Project Title

CCSW 223 Lab Project Report

[your Section]

Student Name	Id	Tasks

NOTE: Remember to number tables and figures and show me your creativity

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1 Introduction

Idea management technology helps organizations and users to give them better experience Health volunteer center. Is a Health care app that provide A connection between both patient in need for donation and doner as well as connection whit organizations how needs medical staff to volunteer and medical staff members how are looking for volunteer experienced in a secure   useful way   Therefore, we created this app to support this idea   to help the voluntary health sector.

2 Problem Definition

The donor often faces several problems in donate in many cases, one of the common issue is failing to reach the suitable people for donation. Moreover, when we look at the individual in need for donations, we find it difficult to find help at the right time. As for the medical teams, many of them are willing to volute, but opportunities are difficult to find due to fraud or exploitation of the health and medical staff. Also in most cases, Owing to their incapacity to travel for treatment of chronic diseases that the communities' competences cannot take over due to the lack of a medical equipment, staff and the poor financial state .certain villages and deserts that need highly skilled doctors cannot be heard.

3 Information Gathering

3.1 Interview Description

 1-Have you ever donated or participated in a volunteering team?

2- How was your experience?

3- Have you ever faced any difficulties?

4- Can you recall any of the difficulties that you went through?

5- What are all the things that you need to know in order to donate?

6- As someone who is in need for donation can you recall a situation where it was hard for you to find help?

-medical staff

7- As a doctor /Health care employee have you ever

Wanted to help ovation in need but there was not enough support to reach them?

8- As a doctor /healthcare employee haven't you ever hoped for organization that connect you with people who are truly in need?

-mom medical staff

7- As a citizen have you ever which for an easier way to connect with the patients to donate?

8- As a patient would you like a center to represent your situation to make it easier for you to find help in the right time?

9 -What do you think about our application?

10 - If such software were available, what are the features that you are looking for?

In our questions, we focused on the current situation and the difficulties facing the target groups.

3.2 Interview Analysis

Interviewer	Interviewee	Analyst Comment
Sahar turki	• *Muhannad saud , Medical student* • *Reema Qadi, Nursing intern and volunteer*	Both Reema and muhannad have volunteered before in some events such as, diabetes awareness campaign and children with autism and hyperactivity (ADHD) and for their experiences they were average some of them are easy and others were not. While volunteering they faced many difficulties one of them was not being able to find teams who accepts them right away and having a tough time to find volunteering work appropriate to their specialty. We also discussed situation where they needed health donation, one of their family members who was in emergency condition and they needed a specific blood type but they couldn't find it and unfortunately, she passed away. As a medical staff Reema and muhannad always wanted to volunteer in a different cases and fields but it's difficult nowadays due to the hard circumstances.
Ruwayn Alharbi	• Rawan Alharbi Respiratory Therapy • Raneem Alharthy is a physiotherapy student	Rawan and Raneem had previously volunteered during the summer vacation at the Saudi German Hospital, and it was an unforgettable experience for them and full of humanity, and it affected them morally to help patients and they faced difficulties, including there are no reliable platforms to announce volunteers, and they were not aware of the details of the volunteering program and among the things they wanted To know her before donating is if the donation has financial benefits or not, and one of the difficulties that Rawan mentioned is that her aunt was in dire need of a kidney donor and she did not find and because of this her process was delayed until they found her a donor and the reason for this delay is the lack of applications that announce donations and they all agreed that they cannot reach the

		needy patients who cannot go to the hospital. Raneem answered me that she wishes to join health organizations that provide free services aimed at helping patients. He expressed their admiration for the idea of our application, which is excellent and very distinctive because of saving time for them. desperately need care
Alaa Alqarni	• Dr.Majd alharbi Surgeon • Dr.Batool alnobi Dentist	Dr. Majd and Batool support the idea of donating, as they are health practitioners who have faced many difficulties due to the limited number of supporting bodies to donate Because of their interest in donating and helping those in need of blood, they faced difficulties in obtaining some blood types, which are rare, or announcements of need that reach people at a late time. The application impressed them with the idea, and they said that through their work as doctors, the presence of a diagnosis of the patient's condition speeds up the process of finding the right and appropriate donor for the case Batool believes that the idea of the program is great because the cases are constantly updated, so the support arrives in a timely manner, and Majd would like to add the advantage of locating the nearest branch of the donor through the application. They both look at the application positively and support the idea.
Suha Al sulami	• Dr.Alwalid Pediatrician • Noura is a high school student	They both tried volunteering and it was a great experience for them and they did not face any difficulties due to the advice of the organizers and knowing the things they wanted to know. They also wanted to know the things that should be known when donating, which is the place of donation and how it is done Dr. Alwalid replied that he did not know for the first time that there is a feeling of dizziness after the donation. Noura replied that she had contracted the Corona virus and needed a blood donor, and she didn't find donors because of the home stone, there were no donors who could

