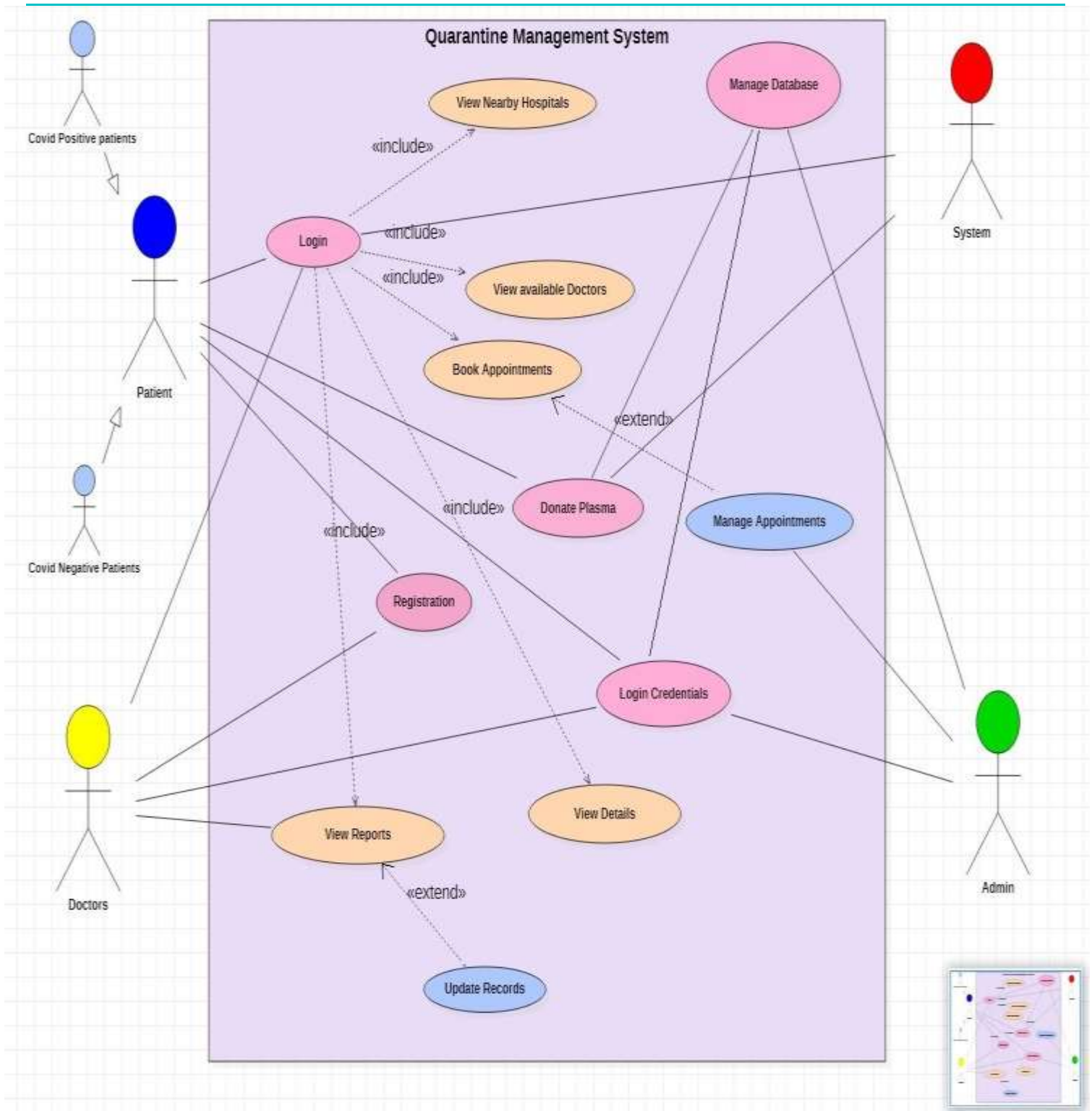- *Government*
- *Management Staff*

THE USE CASES OF THE SYSTEM

- *LOGIN*
- *VIEW NEARBY HOSPITALS*
- *VIEW AVAILABLE DOCTORS*
- *BOOK APPOINTMENT*
