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Department of Software Engineering



المملكة العربية السعودية

جامعة جدة

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قسم هندسة البرمجيات

THE RED HOPE

SE2

SUPPERVISED BY DR. OMNIYA

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Introduction:

The critical need for accessible and efficient blood donation systems has never been more evident. Every year, countless lives hang in the balance, relying on the availability of safe blood supplies for emergencies and medical treatments. However, the process of connecting blood donors with those in need has been plagued by challenges, from the difficulty of locating donors to the inefficiencies in managing blood inventory effectively. This is where The Red Hope steps in, a revolutionary, user-friendly application designed to transform the landscape of blood donation and distribution. The Red Hope swiftly identifies nearby hospitals and recipients in need of donations, providing real-time notifications for urgent cases. Its seamless user experience ensures quick access to donation statuses, highlighting its pivotal role in bridging the gap between donors and recipients. The Red Hope aims to address the complexities of blood donation systems, ultimately saving lives and making a positive impact on communities worldwide.

Student Name	ID	Tasks
Ebtehal Alzahrani	2210441	General idea & Interview with a Hematologist
Razan Aljadaani	2210535	Collecting data from users & Interview with public person
Muruj Alshaikh	2210505	Finding users & Interview with a donor
Shahad Hasnoon	2210508	Main problem & Target User & Interview with Recipient
Lana Ibrahim	2210369	Interview with a head of blood bank & questionnaire

1. General Project Idea:

The Red Hope is a user-friendly application designed to serve as a reliable reference for blood donors and individuals facing emergencies requiring blood. Upon login, users complete a questionnaire, detailing crucial information like blood type and health status. The app then identifies the nearest hospitals in need of donations, with real-time notifications for urgent cases. The focus on seamless user experience ensures quick access to donation statuses and emphasizes the app's vital role in connecting those who can help those in need.

2. Targeted Users:

The target users are all people in need of blood donation and all people of different ages who are able or willing to donate blood.

3. Main Problems Our Application Will Solve:

Our application aims to address the difficulties associated with searching for blood donors, finding recipients, and managing blood supplies, ultimately saving lives.

For blood donors, the difficulty lies in finding donation opportunities and understanding the process. Many potential donors are unaware of where to donate or have misconceptions about donation procedures.

For recipients, finding trustful donors and accessing suitable blood units in a timely manner is often problematic due to inefficient inventory management systems.

Our solution is to provide a user-friendly platform that connects donors, recipients, and blood banks, streamlining communication and donation processes. Additionally, our application will make blood donation easier and more accessible for everyone involved and it will ensure that critical blood supplies are available when needed.

4. Collecting Data From Users:

We collected Data from users by conducting interviews and questionnaires.

5. Finding Users:

We have found users at the University “students”, and we communicated with family members, friends and specialists.

6. Interviews:

a. Interview with a Hematologist:

Interviewer: Ebtehal Alzahrani

Interviewee: Bader Allahyani

Questions:

- A. How can technology improve blood donor-recipient communication in emergencies?**
- B. What are the Key factors to consider when designing a blood donation platform?**
- C. What are the various conditions and limitations for blood donors that should be considered, including factors like age restrictions and health conditions?**

Hematologist's answers:

- A. Technology can definitely improve blood donor-recipient communication in emergencies by providing faster and more convenient ways to connect. For example, an app that uses location data to notify nearby donors of emergencies could increase the chances of getting a suitable blood donor quickly.**
- B. Accessibility is crucial, ensuring it's user-friendly for donors and recipients to navigate, register, and make inquiries. Security measures must safeguard data privacy. Privacy considerations should govern data collection and sharing, respecting user consent. Lastly, reliability is paramount, ensuring the platform can handle its workload effectively.**
- C. In general, people aged 18 and older can donate blood. They should be in good overall health, free from chronic illnesses or infectious diseases that could be transmitted through transfusions. Moreover, donors must weigh at least 110 pounds, have normal blood pressure, and meet the required hemoglobin level.**

b. Interview with Head of the Blood Bank:

Interviewer: Lana Ibrahim

Interviewee: Ghazi Alghamdi

Questions:

- A. Is it possible to communicate with donors?**
- B. Do you find it difficult to arrange appointments with donors?**
- C. Are there problems in arranging donors according to their blood type?**

Head of the Blood Bank's answers:

- A. Yes, but sometimes donors don't commit the appointment.**
- B. Yes.**
- C. Yes.**

c. Interview with a recipient:

Interviewer: Shahad Hasnoon

Interviewee: Budoor Baazim

Questions:

- A. Have you ever had difficulty finding blood donors?**
- B. What are the biggest difficulties you faced?**
- C. Do you think that having a blood donation program would be useful in treating these problems?**

Recipient's answers:

- A. Yes.**
- B. I could not easily find a donor with the same blood type as me.**
- C. Yes.**

d. Interview with a friend (donor):

Interviewer: Muruj Alshaikh

Interviewee: Lujain Alzahrani

Questions:

- A. Have you ever donated blood? If you have, what was your experience of donating blood?**
- B. What are the difficulties or challenge encountered you when attempting to donate blood?**
- C. What innovative features do you recommend we integrate into our app to enhance user experience and functionality?**

Donor's answers:

- A. Yes, I have, I saw an announcement on social media for someone that needs urgent donating, but it was not clear, so it was a bit difficult.**
- B. As I said the announcement was not clear on what blood types can donate to them so I had to do my research and I went there with my sister then when I arrived my sister could not donate because she was young and in a bad health. We did not know that young people could not donate.**
- C. I would like to suggest that you clarify which blood types can donate and receive from each other and the characteristics of the donor.**

e. Interview with a public person:

Interviewer: Razan Aljadaani

Interviewee: Taghreed Abed

Questions:

- A. What motivates you to donate blood?**
- B. Do you feel satisfied with the current system of donating blood?**
- C. Why did you decide to become a blood donor?**

Public person's answers:

- A. Because it is a voluntary act that helps save sick individuals, and due to the need for a large number of people to undergo blood transfusions annually or due to some individuals being involved in accidents, there is a need for blood transfusion.**
- B. Donating blood through the current system has both positive and negative aspects. The positive aspect is the ability to quickly find a large number of blood donors to help patients and save lives by posting advertisements on social media platforms. The negative aspect is the lack of knowledge among donors about the safety of their bodies and their freedom from diseases that prevent blood donation, as well as not knowing the time required for blood transfusion, their blood type, and whether it matches the patient's blood type.**
- C. Due to someone experiencing severe bleeding and not being able to find their blood type in the blood bank, I decided to donate blood and encourage many others to donate different blood types to help patients.**

7. Questionnaire:

a. Screenshots:

هل تيرعت بالدم من قبل ؟ *

☐ نعم

☐ لا

إذا كانت اجابتك نعم فكم مره تيرعت ؟ *

☐ مرة واحدة

☐ مرتين

☐ ثلاث مرات

☐ اكثر من ثلاث مرات

☐ لا ينطبق

هل تجد بعض الصعوبات في التبرع بالدم ؟ *

☐ نعم

☐ لا

هل انت مهتم بتطبيق يسهل لك عملية التبرع بالدم ؟ *

☐ نعم

☐ لا

هل تعتقد ان تطبيق الامل الاحمر سيساعد في تحصيل متبرعين بسهولة ويسر ؟ *

☐ نعم

☐ لا

☐ ربما

ماهي مقترحاتك لتطبيق الامل الاحمر للتبرع بالدم ؟

اجابته

محو النموذج إرسال

عدم إرسال الكلمات المرور عبر نماذج Google مخطأ.
لقد تم إنشاء هذا المحتوى ولا اعتماد من قبل Google. الإلتزام عن إساءة الاستخدام - شروط الخدمة - سياسة الخصوصية

نماذج Google

تطبيق الامل الاحمر للتبرع بالدم

السلام عليكم ورحمة الله وبركاته .
الامل الاحمر هو تطبيق سهل الاستخدام تم تصميمه ليكون بمثابة مورد يمكن الاعتماد عليه لكل من المتبرعين بالدم والافراد الذين هم في حاجة ماسة إلى الدم أثناء حالات الطوارئ.
هذا الاستبيان يجمع البيانات بسرية .