		donate to her. Also, when they were asked if they wanted someone to represent their health situation, they liked the idea and about the application, they liked it, and one of the features they want is for the program to be easy and fast so that they can be helped as soon as possible.
Rahaf Alzahrani	• Layan Engineer • DR.Muhammad Surgeon	Layan and Malak love to participate in health donation opportunities and they usually go because it makes them feel like they are contributing to saving lives. Their experiences differ according to the centers they went to, but one of the disadvantages of the usual ways of donation and volunteering is that the rapid communication between needy patients and donors is almost non-existent and unknown locally, and the donation centers may not be known or even reliable. Also, the donation process requires much more time and effort, sometimes it may be caused by lacking organization. The lack of effective communication between the donor or volunteer and the patient makes it difficult for all people to reach the needy patient at the right time. Opinions are very positive regarding this application, as facilitating ways to receive assistance may save many lives and revive the human qualities of volunteers and donors. It has been suggested to add a feature that allows the user to see a scale of the extent to which most centers are in need and another feature that shows the user the closest donation centers to the user.

They all previously participated in volunteering and donated, such as blood donation, and they all faced several problems in volunteering, such as the lack of volunteer work that suits their specialization, as well as the lack of communication between volunteers and organizers, and the lack of a reliable platform for volunteering. Regarding donation, Rawan (Respiratory Therapy Student) mentioned that the benefit of the donation is known, whether that It contributed to improving the life of a person and also whether it had financial benefits or not and also not knowing if it was a reliable center for donation. As for taking their opinion about our application. They liked the idea positively and mentioned some additional features. Such as, determining the nearest donation center and seeing the scale of the need for most centers to

donate or volunteer, as well as the appearance of health information for patients in the application, if their condition is serious, they will have priority for the treatment first .Also the idea of alerting donors when one of the patients is recovering.

4 Planning Phase

4.1 Project Goals

There are different platforms that provide opportunities for volunteering and donations, but from the perspective ofexperts, not all people have access to them.

Countless medical conditions were ignored due to the shortage in medical equipment and blood or simply not knowing a way to seek help. The medical professionals and medical field students have difficulties volunteering because it is challenging to contact them as well. They lack an easy method to get in touch with the organizations that provide volunteer opportunities.

Our product will fulfill its rule of providing an effective way to connect them all and give them a better

experiencesIn an effort to increase volunteering awareness and make services available to everyone, we choose

this project.

As I mentioned earlier, volunteers from the health field suffer from finding an easy way to volunteer, and on the other hand, those who need to volunteer cannot find help.

Our goals are to raise volunteer awareness, facilitate access to those in need, facilitate ways to donate money or blood, and facilitate communication between organizations and volunteers.

4.2 Cost and schedule estimation

Tasks	Estimated duration	Start date	End date
scope	32days	Tue8/30/22	Tue9/29/22
Analysis /software requirements	32 days	Fri 9/30/22	Mon 11/14/22

Design	35 days	Tue 11/15/22	Mon 1/2/23
Development	23 days	Tue 1/3/23	Tue 2/2/23

Resources	Estimated cost
software engineer	3000$
software engineer	4500$
designer	1000$
designer	1200$

The project preliminary report describes your progress so far. It should form the basis of your final report.

There are no length constraints on the preliminary report, but you should aim to be as concise, clear and organized as possible. Since you are working in groups, the writing and presentation should be at a high quality.

4.3 The Feasibility Study

1 Problem Definition:

The donor frequently encounters a few challenges when volunteering, the most significant of which is the inability to connect with the appropriate individual and the challenge of locating the most vulnerable group. Furthermore, it is challenging to identify a donor among those in need of assistance when we look at those who require some people to donate. Regarding health professionals, many of them are reliable volunteer possibilities through authorized bodies, but opportunities are hard to come by because of fraud or exploitation of the health professional. Due of their incapacity to travel for treatment of chronic conditions that the communities' competences cannot address, some villages and deserts that require highly qualified doctors also seldom get their voices heard.

