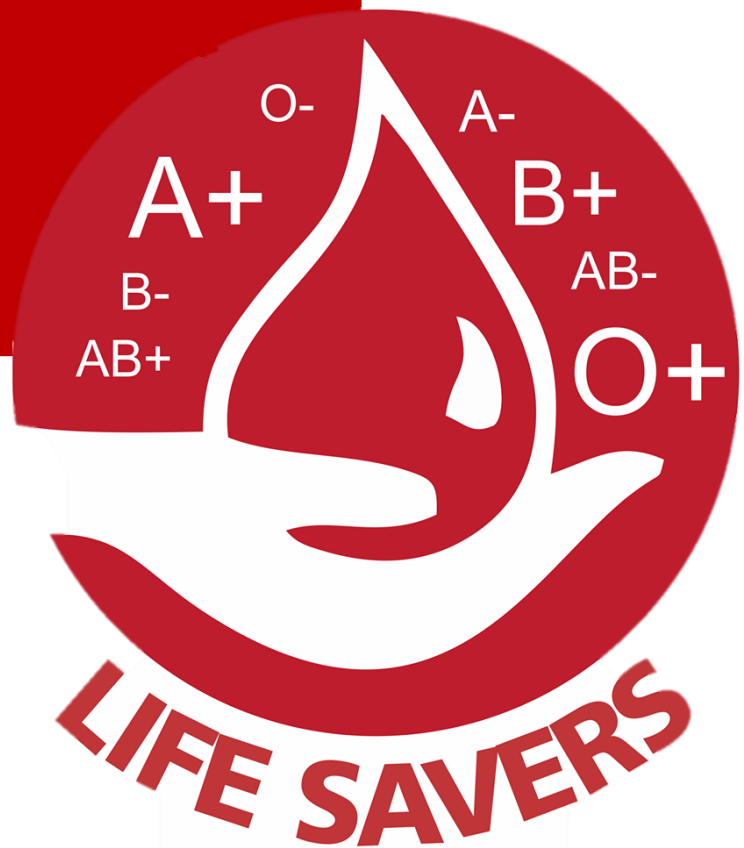


BLOOD DONATION APP



The Hateful Eight

Team members: Radu Bâlc
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Team leader: Stefan Delibaş

Summary:

1. Short presentation of the project requirements
2. Presentation of the used technologies
3. Use case diagram(s)
4. Sequence diagram(s)
5. Activity diagram(s)
6. Class diagram(s)
7. Database diagram
8. Deployment diagram
9. Architecture diagram
10. Help File

On our application, users (depending on what they are) can do the following:

- **Doctors** can request blood for their patients and check the status of their request
- **Donation Center Personal** can collect data about donors, manage the journey of blood containers, contact the closest eligible donors, process requests, as well as see available stocks
- **Donors** can register, login, edit personal data, monitor the history of their blood donations and receive messages from donation center personal
- **Admin** can add Doctors

Implementation phases:

Week 1-2: -We formed the team and chose a team leader.

-We chose the task management app, application type, programming language, database and ORM technology

-We also did a meet-up and online hangout with the team in which we discussed how to organize the project and how to manage each other's responsibilities

Week 3-4: -We created the use case diagram and the UML diagram

-We also created the database in SQL Server

Week 5-6: - We familiarized with Entity Framework and managed to generate the code from the database

Week 7-8: -Each of us did 2-3 sequence diagrams corresponding to a functionality

-We also started the implementation by doing the CRUD operations for each repository

Week 9-10: -We created the activity, class, architecture and collaboration diagrams

-We continued with the implementation of the project

Week 11-12: -We finished the implementation and started working on the documentation and presentation

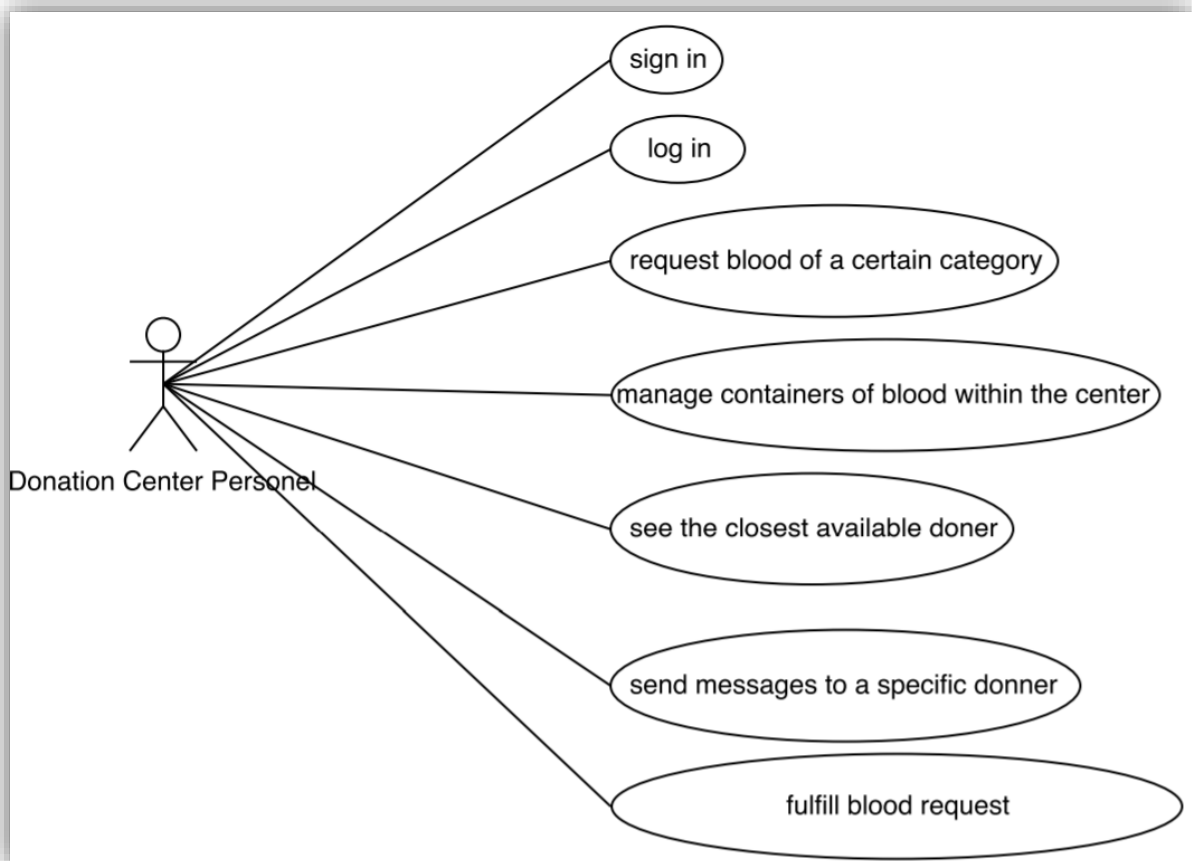
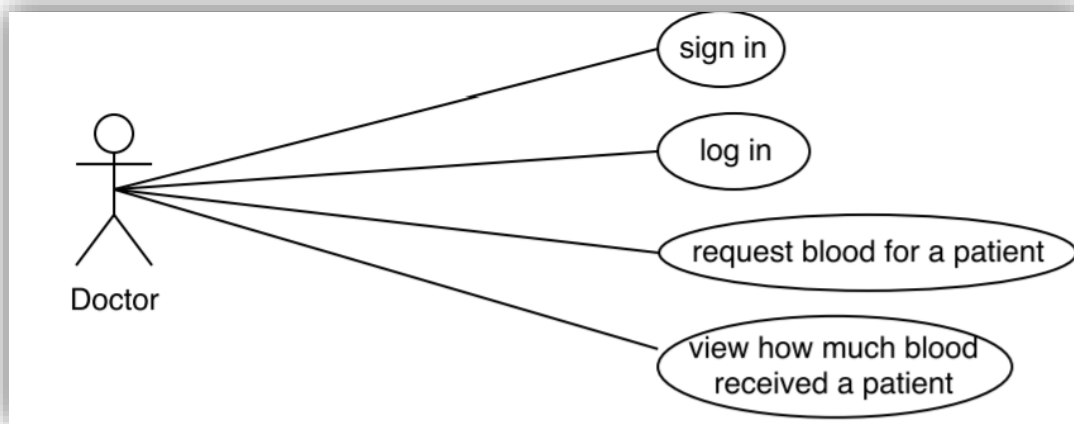