muruj4@gmail.com
تدليل الحساب
غير مشترك

تشير إلى أن السؤال مطلوب *

الإسم *

اجابته

الجنس *

☐ أنثى

☐ ذكر

هل تيرعت بالدم من قبل ؟ *

هل تفضل ان تكون مواجبتك عند التبرع بالدم منتظمة ؟ *

☐ نعم

☐ لا

هل سمعت من قبل بتطبيقات التبرع بالدم ؟ *

☐ نعم

☐ لا

هل انت مهتم بتطبيق يسهل لك عملية التبرع بالدم ؟ *

☐ نعم

☐ لا

هل تعتقد ان تطبيق الامل الاحمر سيساعد في تحصيل متبرعين بسهولة ويسر ؟ *

☐ نعم

☐ لا

☐

b. Link

<https://docs.google.com/forms/d/e/1FAIpQLSfZomHuL1OlpNDoCDsCnGz0mkV-h2Ytg6SHQKqCC3laug1S6Q/viewform>

Student Name	ID	Tasks
Ebtehal Alzahrani	2210441	Program tasks
Razan Aljadaani	2210535	Insights
Muruj Alshaikh	2210505	Users' needs
Shahad Hasnoon	2210508	Visualization of the data collected
Lana Ibrahim	2210369	Raw data

8. Raw Data:

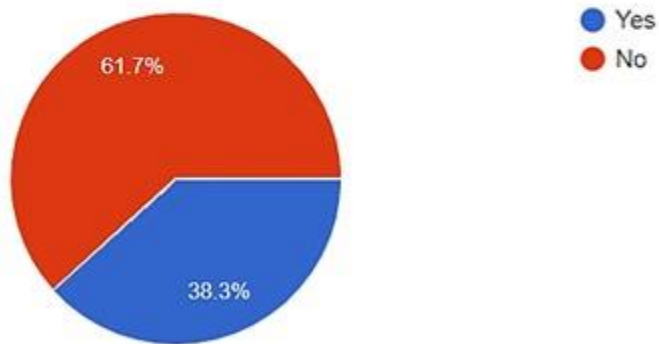
Question	Answers	Responses
1. Gender ?	Female	82
	Male	12
2. Have You Donated Blood Before?	Yes	18
	No	76
3. How Many Times You Donated?	Once	12
	Twice	2
	Three Times	0
	More than Three	4
	Did not Donate	76
4. Did you had some Difficulties in The Donation Process?	Yes	36
	No	58
5. Do you prefer to have your appointments to be scheduled?	Yes	23
	No	71
6. Have you ever heard or used Blood Donation apps?	Yes	36
	No	58
7. Are you interested in an application that facilitates the blood donation process for you?	Yes	84
	No	10
8. Do you think that the red hope application will help in obtaining donors easily and conveniently ?	Yes	75
	No	1
	Maybe	18