2   Scope Objectives of "new system":

Vital symbols

Show a sign for the centers that need a donation as soon as possible, and through the symbols there are three symbols, which are in red, yellow, and green, placed next to the name of the donation center

Red means they need the largest number of donors as soon as possible, it will be at the top of the site page.

The yellow one needs a few donors to donate, and it will be in the middle of the website page. Green

There is no emergency to donate it will be at the bottom of the site page.

By clicking on it, he will see what type of donation is, and the donor will book an appointment to donate.

3 Alternative Solutions:

The alternative solution is an application that consists of an interface of several options, namely (username, password, type female or male, user email, phone number, city) Then, after filling in the data, the question to determine the age group will appear. If the age is over eighteen, he will be allowed to enter the application. After allowing the user to enter the application an interface will appear asking him to attach information about his blood type and the diseases he suffers from After selecting the information, a list of hospitals and laboratories that he can donate will appear to him according to the needs of the establishment to receive him as a donor. After that, the reservation date will be confirmed.

4 Cost And Benefits of Alternatives:

Alternatives	Cost	Benefits	Drawbacks
Update Application	20000$	Make it easy to use and fast	Increase System space
Increase System Protection	13000$	Make the protection process stronger than before to protect users	It will be more complicated than before for security professionals
Add future feature to the application	17000$	Adding attributes that make it more accurate than before	Increase System space

2 Software Impacts:

One of the last additions that we want to add is the development of the user interface and its facilitation for the user and the improvement of the protection process to protect the data of volunteers, donors, patients, volunteering, and donation centers, and among the new additions is a method of communication between patients and the doctor to answer patients' inquiries.

3 Potential Changes in the Organization:

The possibility of access to patients with appropriate emergency and critical cases, as well as the arrangement of reliable information for all doctors and surgeons free of charge and without limits, and the financial profits for cases that require surgical intervention in the hospitals surrounding hospitals in the natural spaces of this

program is to revive the qualities of humanity and love to help others.

4 Recommended Alternative of the Course of Action:

Adding future features is very important in order for the application to be in full harmony with all developments in the world of programming and also to be familiar with everything the user needs.