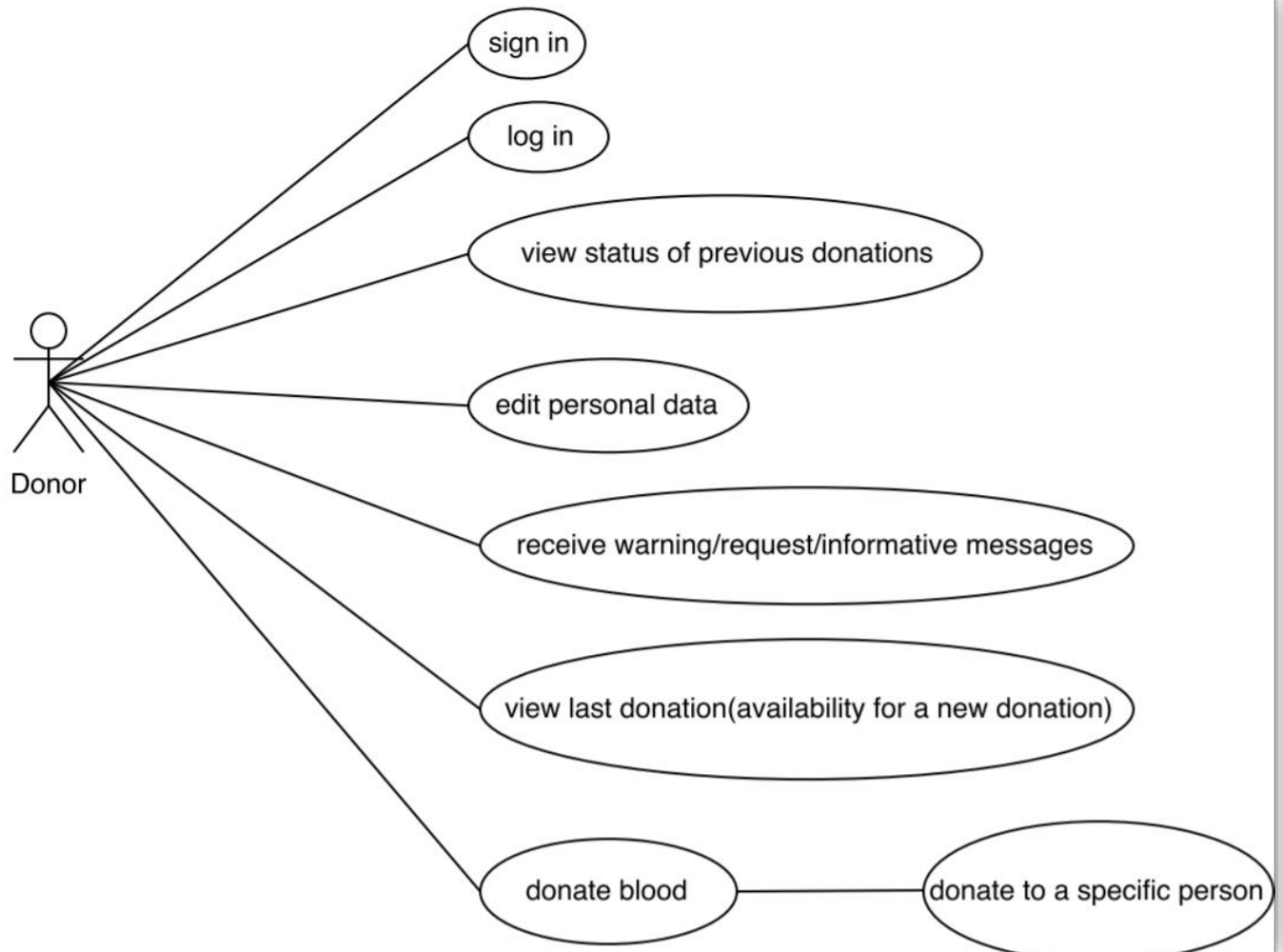
We develop a desktop app using Windows Forms, .NET Framework with Entity Framework ORM and SQL Server for Database storage.

As for technologies used for creating this project, we used:

- ❖ For communication: Messenger, Google Hangouts, TeamViewer
- ❖ For diagram creation: draw.io, Star UML
- ❖ For version control: GitHub
- ❖ For task management: Trello