ماهي مقترحاتك لتطبيق الامل الاحمر للتبرع بالدم ؟ / What are your Suggestions for The Red Hope Application ?
وضع مواعيد منتظمة سنوية بحيث يمكن للمتبرعين ان ينتظموا في التبرع بالدم
مراكز و مستشفيات في جميع مناطق المملكة وتكون لها تطبيق سهل الاستخدام و يكون واضح للعميل
عرض خانة معلومات لأنواع الأمراض، حامل بها الشخص غير القابلة للانتقال عن طريق التبرع (قد يكون الأمر مانع الشخص من التبرع بسبب ظنه انها تنتقل عبر التبرع
واجهة سهلة الاستخدام حتى يسهل ايجاد متبرعين
إيجاد حلول لجعل الجميع يستطيعون أن يتبرعوا بالدم بكل سهولة ويسر عن طريق حجز موعد مسبق.. وإيجاد حلول للأمراض الدم
وجود تقويم سنوي او شهري لتوضيح مواعيد التبرعات مع تذكيرات قبل كل موعد تبرع
ارسال اشعارات مستمرة لفترات المسموح فيها بالتبرع بالدم
ان يكون مرتبطاً بتطبيقات صحي وتوكلنا خدمات
توفر موظفين للمساعدة على جميع الاسئلة على مدار الساعة
يكون يحسبك بين فترات التبرع بالدم و متى تقدر تتبرع ثاني، ممكن يكون في قسم يكون إثراء للمستخدم من ايش يسوي قبل اول مره يتبرع فيها ل ايش اثر التبرع اللي سواه بالمستشفى الفلاني (زي مثلا انقذ مريض من ... فيكون هدفه التحفيز)
سهولة الوصول للمعلومات و واجهات واضحة للمستخدم
نشر الوعي والنصيحة بالتبرع لمساعدة الآخرين وكسب الأجر
توفير مراكز اكثر توفر خدمة التبرع بالدم
الخدمات المنزلية كمان ممكن تسهل التبرع بالدم
الاعلان عن التطبيق بشكل اكبر و تنويع موقع سياره التبرع يعني مثلا تنتقل بين الجامعات لان الشباب كثير و الاقبال سيكون اكثر
إرسال إشعارات للمستخدمين تحثهم على التبرع وإشعارات تذكيرية بشكل دوري للمتبرعين الذين يحتاجون - إلى التبرع بالدم
ترتيب أولوية المرضى المحتاجين للتبرع لهم حسب حالات الحاجة -
مساهمة المتبرعين بتقديم أرقامهم الشخصية للوصول إليهم في حالات الحاجة -
تحديد الموقع لأقرب مركز تبرع ، عرض للتاريخ المرضي للمتبرع عند تسجيل الدخول ، عمل إشعارات عند وجود حالات حرجة تحتاج لتبرع سريع

9. Visualization of collected data:

Did you had some Difficulties in The Donation Process ?

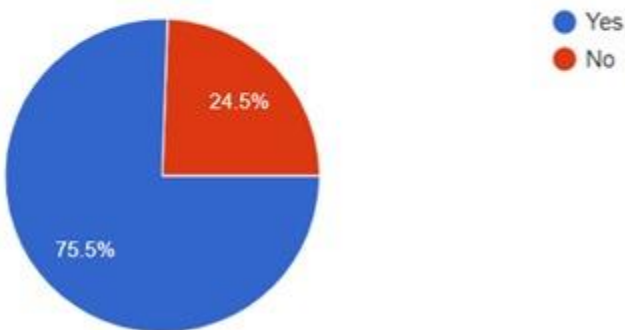
ردًا 94



38.3% Of people facing difficulties in the donation, while 61.7% of people do not face difficulties in doing so, which means that most people do not face any difficulties in the donation process.

Do you prefer to have your appointments to be scheduled ?

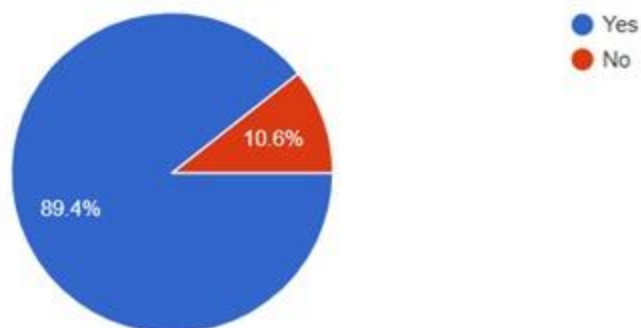
ردًا 94



75.5 Of people prefer to have their appointments scheduled when making the donation process while 24.5% of people do not prefer that which means most people prefer to have their appointments scheduled.

Are you interested in an application that facilitates the blood donation process for you

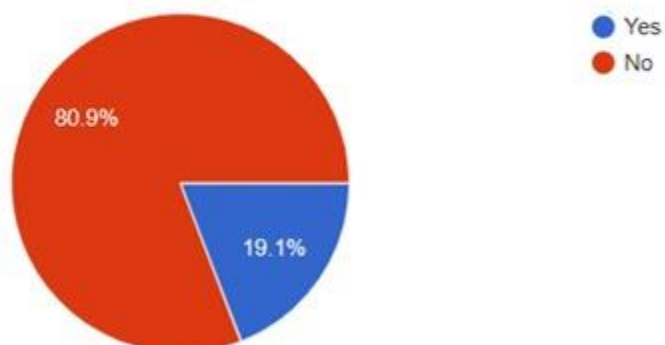
94 رداً



Most people (89.4% of people) are interested in an application that facilitate the blood donation process for them.