4.5 Project Plan
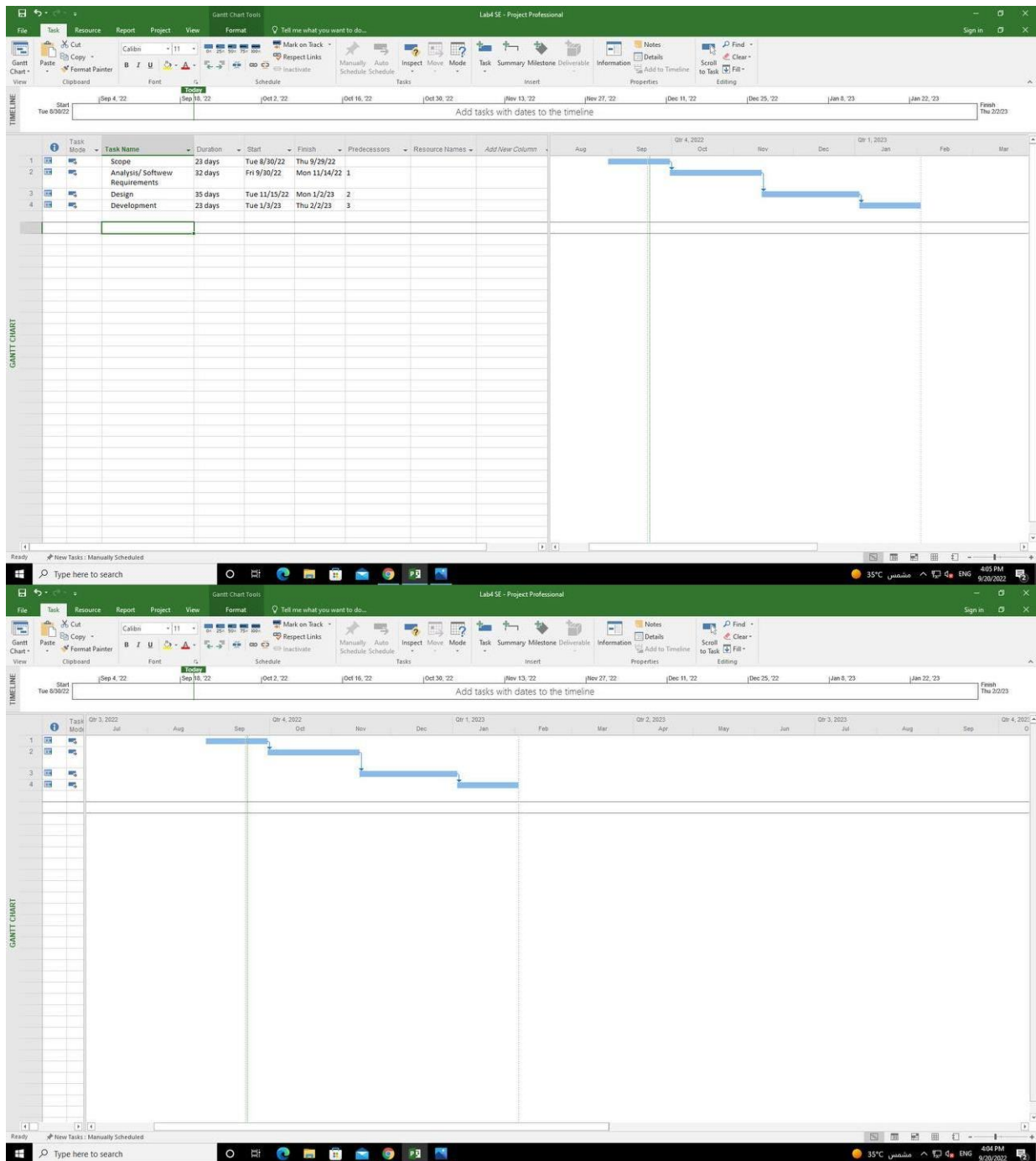
5 Analysis Phase

5.1 Stakeholders

1   The Client

Who Seeing needy patients who may get help too late is what made us

2   The Customer

A person who wants to donate or volunteer in the health field

3   Other Stakeholder

1. **Patients** whose information is recorded in the system and relatives of thesepatients.

2. **Donors** have their health information recorded in the system to donate.

3. **Donation centers** the needs of the type of donation are displayed.

4. **Volunteers** are registered with their data and knowledge of their medical specialties.
5. **Volunteer centers** the requirements for volunteering as well as the required places and health specialties are displayed.

6. *A medical ethics manager* who must ensure that the system meets currentethical guidelines for patient care.

7. **IT staff** who are responsible for installing and maintaining the system.

8. **Medical records** staff who are responsible for ensuring that system informationcan be

maintained and preserved, and that record keeping procedures have been properly

implemented.

5.2 Context Diagram

5.3 Event Table

Event Name	Input and Output	Summary
1- Make the donation	Patient's treatment reports (out)	The health center receives the domain from the donors
2- The Donor	2-Donate (in)	Donor's ask the health center for patient treatment reports
3- Organizations offering volunteer opportunities	Connect the with the medical staff(out)	The health Center connects organizations that offer volunteer opportunities with medical staff
4- Volunteer Collection	Search for volunteers (in)	The health Center is looking for volunteers in organizations that offer volunteer opportunities
5-Advertising for volunteer opportunities	Offers volunteering chances(out)	Organizations that offer volunteer opportunities involve them with medical staff at health centers