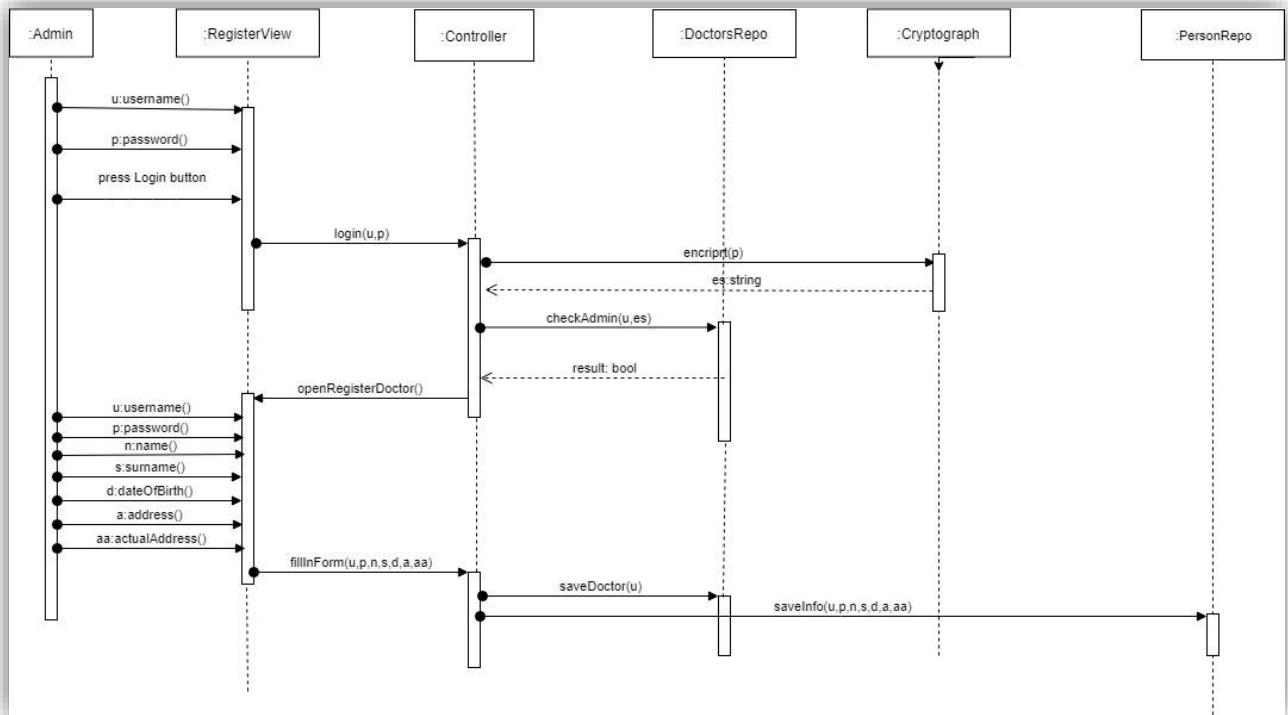
Use Case Diagrams



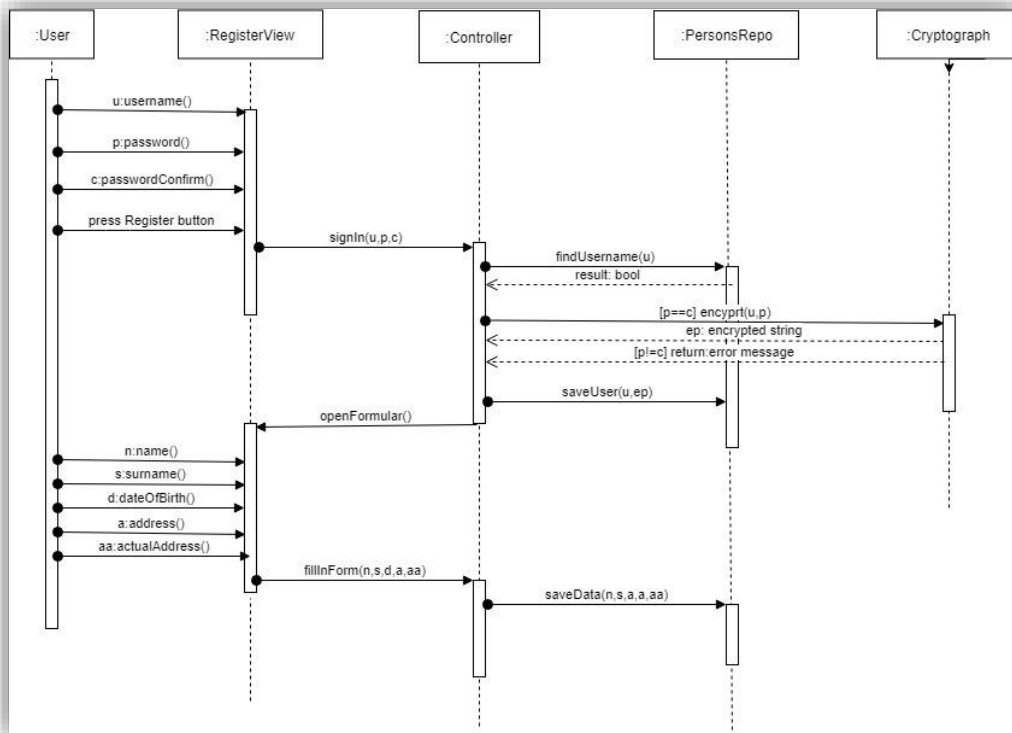


Sequence diagrams

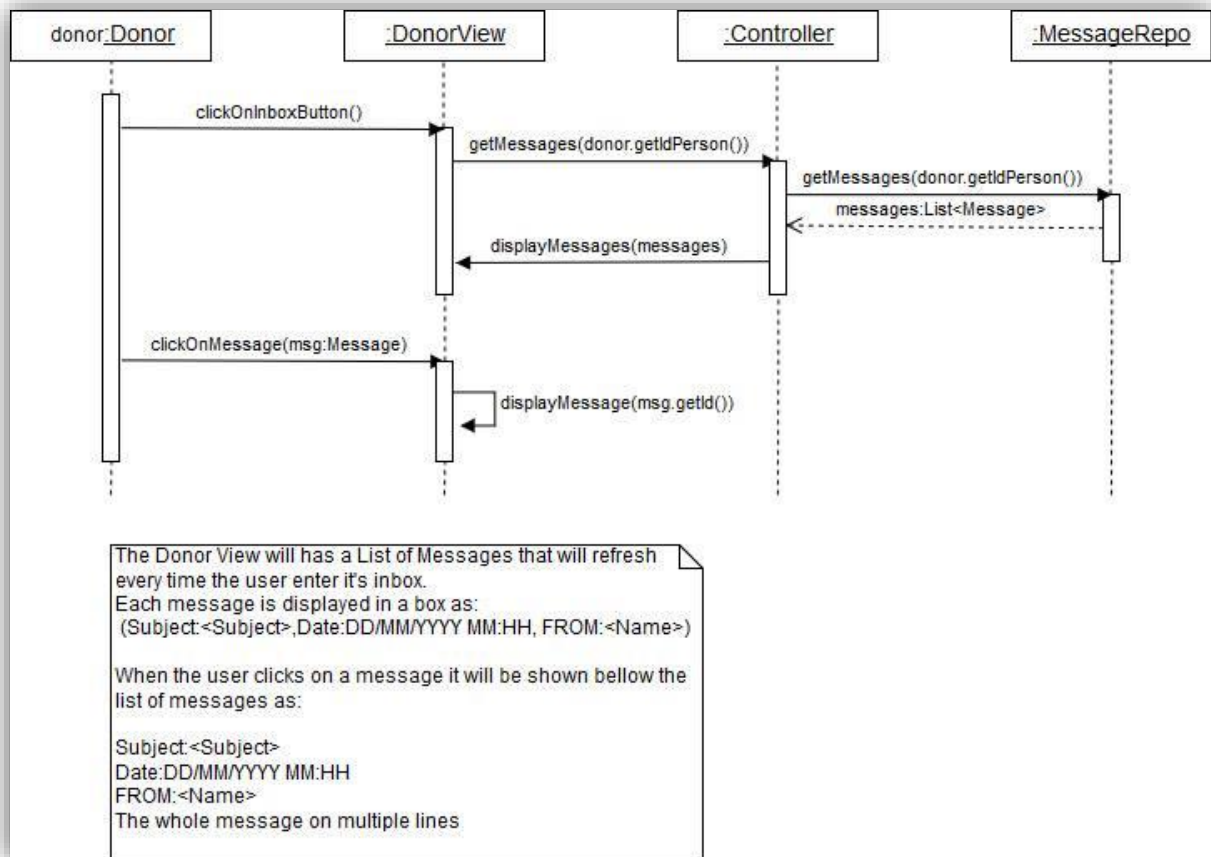
Login



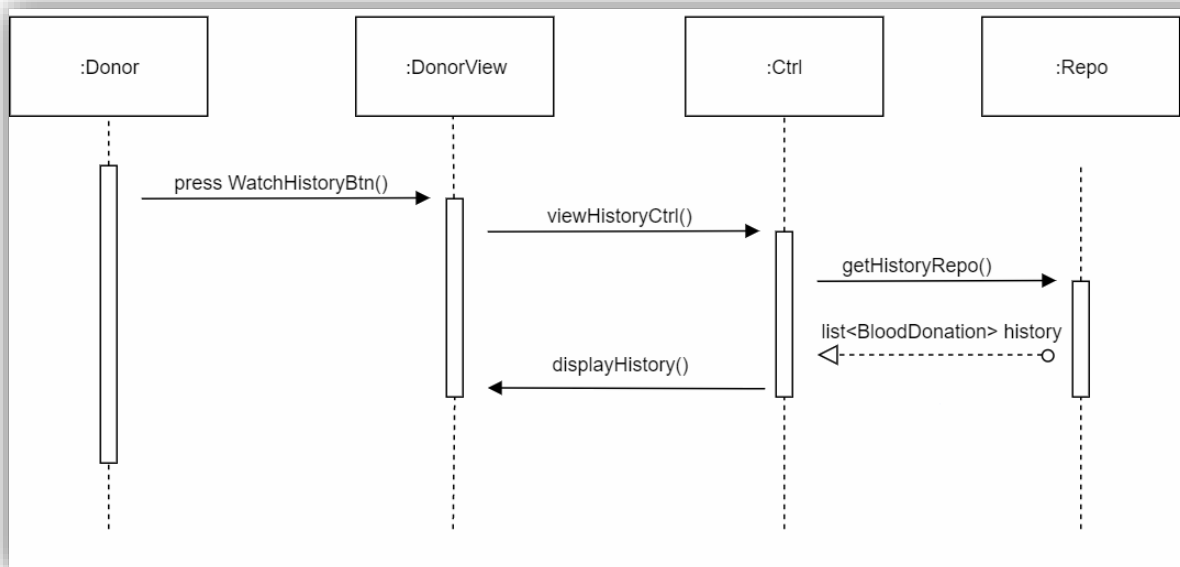
Register



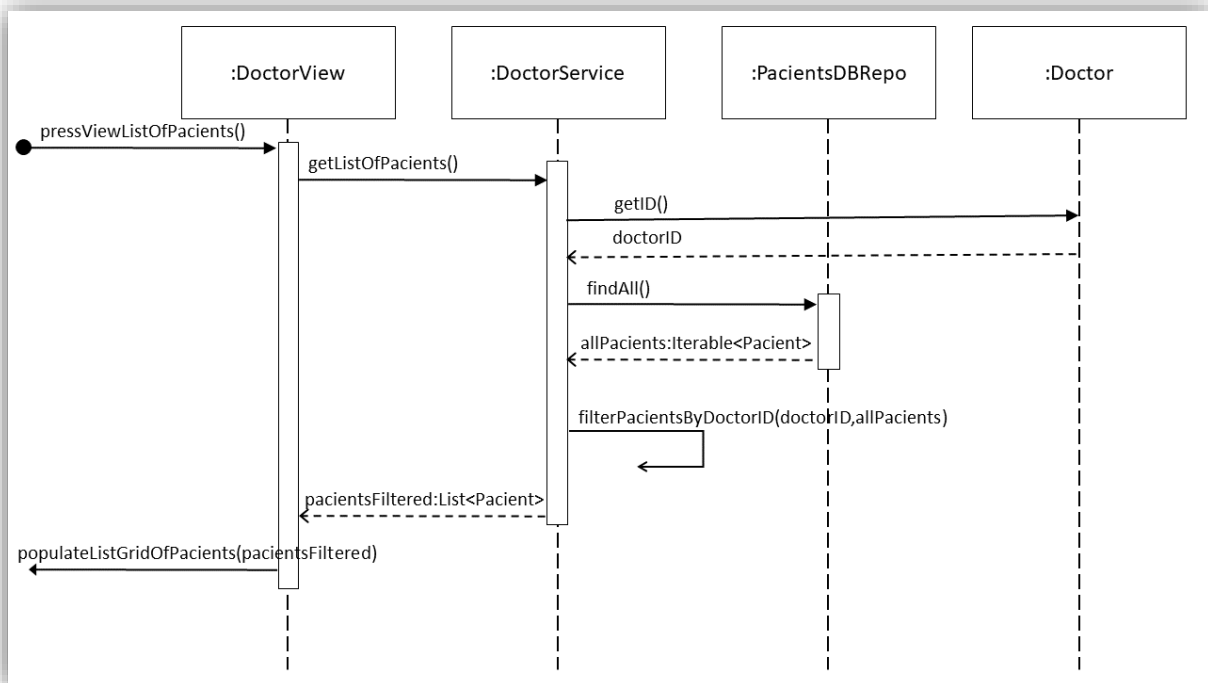
Donor see messages



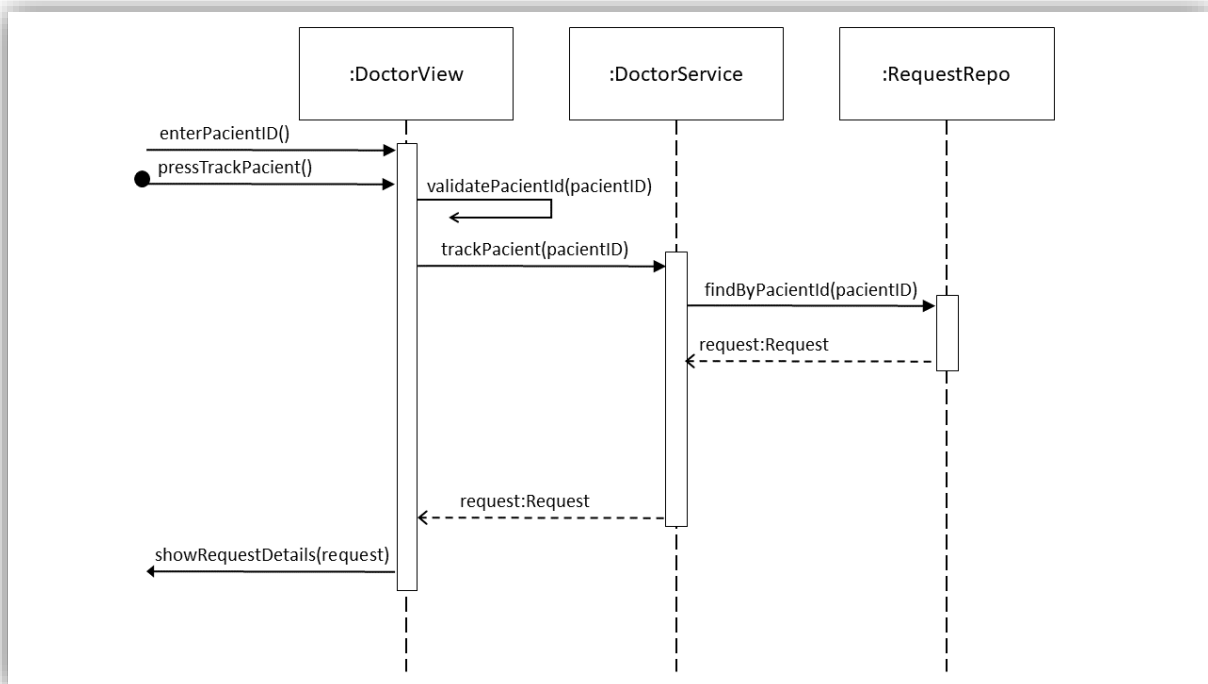
Donor watch history



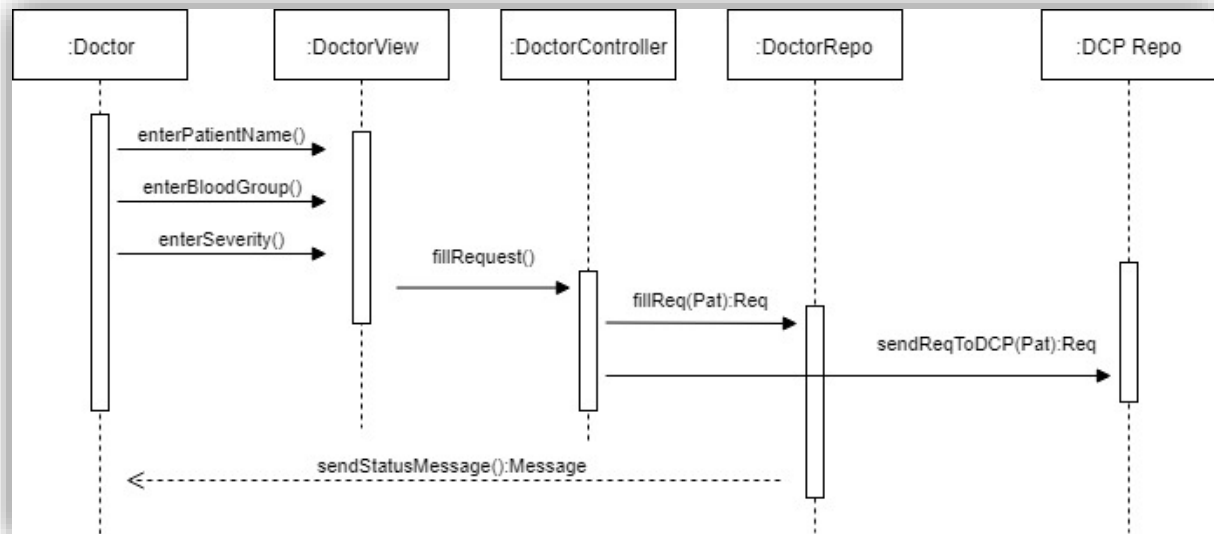
Doctor View list of patients



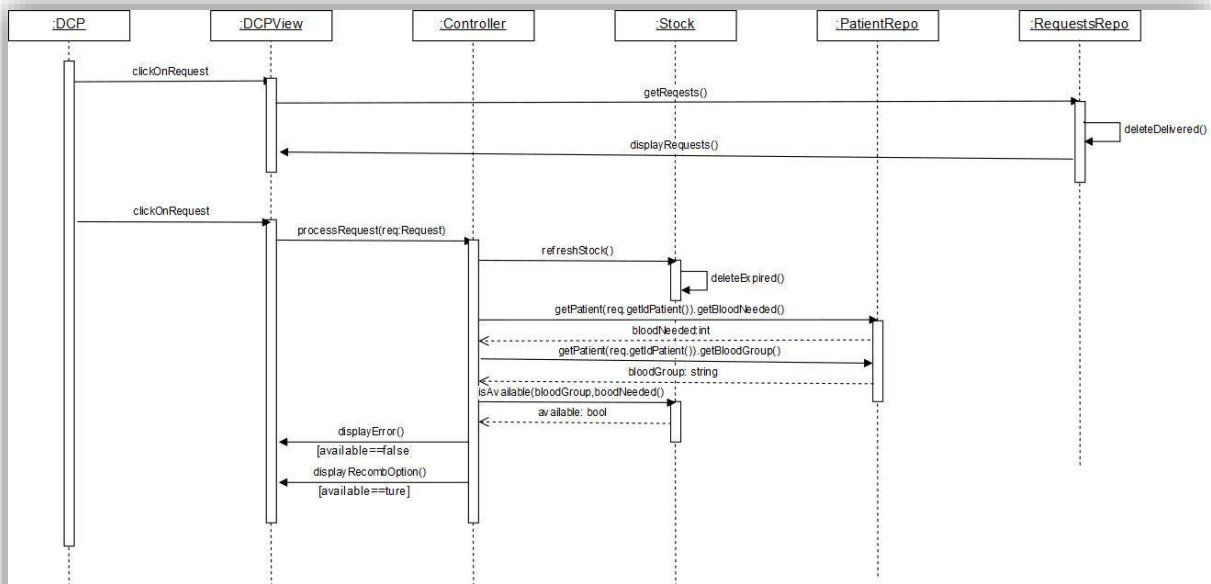
Doctor track a patient