Have You Donated Blood Before

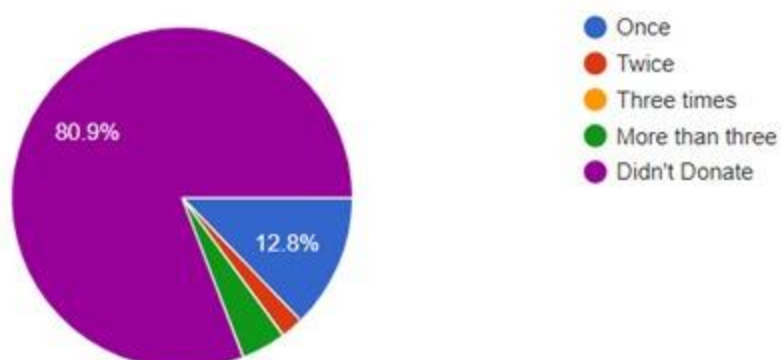
94 رداً



80.9% of people have never donated blood before, which means that few people have ever donated blood.

If your Answer was yes, how many time you donated ?

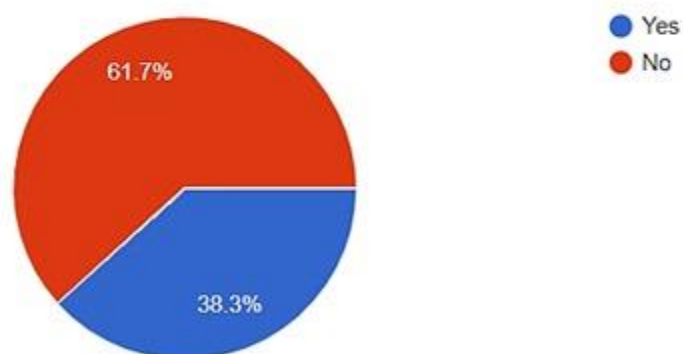
ردأ 94



As for people who had previously donated blood, 12.8% of the people donated only once, while a smaller number donated twice. None of the people who filled out the questionnaire donated three times, and people who donated more than three times constitute the lowest percentage.

Have you ever heard or used Blood Donation apps ?

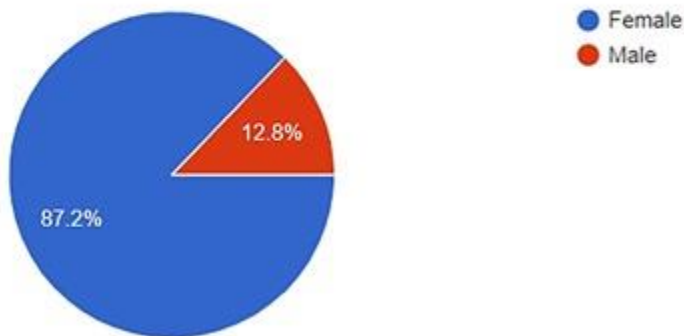
ردأ 94



only a small number of people (accounting for 38.8percent) have ever heard of this application, which means most people (61.7% of people) have never heard of a blood donation application.

Gender ?

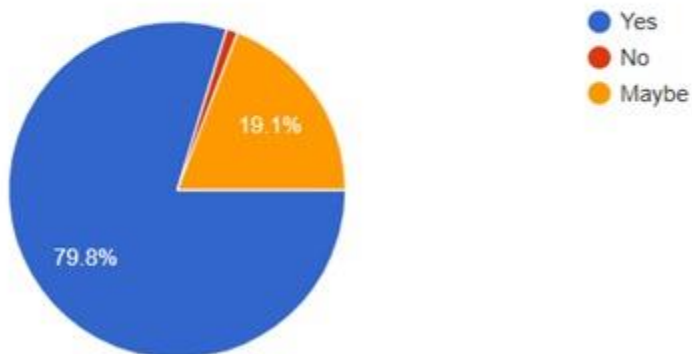
94 ردًا



Most of the people who filled out the questionnaire were female.