6-Register to volunteer	Registration into volunteer(in)	The health Center is looking for registration to volunteer with the medical staff
7- treatment plan	Gives treatment plans (out)	The health Center provides a treatment plan for patients
8- Donors Collection	Donations (out)	The health Center collects donations for patients

5.4 Functional Requirements

FR1: The user should be able to clearly see the system services options.

FR2: The user should be able to communicate with a clear side when a problem occurs in the system.

FR3: The Hospital Management System generates a report on every patient regarding various information like patient's name, Phone number, bed number, the doctor's name whom its assigns, ward name, and more.

FR4: That the user can search for all donors, the system is through a search box that facilitates access.

FR5: For the user to write the type of need for a donation, then the system will send him notifications if available.

FR6: That the user can update his data on the site easily. FR7: The system sends suggestions or advertisements periodically according to their interests.

FR8: When the user requests for donations by using app a form is displayed on the screen which is filled by user after filling this form a message is displayed that the request is posted successfully.

FR9: This feature used by the user to login into system. A user must login with his username and password to the system after registration. If they are invalid, the user not allowed to enter the system.

FR10: system should be protected from unauthorized users and access.

FR11: system should be protected from unauthorized users and access.

FR12: system should be enabling the administrator to create delete and update users.

FR13: system should allow a health institution to check availability and. validation for data.

FR14: allow consumers to contact their healthcare provider(s) any time they have a question, issue, request, or concern.