- *MANAGE APPOINTMENTS*
- *REGISTRATION*
- *VIEW REPORTS*
- *UPDATE RECORDS*
- *VIEW DETAILS*
- *LOGIN CREDENTIALS*
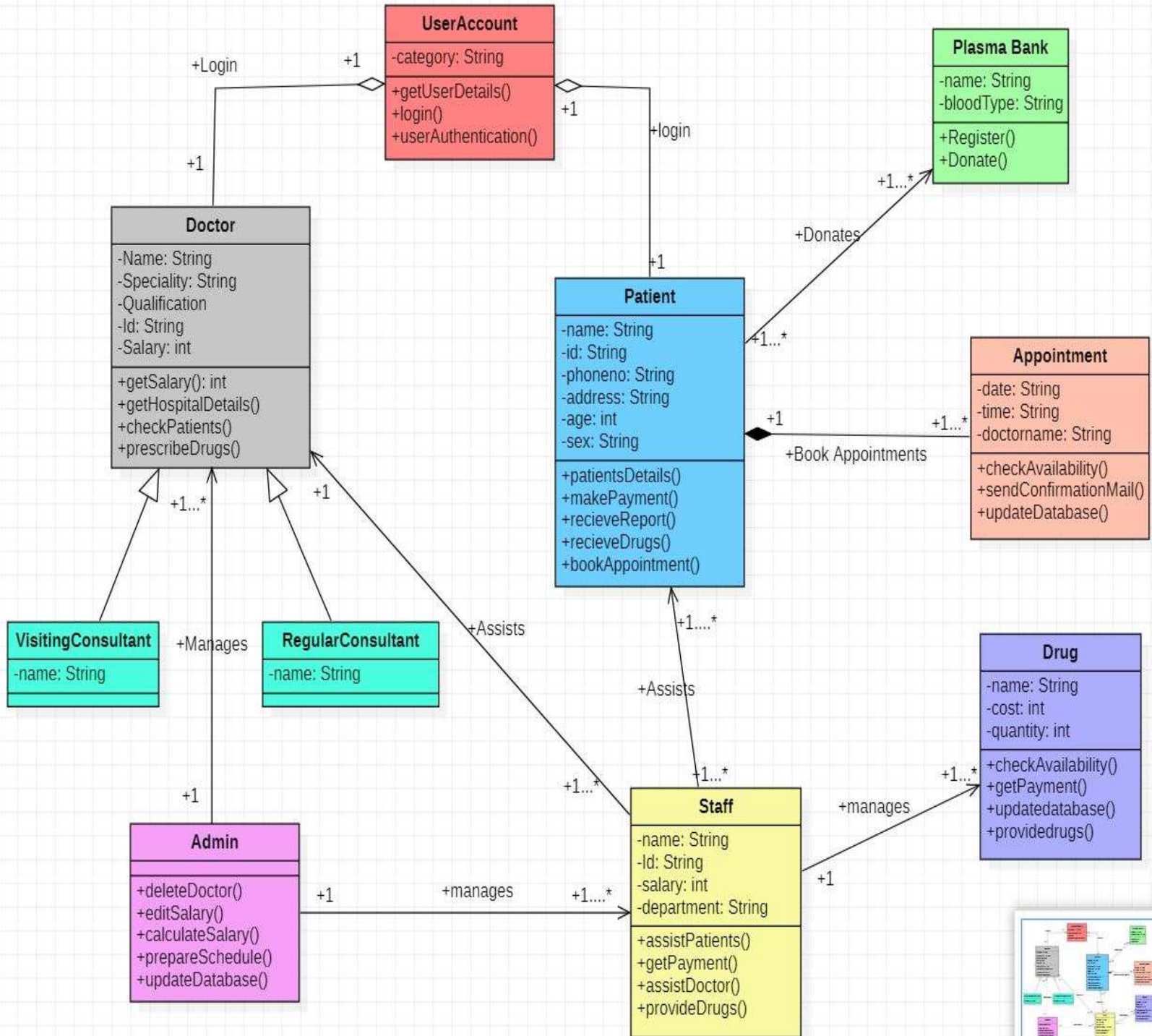- *MANAGE DATABASE*
- *DONATE PLASMA*