Do you think that the red hope application will help in obtaining donors easily and conveniently

94 ردًا



Most people (79.8%) believe that the Red Hope application will help in obtaining donors easily and conveniently, while there is a very small percentage of people who do not believe this.

The analysis of the suggestions for The Red Hope blood donation application can be summarized as follows:

Easy-to-Use Interface:

- **Design a user-friendly interface to make it easier to search for donors or book appointments.**

Regular Donation Scheduling:

- **Provide regular yearly/monthly schedules to encourage donors to consistently participate in blood donation.**

Integration with Health Apps:

- **For a complete healthcare experience, integrate the app with other health services apps.**

Providing Disease Information:

- **Add a section for types of diseases that make a person ineligible for donation, with clarification on how these diseases may or may not be transmitted through donation.**

Continuous Alert System:

- **Send continuous alerts for allowed donation periods and remind donors of upcoming appointments.**

Motivating Donors:

- **Include motivating elements like measuring the effects of donors' donations and emphasizing the health advantages of donating.**

10. Needs:

- A. Both donors and recipients need to know full health status and blood type of each other.**
- B. Both donors and recipients need to get educated on the instructions before and after blood donation/ transfusion.**
- C. Both Donors and recipients need to make sure the blood transfusion process is safe.**
- D. Donors need to make an appointment to check their health regularly.**
- E. Donors need to schedule blood donations appointments.**
- F. Donors need to know and be updated and involved on the impact of their donations.**
- G. Donors need to get appreciation for their contributions.**
- H. Recipients need a reliable source to publish announcements when need of blood.**
- I. Recipients need to meet a trustful donor.**
- J. Recipients need prompt and rapid access to blood.**
- K. Recipients need follow-up care after blood transfusion.**

11. Insights:

- A. Not knowing the complete health status and blood type of donors and recipients exposes them to risks and infectious diseases transmitted through blood. It may lead to unexpected reactions such as low blood pressure and treatment delays. Additionally, it could result in a shortage of compatible blood, making it more difficult to meet the urgent blood needs of patients.**
- B. Not knowing the instructions before and after blood donation/transfusion may lead to ignoring warnings about potential side effects of donation, such as dizziness and increased risk of infection transmission and contracting infections, negatively affecting their psychological state and their ability to recover and return to normal life.**
- C. The lack of prompt access to blood for recipients leads to an increase in patient mortality rates and raises the psychological pressure on recipients. Recipients may be compelled to resort to alternative or uncertain treatment options due to the unavailability of blood promptly, resulting in increased healthcare and financial costs.**
- D. The lack of awareness among donors about the impact of their donations and their non-involvement in them leads to a decrease in trust in the system and a reluctance to donate in the future. They may refrain from supporting institutions or individuals they believe are not utilizing their donations effectively.**
- E. The absence of a reliable source to disseminate blood donation requests to recipients may result in delays in responding to blood supply needs. This delay could lead to treatment delays for patients, causing frustration, wasted efforts, and ineffective communication between blood recipients and donors. It negatively impacts recipients' ability to obtain the blood they need promptly and efficiently.**

12. Tasks:

- A. Establish a feature that enables donors and recipients to securely share and verify their full health status and blood type with each other before the donation. This will ensure compatibility and reduce the risks associated with blood transfusions.**
- B. Provide comprehensive educational resources and guidelines for both donors and recipients before and after blood donation/transfusion, including information on possible side effects, safety measures, and post-transfusion care to minimize risks.**
- C. Facilitate the scheduling of regular check-up visits for donors in order to keep track of their health and eligibility to donate blood. Additionally, allows donors to swiftly schedule blood donation appointments using the app.**
- D. Provide donors with real-time updates and notifications on the impact of their donations. This includes information on how their donations have been utilized, such as the number of lives saved or the specific cases where their blood has been used. This task enhances their sense of involvement, satisfaction, and appreciation for their contributions to the community.**
- E. Provide a trustworthy platform for recipients to publish urgent blood donation requests, ensuring prompt and rapid access to blood when needed. Utilize real-time notifications and location-based services to connect donors with nearby hospitals or recipients in urgent need, reducing response times and improving patient outcomes.**