FR15: The system should allow the appearance of the nearest volunteer site and cases in need of volunteering

5.5 Non-Functional Requirements

2.1 Performance

NFR1: Each request should be processed within 10 seconds.

NFR2: Emails should be sent with a latency of no greater than 12 hours.

2.2 Usability

NFR3: ease of use and user-friendly interface, that allow users to seamlessly interact with the cases.

NFR4: interface actions and elements should be consistent, protecting the users from error.

2.3 Availability

NFR5: The system must operate 24 hours a day, seven days a week.

NFR6: The user must be able to use the system from all servers or download it from the Apple Store

5.6 Use case Diagram

5.7 Scenarios

Name	**Use case name.** Such as (Log In, Check Balance, …)
Id	An identifier that is unique to each Use Case. Such as (UC1, UC2, ….)
Actors	The type of the user that interact with the system to accomplish this task. (Customer, Bank..)
Precondition	If there were condition(s) before use case started.
Path	Use case steps or flow (interaction between user and system) 1. Step1 2. Step2 ….

Name	**Log in** as user
Id	National ID
Actors	user
Precondition	Open the app after downloading it.

Path	1- When you open the application, a screen will appear.
	2 There are 3 choices. "The user wants log in as a patient, donor, or member of the medical staff?"
	3- After selecting the "type" button log in button will appear.
	4- The user will enter the ID number, the password
	6- Next, select "Login."
	7- The ID number will be checked by the system by sending a code to the number assigned to the id.
	8- The system will give the user 4 tries if they entered the wrong code
	9- if the user enters the right code new account will be created

Name	**Explain health condition**
Id	id
Actors	Patient
Precondition	Log in as a patient
Path	1-after log in with the national id
	2-page with questions about the Patient health will be on display
	3-The user will fill the form
	4-The system will send the form to the center to determine whether it's an emergency or not

Name	**Request donation**

Id	id
Actors	Patient
Precondition	User have to enter their health condition
Path	1-after the user explained their health condition 2-when the user clicks on request donation two choices will appear 3-if the user clicked on financial donation the system will sign the user under the financial donation category and display the condition for the donors 4- if the user clicked on blood donation the system will sign the user under the blood donation category and display the condition for the donors

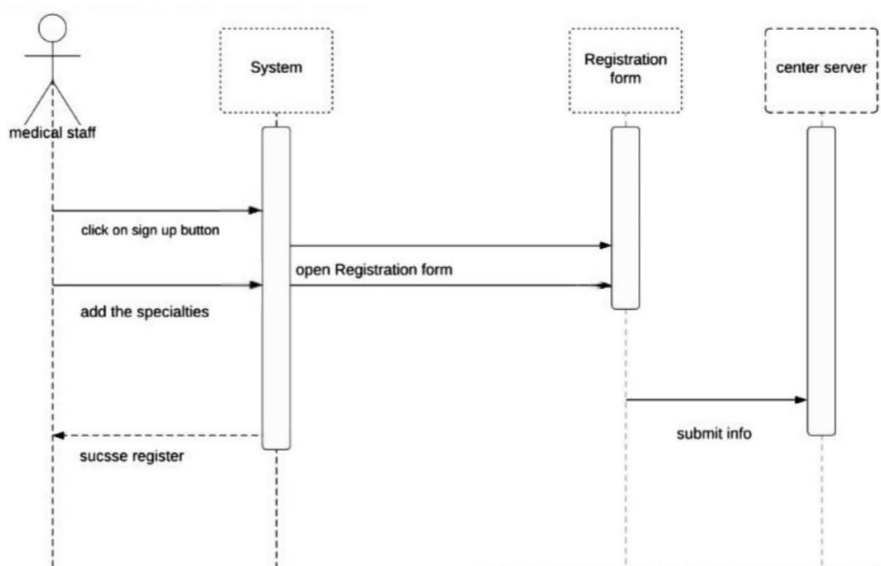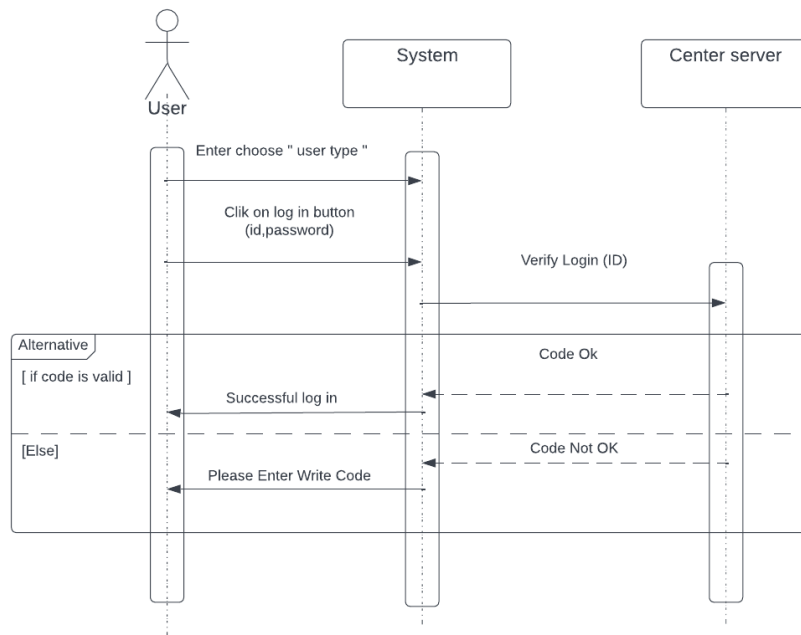| Name	**Sign up for donation**
Id	U4
Actors	Donor
Precondition	Log in as a Donor