Doctor request blood



Donation Center Personal process request

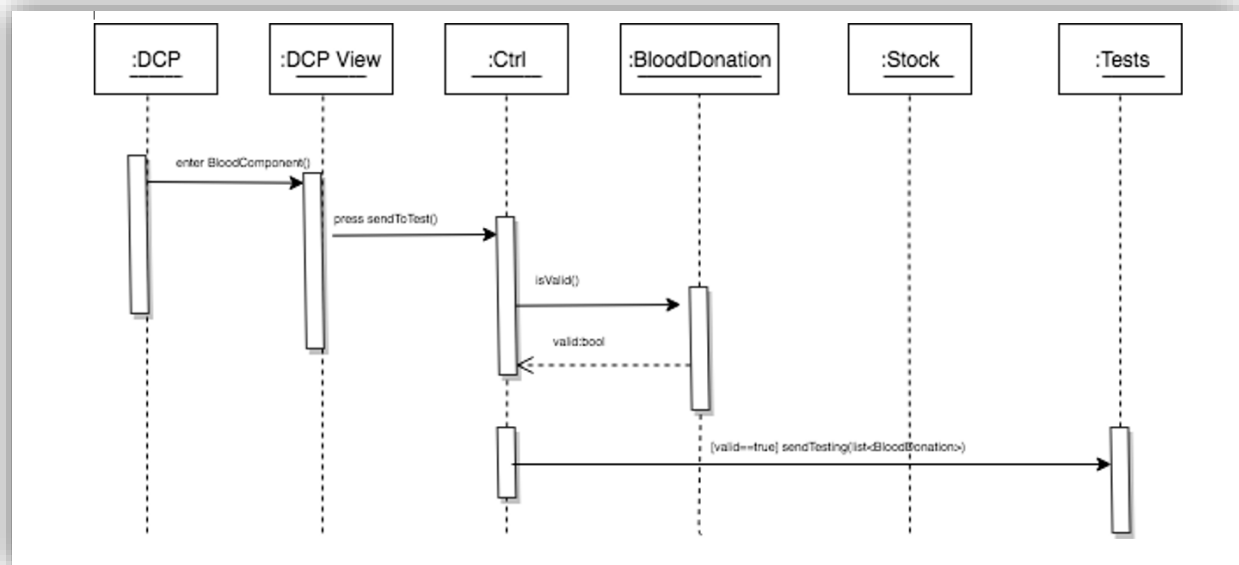


The DCP View will have a List of Requests that will refresh everytime the user enter it's requests.
 Each request is displayed in a box as:
 (Doctor:<Name> Date:DD/MM/YYYY MM/HH, Severity<type> Status:<status>)

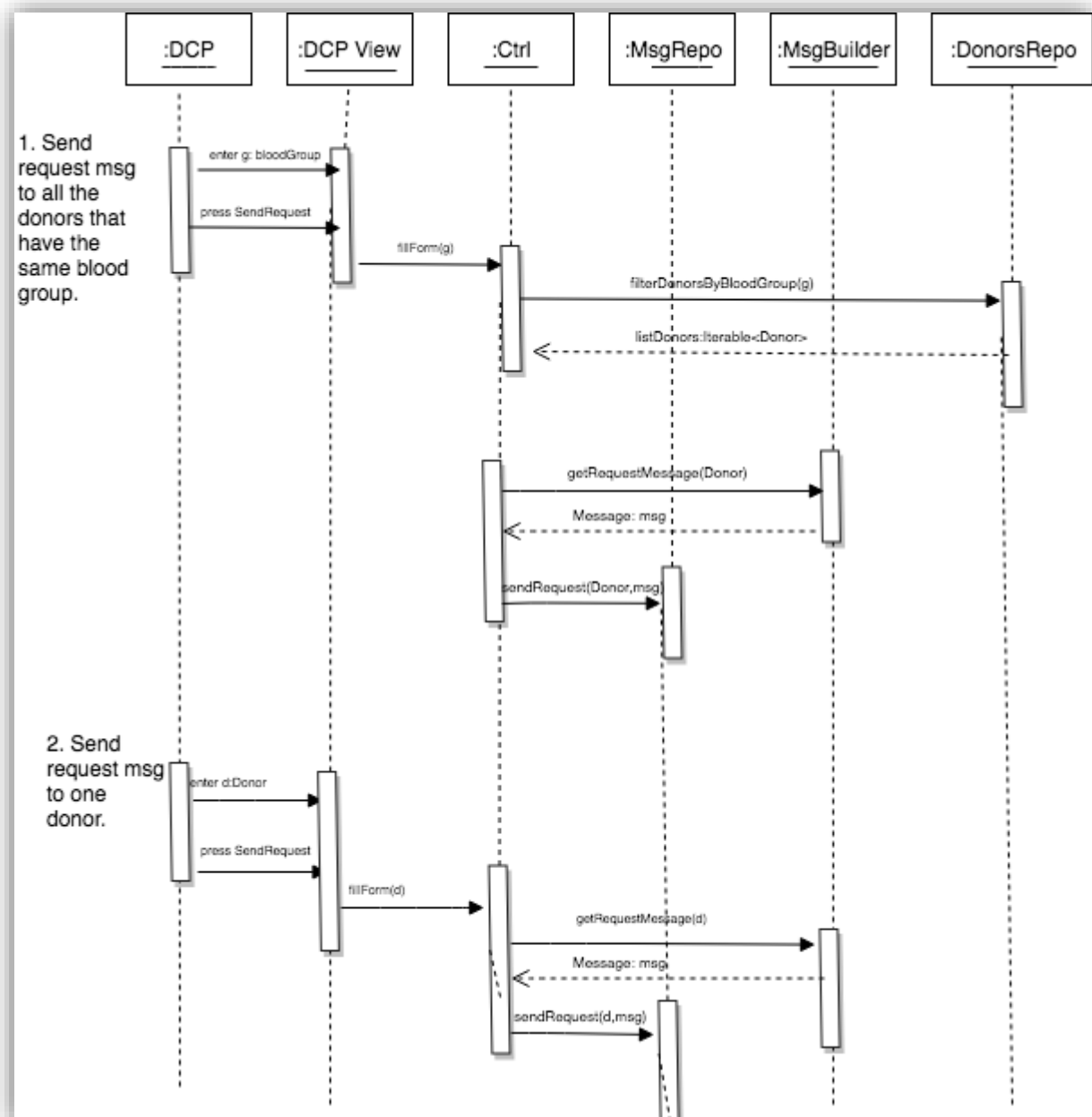
The status field is a down drop menu at it can have the following values:
 requested/processing/delivered