Student Name	ID	Tasks
Ebtehal Alzahrani	2210441	Task 1 (logo-sign up/log in, home page)
Razan Aljadaani	2210535	Task 3
Muruj Alshaikh	2210505	Task 1 (Survey)
Shahad Hasnoon	2210508	Task 2
Lana Ibrahim	2210369	Task 2

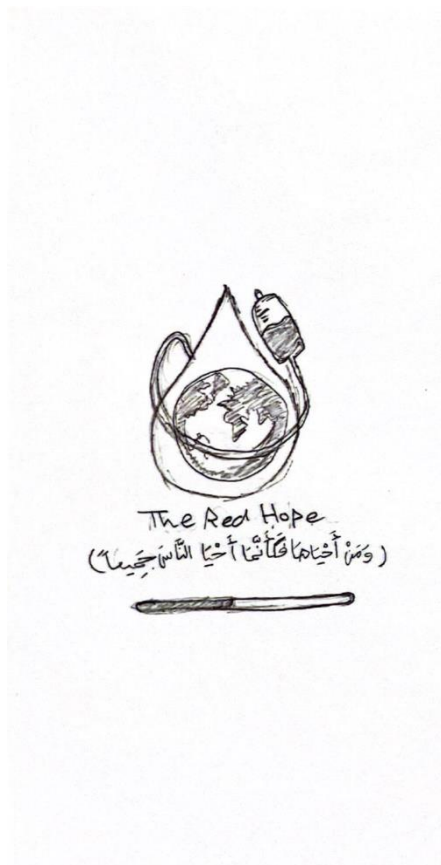
13. Low-Fidelity Interfaces:

14.1 First Task:

Establish a feature that enables donors and recipients to securely share and verify their full health status and blood type with each other before the donation. This will ensure compatibility and reduce the risks associated with blood transfusions.

Explain:

- 1. Users will start by logging in or signing up to the app.**
- 2. Upon successful login/signup, users will be directed to a survey to provide their information.**
- 3. Users must complete all survey questions to proceed to the home page.**
- 4. After answering each question, users can navigate to the next question by tapping the designated symbol.**



The Red Hope

Sign In


Email

Password

☐ Remember ☐ Forget password?

OR

Don't have account? Create Account

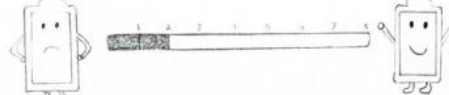


what is your gender?

☐ Female

☐ Male

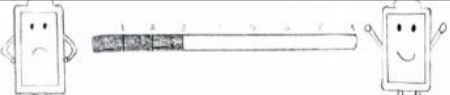
>



what is your date of birth?

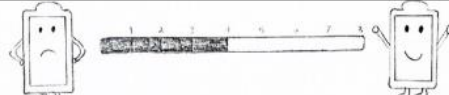
November	1	2001
December	2	2002
January	3	2003
February	4	2004
March	5	2005

>



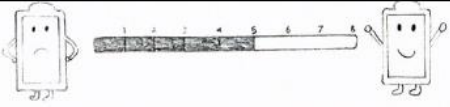
what is your city?

>



what is your weight?

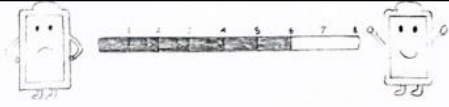
>



What is your blood type?

☐ A+ ☐ A-
☐ B+ ☐ B-
☐ AB+ ☐ AB-
☐ O+ ☐ O-


>



Have you ever donated blood?

☐ yes
☐ no


>



Have you ever received blood?

☐ yes
☐ no

>



Do you have any medical conditions?