Path	1-after log in with the national id
	2- When the user clicks on sign up for donation two choices will appear, financial donation and blood donation.
	3-if the user clicked on financial donation the system will display all the health conditions under the financial donation category from the most urgent to the less ones.
	4- If financial donation is confirmed the system will allow the user to choose a method and pay online.
	5- If the user clicked on blood donation the system will display all the health conditions under the blood donation category from the most urgent to the less ones.
	6-in case the user confirmed the request to donate blood the system will allow user to book an appointment.

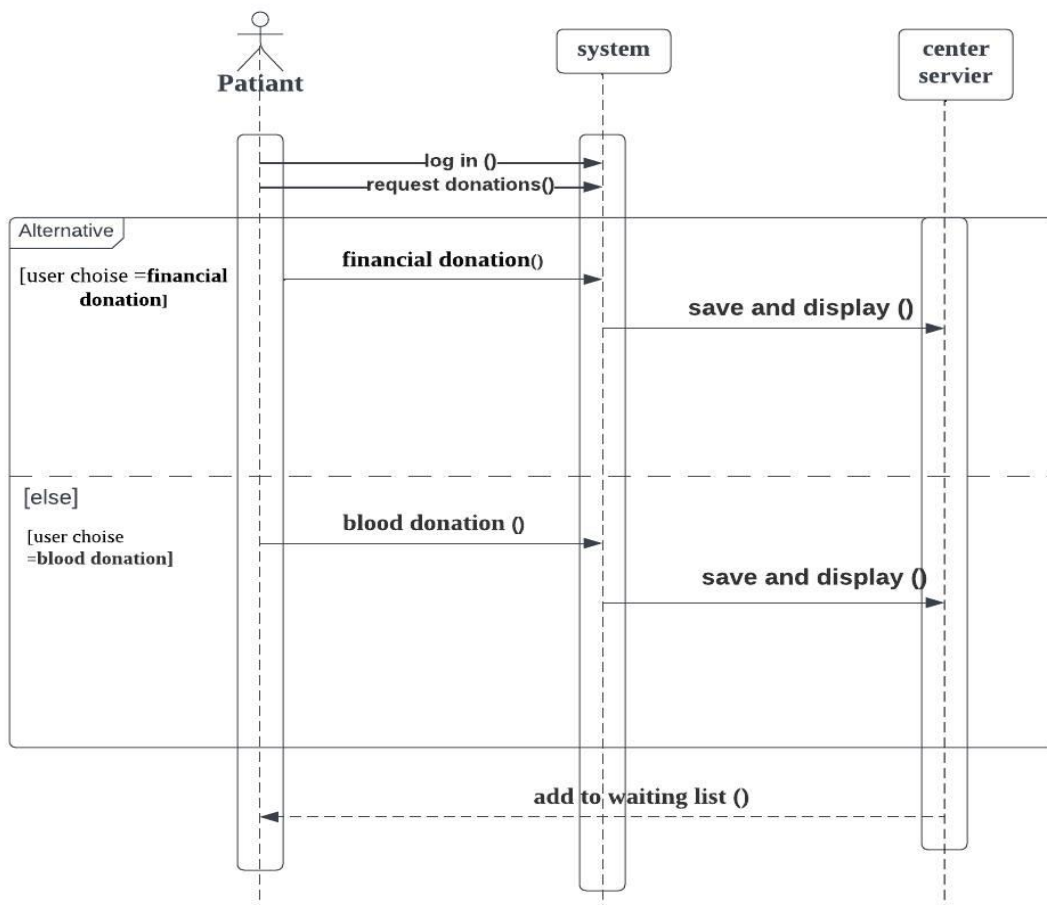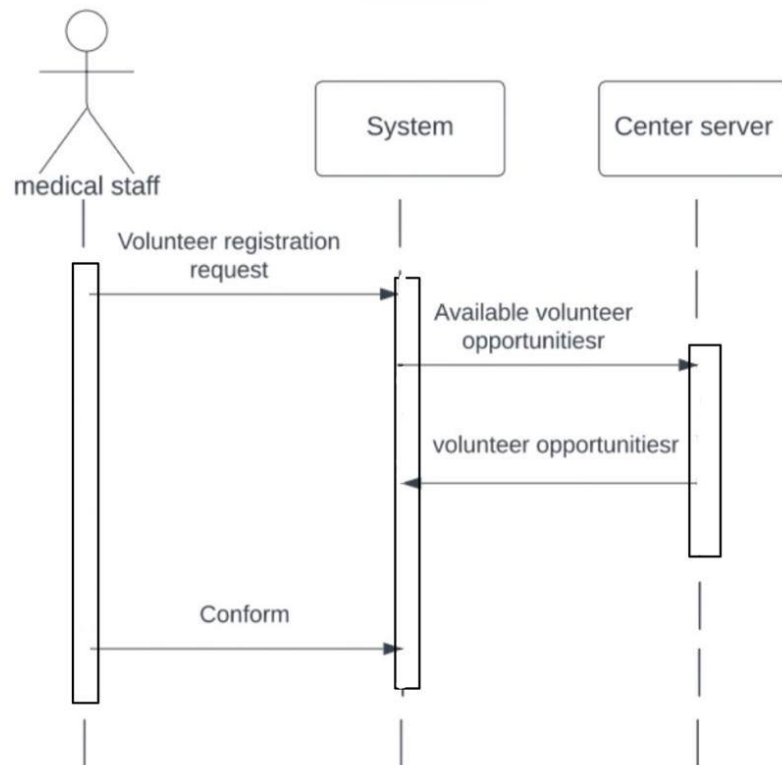|	
Name	**Enter info**
Id	id
Actors	Medical staff
Precondition	Log in as a medical staff
Path	1-After sign up
	2-Open the registration form that show options of medical specialties
	3-The user will choose the specialty
	4-The system will send the form to the center
	5- The center will send the success of the registration acceptance

Name	**Request for volunteer**
Id	id
Actors	Medical staff
Precondition	User have entered the certificate and experience
Path	1-after enter certificate and experience. 2- A new page will open for volunteer registration. 3- the system will send to the center the available volunteer opportunities. 4- The center will send to the system the volunteer opportunities available to the volunteer. 5-The volunteer will confirm the volunteer opportunity.

6 Design Phase

6.1 System Sequence Diagram

6.2 Class Diagram

Donor
- Donor_Name: String
- Donor_ID: int
- Donor_Age: int
- Gender: String
- DMedical_history

+ Log_in()
+SignIn_don()
+cancel_don()