When the DCP clicks a request an option will appear if they want to send the blood components to recombination or an error dialog if the request cannot be fulfilled(not enough blood components of that type)

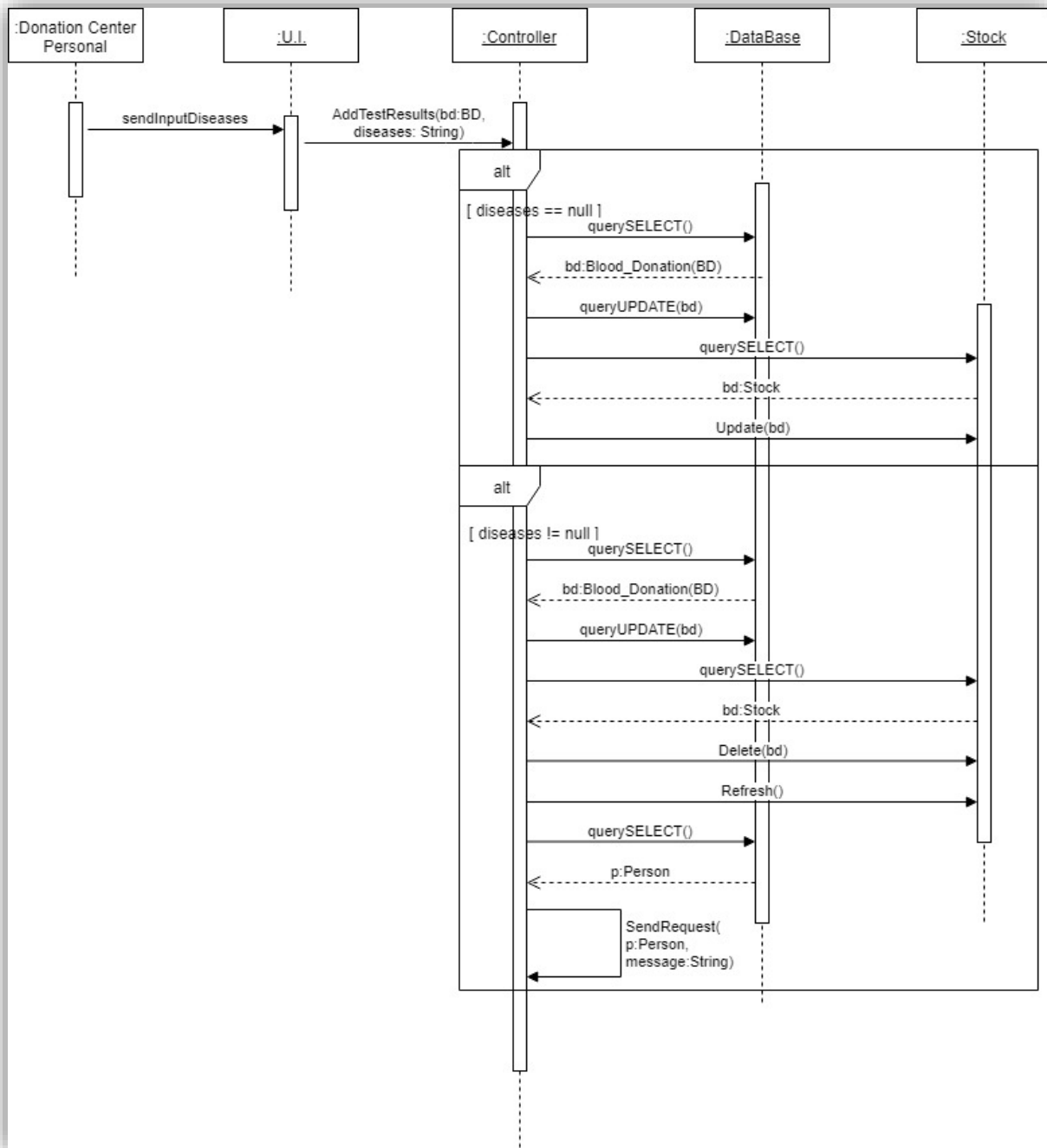
Donation Center Personal send blood to test



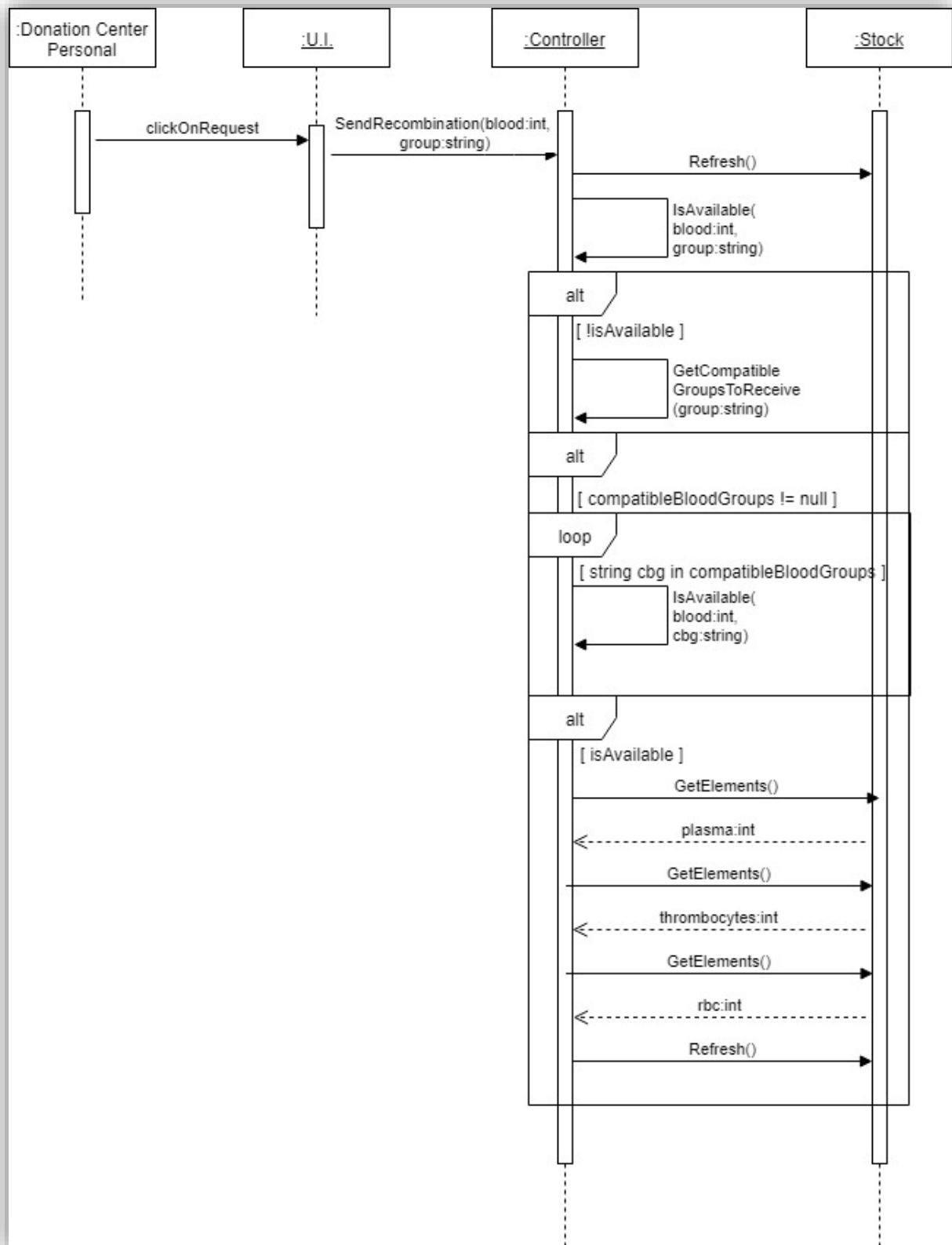
Donation Center Personal send message to the nearest Donors