THE USE CASE RELATIONS OF THE SYSTEM

- *Login Includes View Nearby Hospital*
- *Login Includes View Report*
- *Login Includes View Available Doctors*
- *Login Includes View Details*
- *Login Includes Book Appointments*
- *View Reports extends Update Records*
- *Book Appointment extends Manage Appointment*
- *Patient includes Registration*
- *Patient – Login (Association)*
- *Patient – Donate Plasma (Association)*
- *Patient – Login Credentials (Association)*
- *Doctor – Registration (Association)*
- *Doctor – Login Credentials (Association)*
- *Doctor – View Report (Association)*
- *Admin – Login Credentials (Association)*
- *Admin – Manage Database (Association)*
- *Admin – Manage Appointment (Association)*
- *System – Login (Association)*
- *System – Donate Plasma (Association)*
- *Donate Plasma – Manage Database (Association)*
- *Manage Database – Login Credentials (Association)*
- *Covid Positive Patient Generalized to Patient*
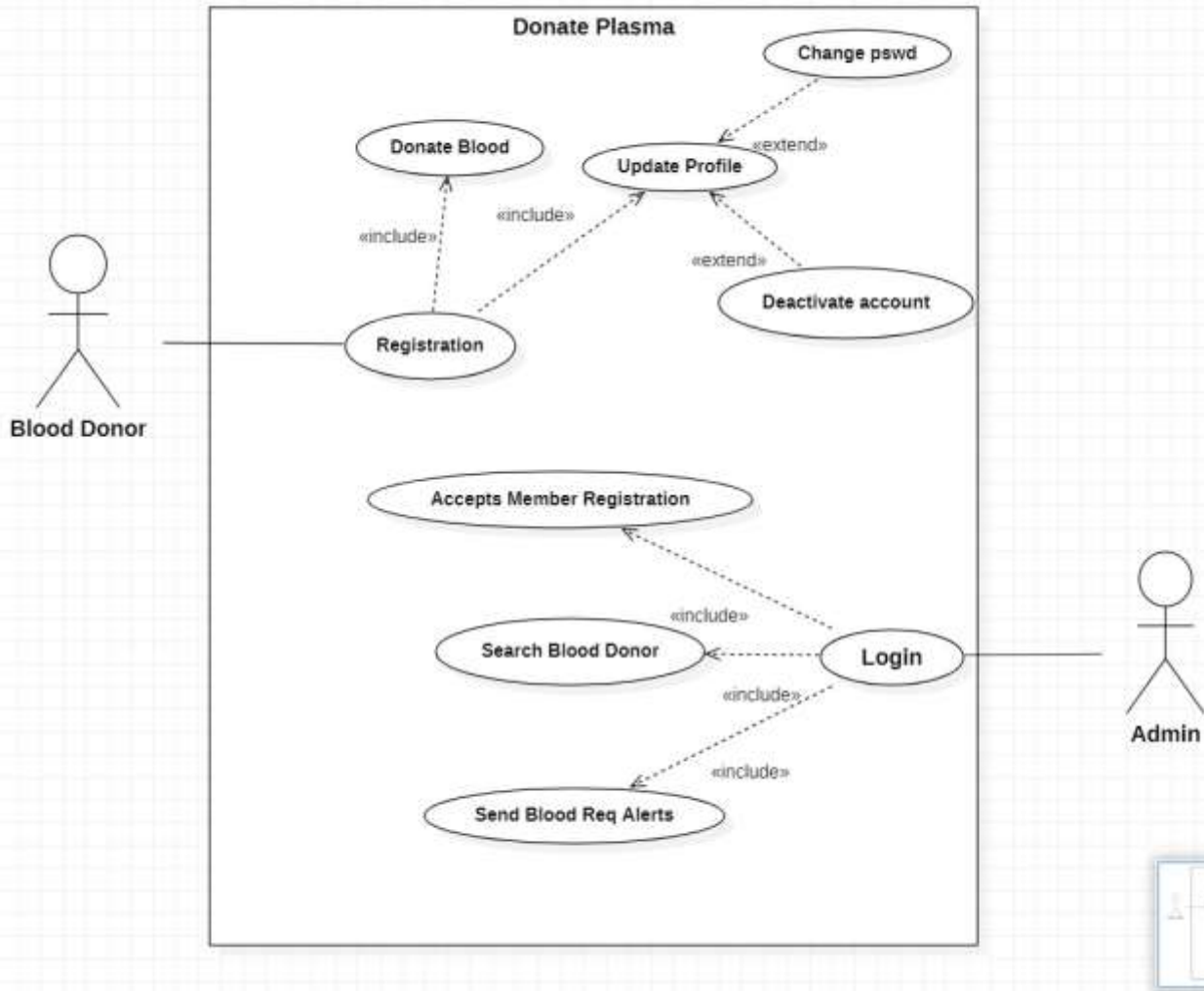- *Covid Negative Patient Generalized to Patient*
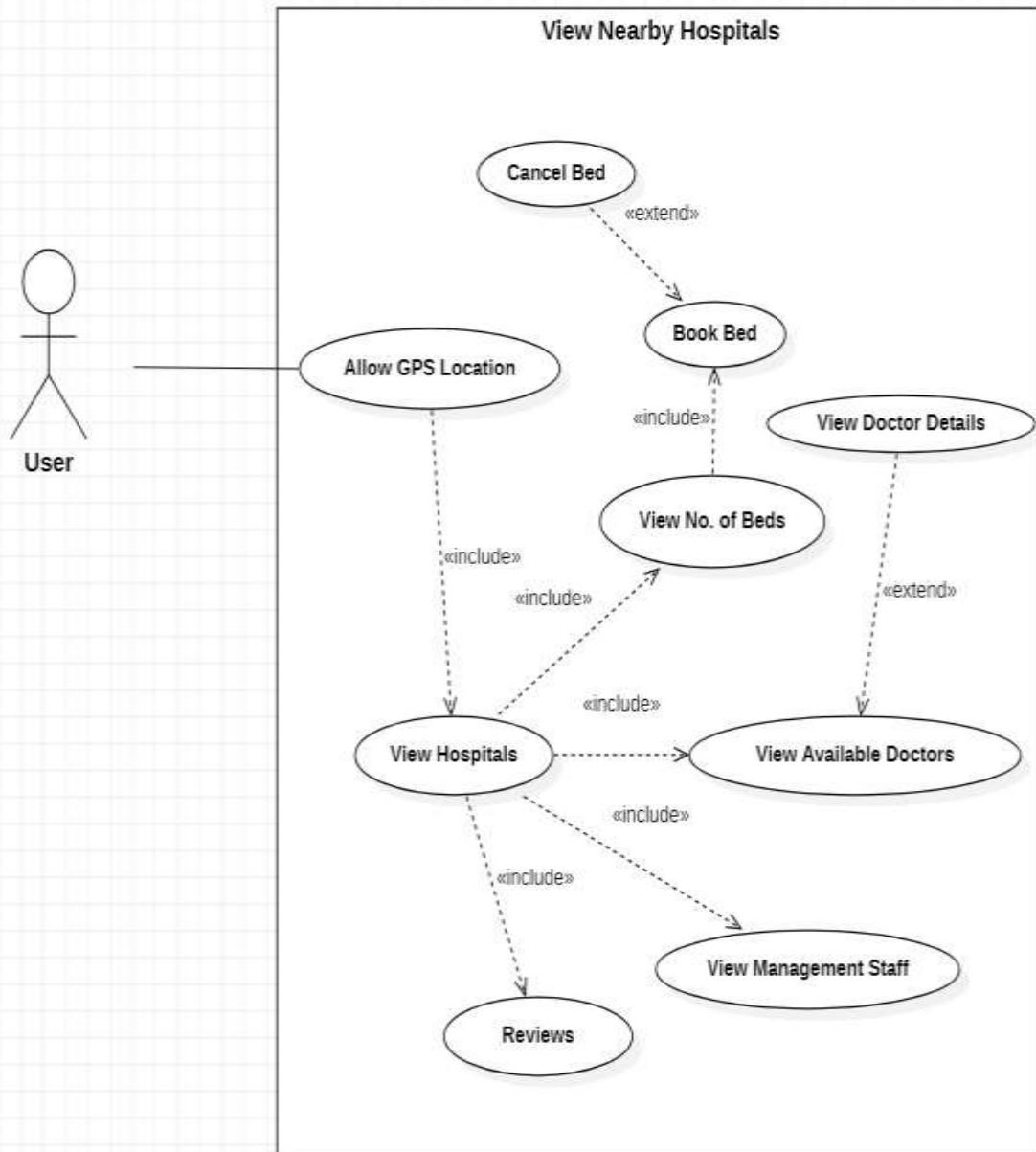
USE CASE DIAGRAM