SingIn_Donation
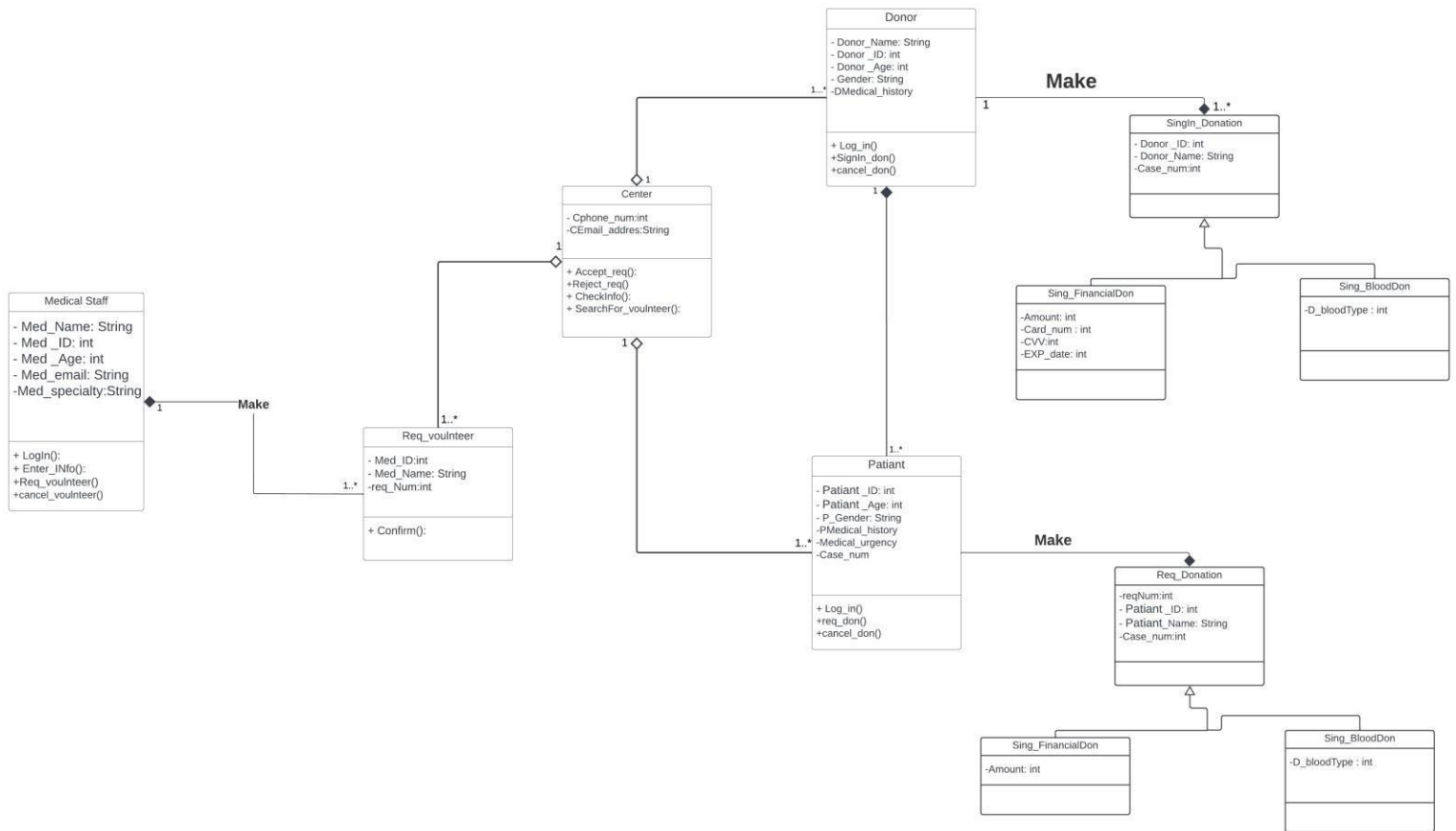- Donor_ID: int
- Donor_Name: String
- Case_num:int

Make

Sing_FinancialDon
-Amount: int
-Card_num : int
-CVV:int
-EXP_date: int

Sing_BloodDon
-D_bloodType : int

Center
- Cphone_num:int
-CEmail_addres:String

+ Accept_req():
+Reject_req()
+ CheckInfo():
+ SearchFor_voulnteer():

Medical Staff
- Med_Name: String
- Med _ID: int
- Med _Age: int
- Med_email: String
-Med_specialty:String

+ LogIn():
+ Enter_INfo():
+Req_voulnteer()
+cancel_voulnteer()

Make

Req_voulnteer
- Med_ID:int
- Med_Name: String
-req_Num:int

+ Confirm():

Patiant
- Patiant _ID: int
- Patiant _Age: int
- P_Gender: String
-PMedical_history
-Medical_urgency
-Case_num

+ Log_in()
+req_don()
+cancel_don()

Make

Req_Donation
-reqNum:int
- Patiant _ID: int
- Patiant_Name: String
-Case_num:int

Sing_FinancialDon
-Amount: int

Sing_BloodDon
-D_bloodType : int

7 Conclusion

One of the mejor defficelates is that the app need alots of reaceshes so the amount if time didnt fit to the work we had to do.

I as we move forword the reqirment keep on changing and we have to keep up and devolp a new features to suite the users leatest requirement.

Simplifying the idea of the system despite its difficulty diversity for example we tried to make app as understandable as possible to the users

We also faced promblems while working with the team such as definding the work ,look for ideas and agree on the final summit