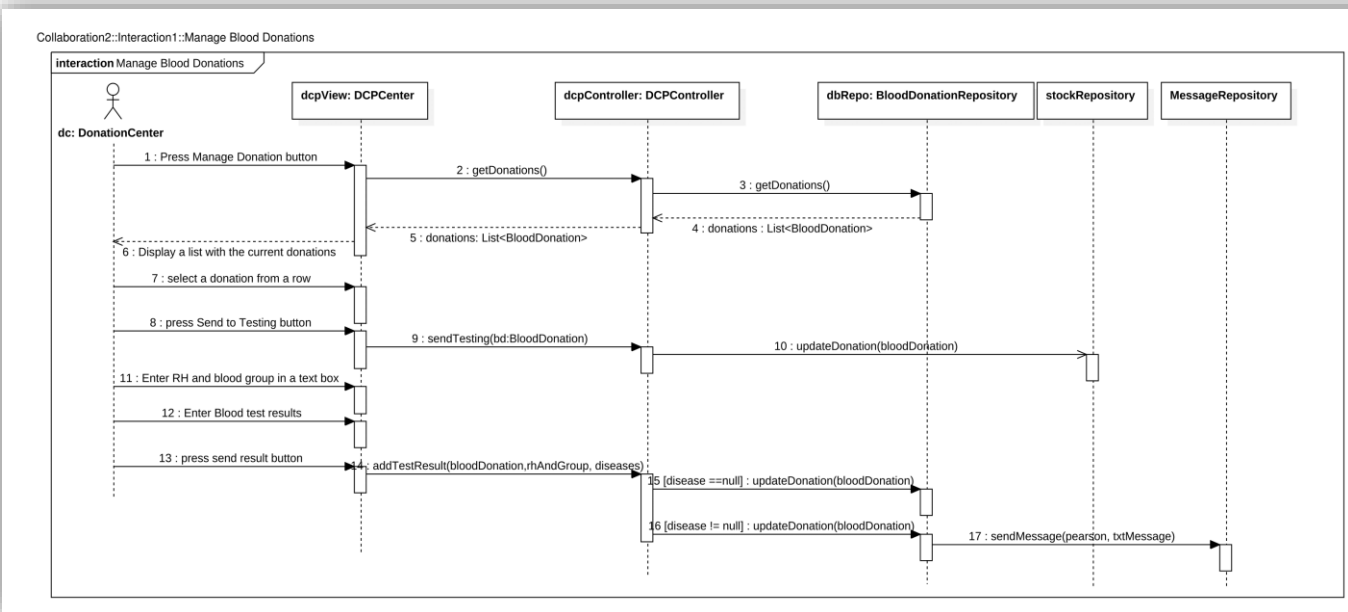
Donation Center Personal approves donations



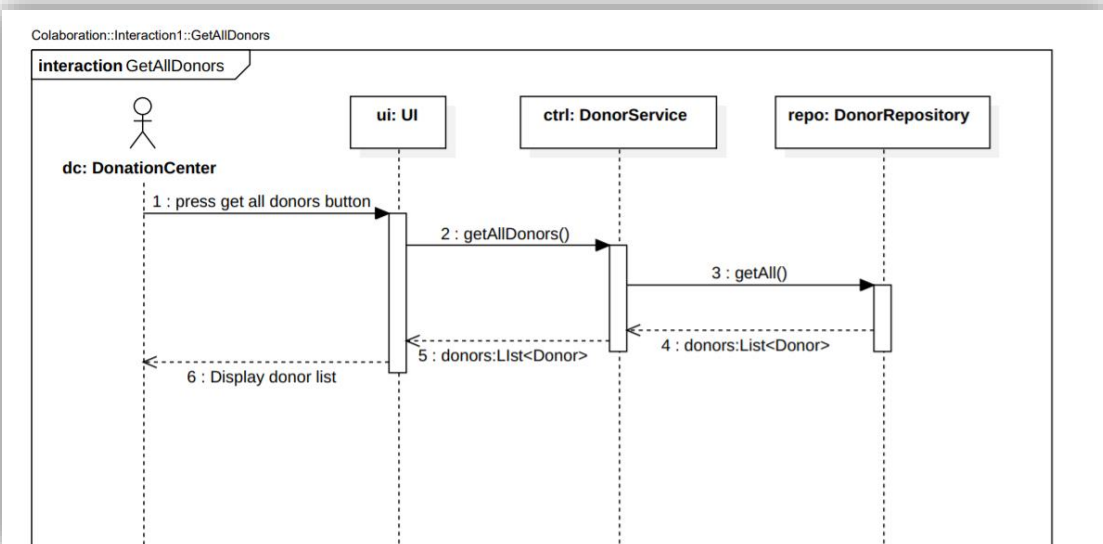
Donation Center Personal sends components to recombination