CLASS DIAGRAM

KEY USE CASE DIAGRAM OF DONATE PLASMA

USE CASE SPECIFICATION

Use Case Name	Donate Plasma
Brief Description	This module enables previously corona positive patients who have recovered; can apply for donating their blood plasma to their nearby hospitals after going through some check-ups and documentations.
Flow of events	Any patient can approach to a nearby hospital with sufficient documentation that supports his/her eligibility to donate blood plasma. The details of the registered users who are willing to donate blood plasma get stored in the database which are managed by an admin. He/ She can register their name with their proper blood group. Then after proper verification they can donate blood plasma in the plasma bank.
Basic Flow	Any patient can visit a close by clinic with adequate documentation that upholds his/her qualification to give blood plasma. He/ She can enlist their name with their legitimate blood group. At that point after legitimate check, they can give blood plasma in the plasma bank. The subtleties of the enrolled clients who will give blood plasma get put away in the data set which are overseen by an administrator.
Alternative Flow	If the person has never been tested positive or he or she is suffering from any auto immune disease like diabetes, HIV/ AIDS or suffering from cancer then the person holds not eligible for plasma donation.
Special Requirements	This module is compatible with other general health management systems. The database stores the information about each blood plasma donor systematically and with no discrepancies thus it is a very reliable module.
Preconditions	No preconditions are required
Post conditions	A plasma donor's record will be added to the database. Plasma Donors will have a unique identification number after registering.
Extension Points	Donate Plasma refers the Manage Database use case to add plasma donors to the blood bank.

View Nearby Hospitals

User

Cancel Bed — «extend» → Book Bed

Allow GPS Location

View Doctor Details

«include» → Book Bed

View No. of Beds

«include»

«include»

«extend»

View Hospitals — «include» → View Available Doctors

«include»

«include»

Reviews

View Management Staff

USE CASE SPECIFICATION

Use Case Name	View Nearby Hospitals
Brief Description	This module helps users to find nearby hospitals. They can filter and sort their choice of search results. This will help users shortlist hospitals according to their needs. As they can view the number beds available in the hospitals, number of doctors and management staff that are working in the hospitals. Thereafter they can book their bed for quarantine in the chosen hospital.
Flow of events	The user views nearby hospitals as the system can use the GPS location of the device to get the user's current location. After selecting the nearest hospital, the user can check the various facilities and information like number of doctors, vacant beds and staff etc. Then the user can book the bed in the particular hospital of choice.
Basic Flow	The client sees close by clinics, in the wake of choosing the closest clinic, the client can check the different offices and data like number of specialists, empty beds and staff and so on At that point the client can book the bed in the specific emergency clinic of decision.
Alternative Flow	If the booking does not get confirmed from the hospital's side then the system will provide the best possible hospitals nearby the user as an alternative.
Special Requirements	Search results are boosted by IntroSearch searching algorithms. The database stores the information about each registered hospital systematically and updates the information about the number of doctors regularly.
Preconditions	The user needs to login into the system before he/she can search nearby hospital.
Post conditions	The bed gets booked after the confirmation from both ends. The number of beds vacant in that hospital reduces by a number and the system updates this information.
Extension Points	The database gets referred regularly when this module is executed.

Manage Database

View Patients

View Doctors

Add Details

«include»

«extend»

Login

Details

Delete Details

«extend»

«extend»

Modify Details

Admin

View Management Staff

View Plasma Donors

Use Case Name	Manage Database
Brief Description	This module deals about rapid storage, searching, modification and deletion of data. This module is an extension to all the modules in the system and is fully and privately managed by the admin. It stores all the information regarding the hospitals, doctors, management staffs, patients and their reports.
Flow of events	This module works dynamically, so if any of the information gets modified by the action of user then this module will ensure consistency and automatically update the database. In case of manual modification in the database then the admin can access the database to do the necessary changes by himself.
Basic Flow	If any of the data gets changed by the activity of client, this module will guarantee consistency and naturally update the data set.
Alternative Flow	If there should arise an occurrence of manual alteration in the data set then the administrator can get to the data set to do the important changes without anyone else.
Special Requirements	The database is completely in sync with system and ensures security, data consistency and avoid any sort of anomalies. No one other than the admin is authorized to access the database.
Preconditions	The admin needs to login into the database before accessing it.
Post conditions	In case of any changes the database will mirror the information in the system.
Extension Points	It has no extension points.