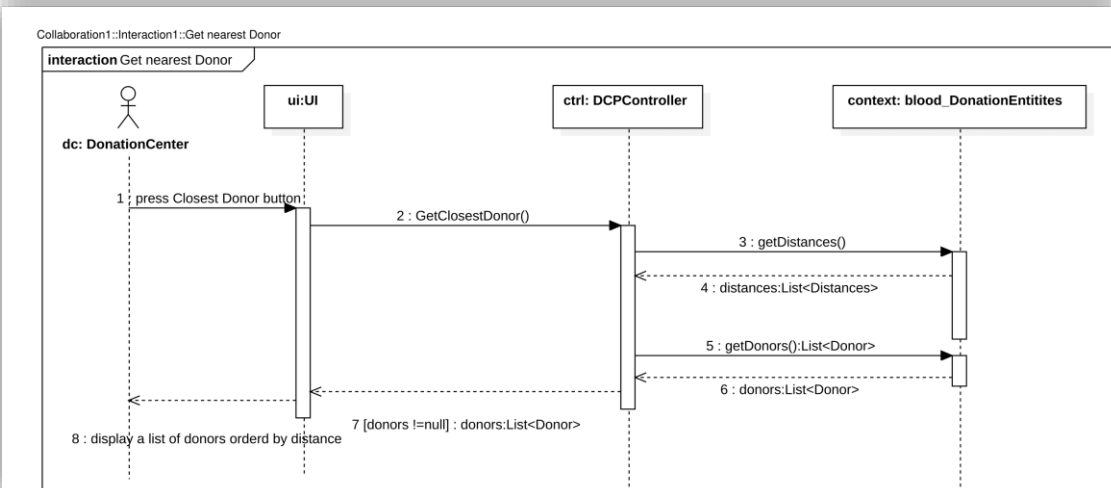
Donation Center Personal manage blood



Donation Center Personal view all donors

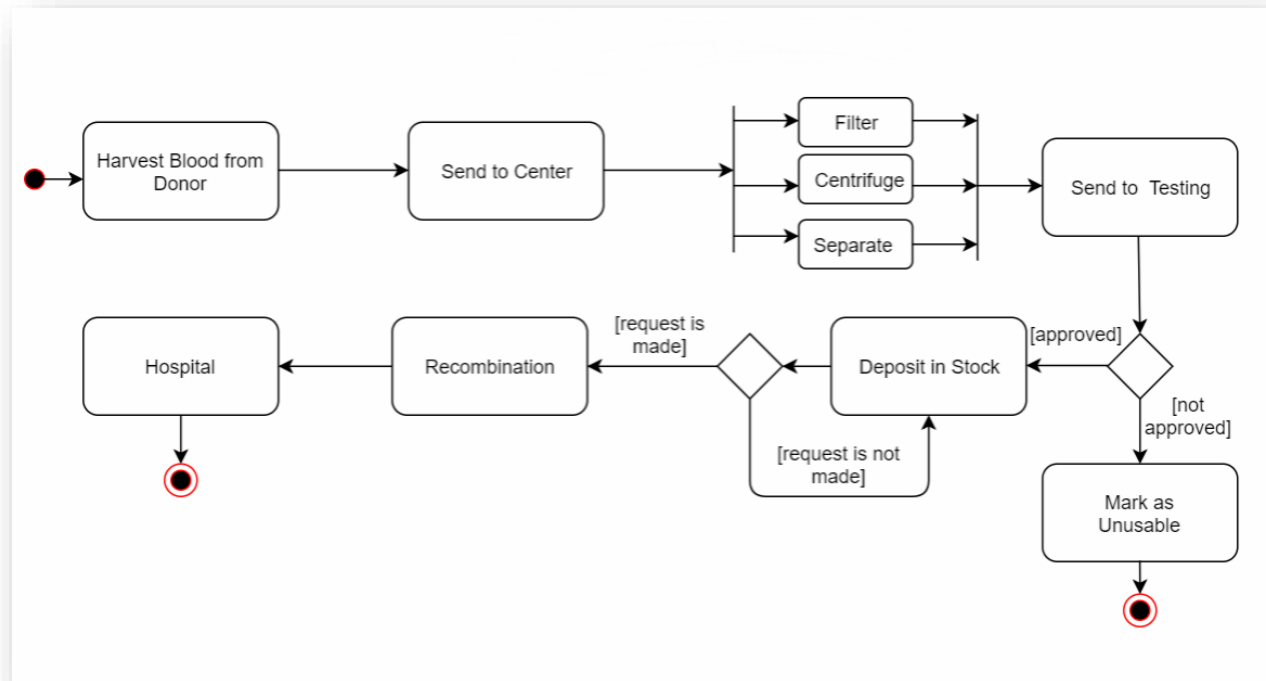


Donation Center Personal get the nearest donors

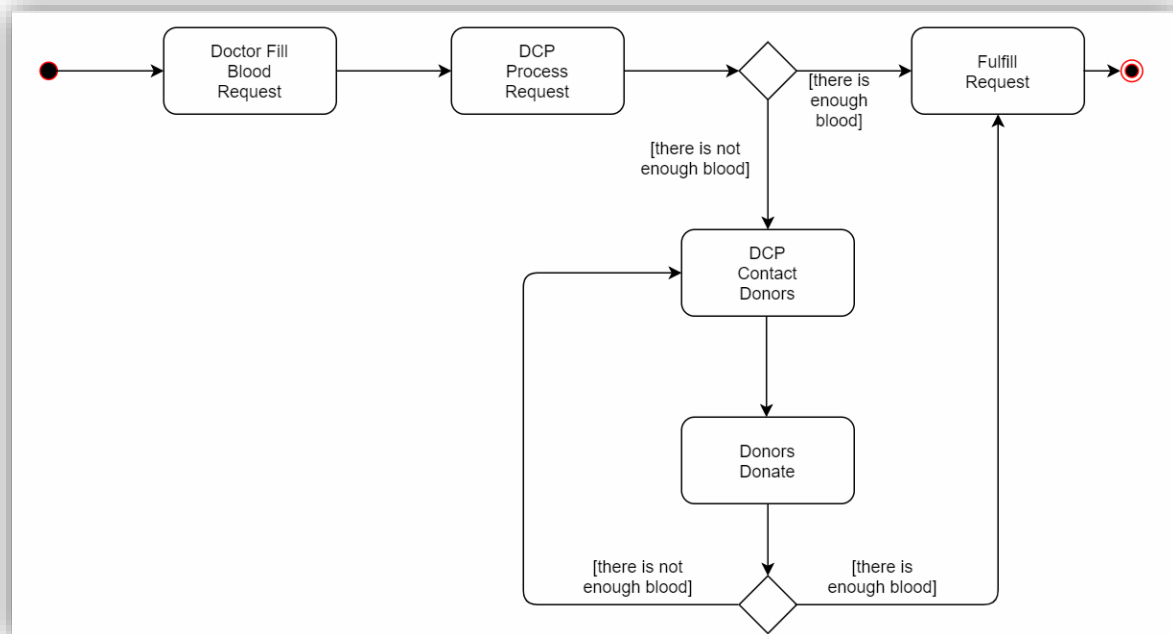


Activity diagrams

Blood route



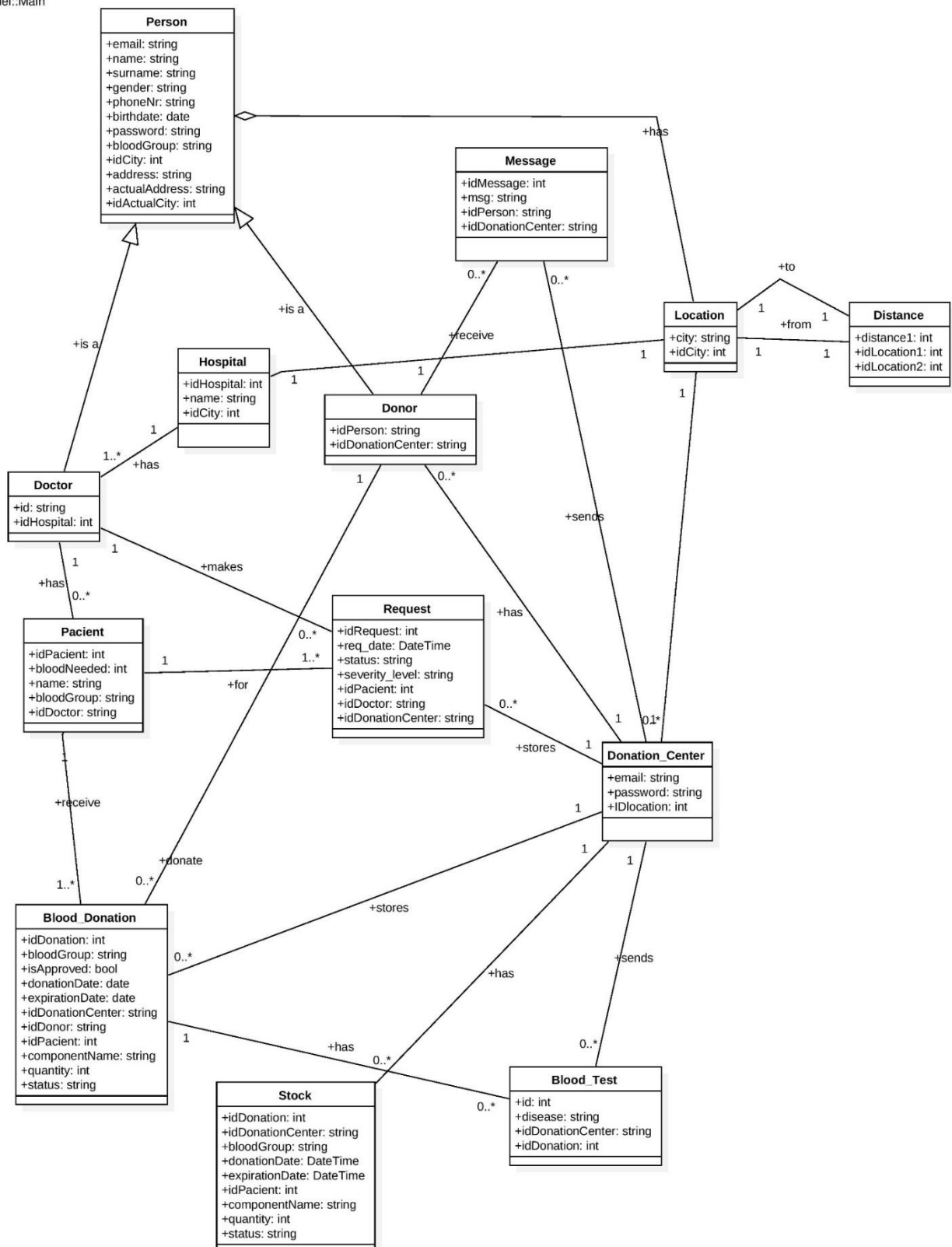
Request route



Class diagrams

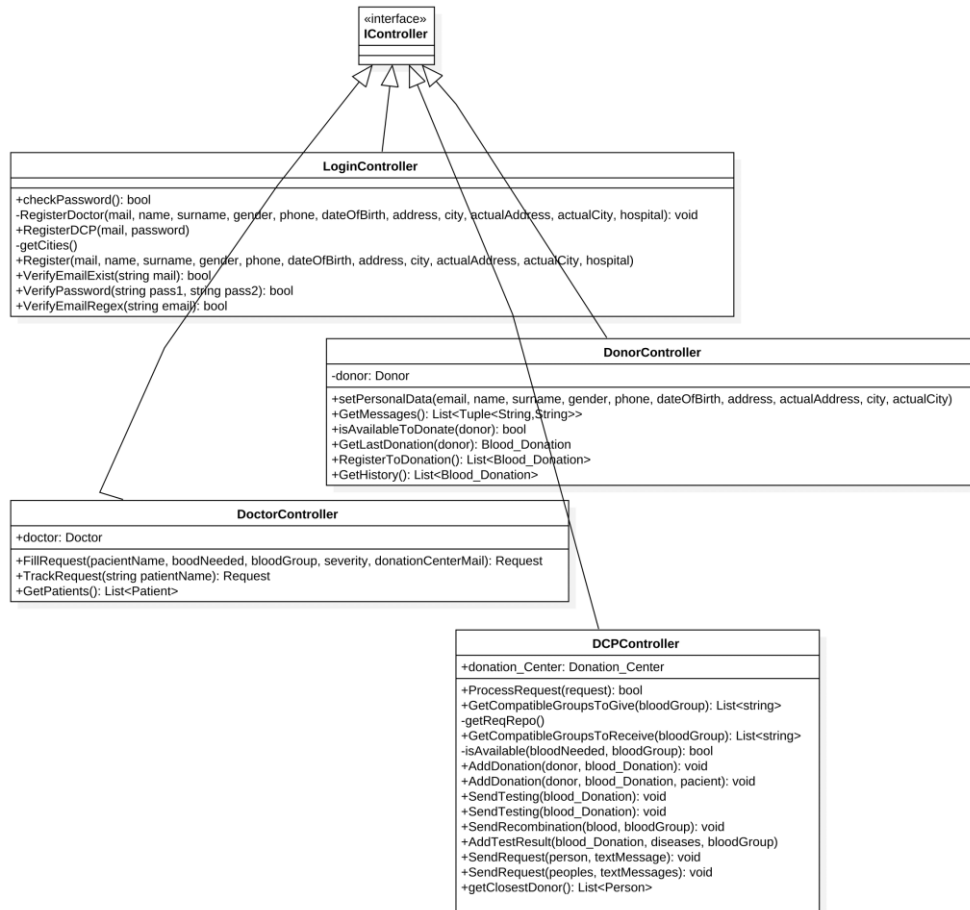
Models

Model::Main

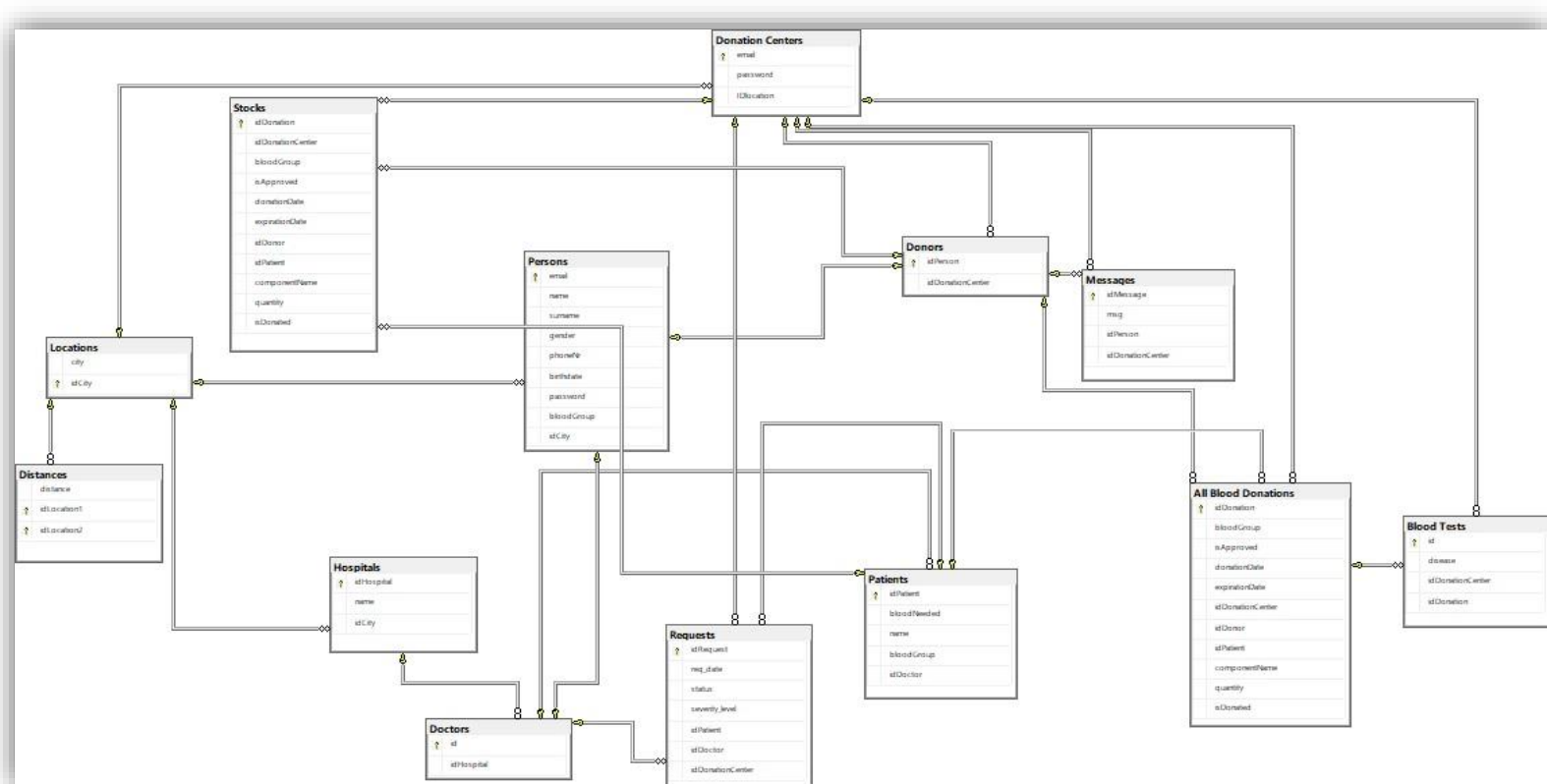


Controllers

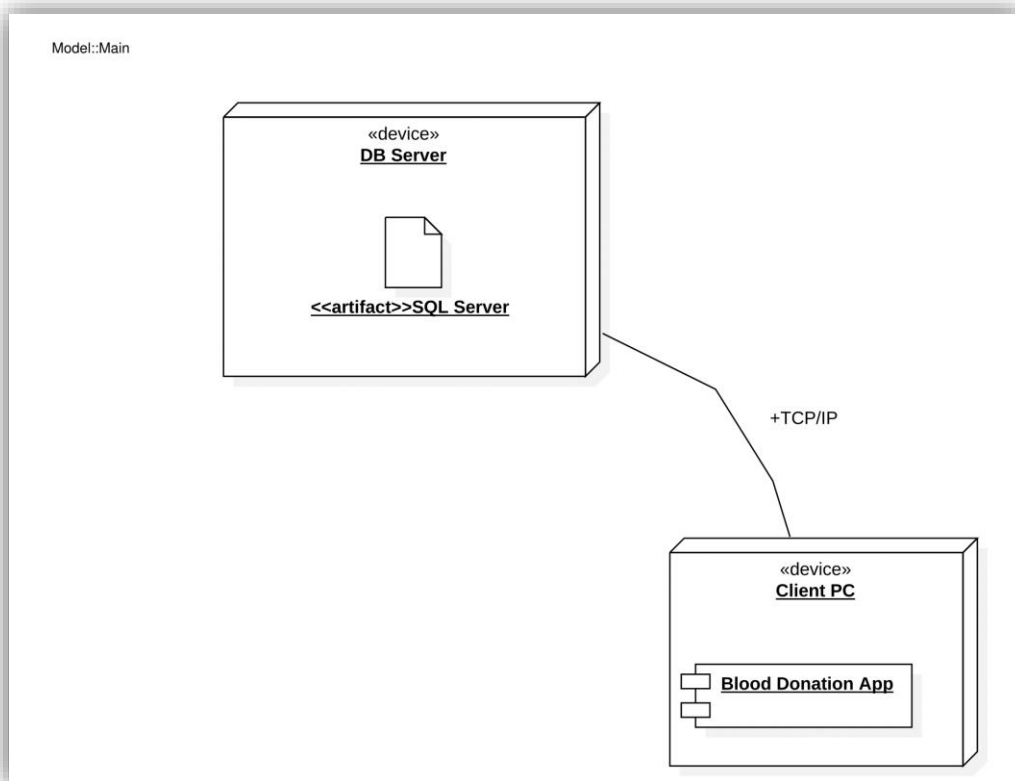
Model::Main



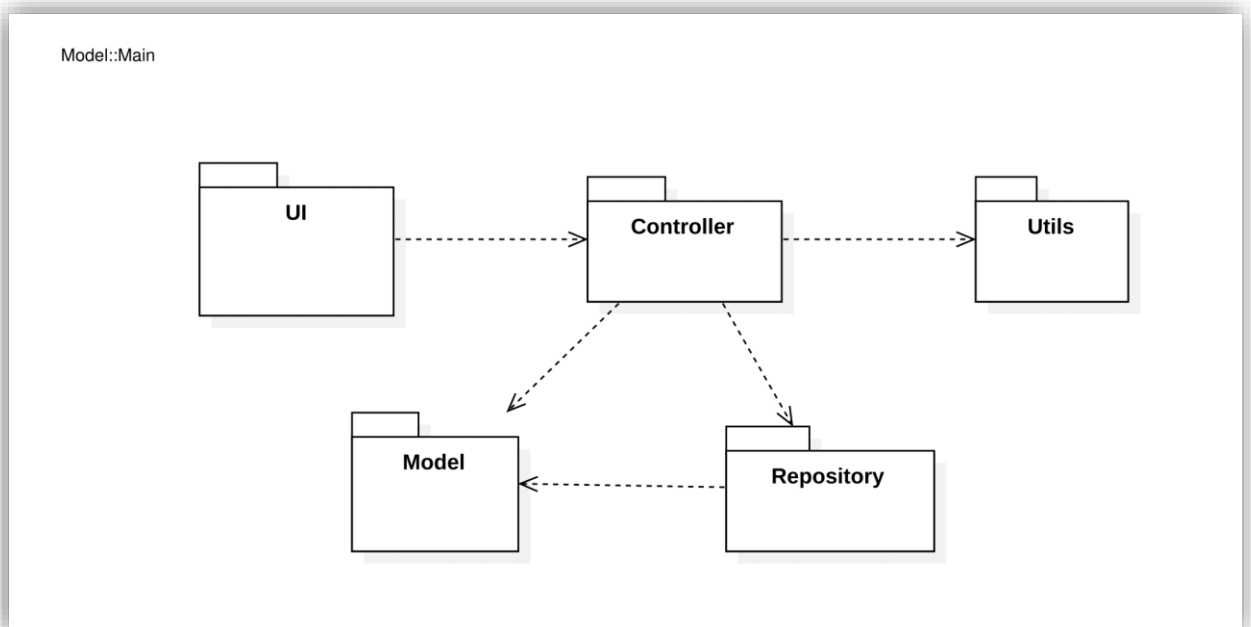
Database diagram



Deployment diagram



Architecture diagram



Help File

When you first open the Blood Donation App, you will see that you can either Register yourself, or if you are already registered, you can simply Login to your account.

Donor

In order to be registered as a Donor, you will first have to create an account on our app with your email address and password. You will have to enter your password twice so that the app will know that the password is correct. Then after clicking the "Register" button you will have to enter some additional information for the app to recognize you as a Donor. Finally, by clicking the "Save Data" button, your registration will be complete. For you to go to the next step, which is to donate, you will have to go back and login with your credentials.

After login, the main page will appear. From here you can view your donation history, see your last donation, change your personal data and see messages .

Whatever your choice of action will be, you will be able to return to the main page easily by clicking the house icon on the top left corner.

By clicking the "Donation History" button, a view with all of your previous donation dates will appear.

By clicking the "Last Donation" button you will get a more detailed view of your last donation. You will see your last donation date, whether your blood was approved by the Donation Center Personal, blood expiration date, your blood group, status of your blood donation. If your blood was successfully donated, then you will also see the component that was donated.

By clicking the "Messages" button, you will be able to see all the messages from the Donation Center Personal. In order to read a certain message, you just have to click on it and the message content will appear underneath.

Maybe you moved, or you changed your telephone number. Will you still be able to use the app? Of course, yes. By clicking on the "Personal Data" button, you can simply update your information.

Doctor

If you are a doctor and you want to use the application, you will first have to personally ask the Admin to add you as a doctor to the application. Although, if you are a doctor you can still be a donor and donate blood.

By logging in as a doctor in the application you will be able to request blood, view your patients information and see a list of all of your patients.

When you want to make a request for blood, you have to enter the following information: the patient's name who needs blood, quantity of blood, blood group, severity of the request and the Donation Center Personal to which the request is made.

If you want to see a patient's information, you simply input its name and click the "View Info" button. The rest of the text boxes will populate with the corresponding information.

The "View All Patients" feature will allow you to see a list with the names of all your patients.

Donation Center Personal

If you are someone from the donation center and you use this application, you can do the following: send request message to the nearest donors, manage requests, send donations to analysis and last but not least donate.

If you are in big need of blood donations you can send request messages to the nearest donors by clicking the "Send Request Message" button. You will write the message and input the blood group blood you need. This message will be sent to all the nearest donors with the given blood group.

By managing a request, you can click on a blood request and if there is enough blood in the stock, a confirmation message will appear on the screen. Otherwise, the message will say that the stock is insufficient.

After the donations are made, you can choose to send the blood to analysis. If the analysis is already done, then you can opt to send the results to the donor. If the donor has any disease, then he will get a message.

By donating, you practically send the required blood to a certain patient. All you have to do is to input the patient's name , the donor's email and click the "Donate" button.