☐ yes
☐ no


if yes, please type it in

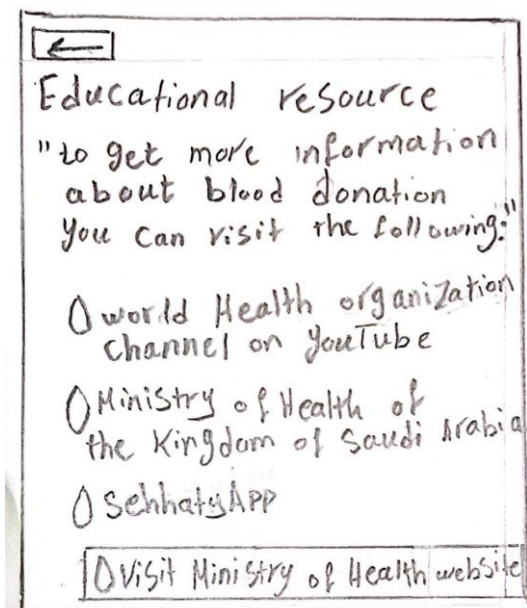
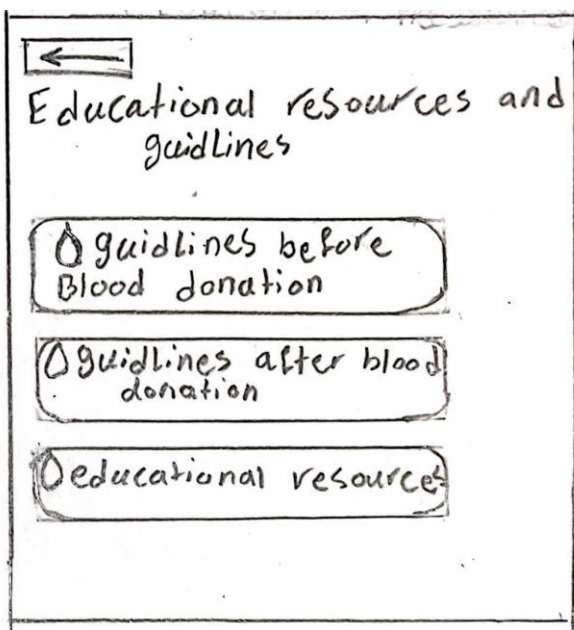
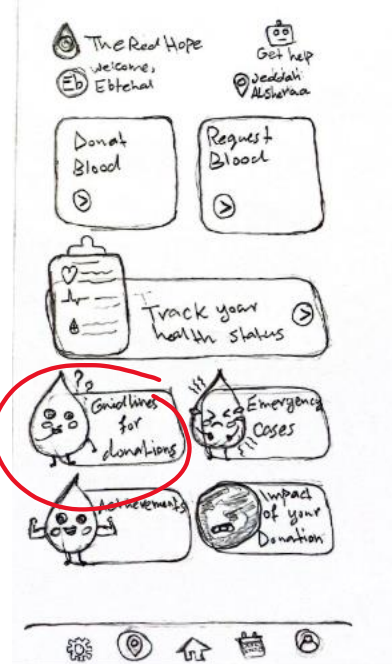
>

14.2 Second Task:

Provide comprehensive educational resources and guidelines for both donors and recipients before and after blood donation/transfusion, including information on possible side effects, safety measures, and post-transfusion care to minimize risks.

Explain:

1. If the user wants to learn more about blood donation and get instructions before and after donating, all he/she has to do is press Guidelines for donation in the home page to take it to educational resources and Guidelines.
2. In the first interface, the user can choose the type of information he/she needs from the list by clicking on one of the existing buttons and they will be taken directly to the required. This button  indicates going back, as it returns to the home page when pressed.
3. The second interface contains reliable sources for obtaining information about blood donation, and the user can directly access the Ministry of Health website when clicking the button at the end of the page.
4. the third interface gives a guideline after donation for donors and for blood recipients, in order to provide them with all the necessary information to give them a pleasant experience.
5. the last interface gives a guideline before donation for donors to make sure they enough care before donating.





Guidelines

after donation

* for Donors

- Pay attention to any instruction giving by The blood donation centers.

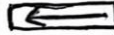
- Avoid vigorous exercise.

- Take care of the donation site.

* for Blood Recipients

- Follow Medical advices.

- Monitor your health.



Guidelines

before donation

* for Donors

- Check Eligibility.

- Eat a Nutritious Meals.

- Stay hydrated.

- Get Adequate

rest.

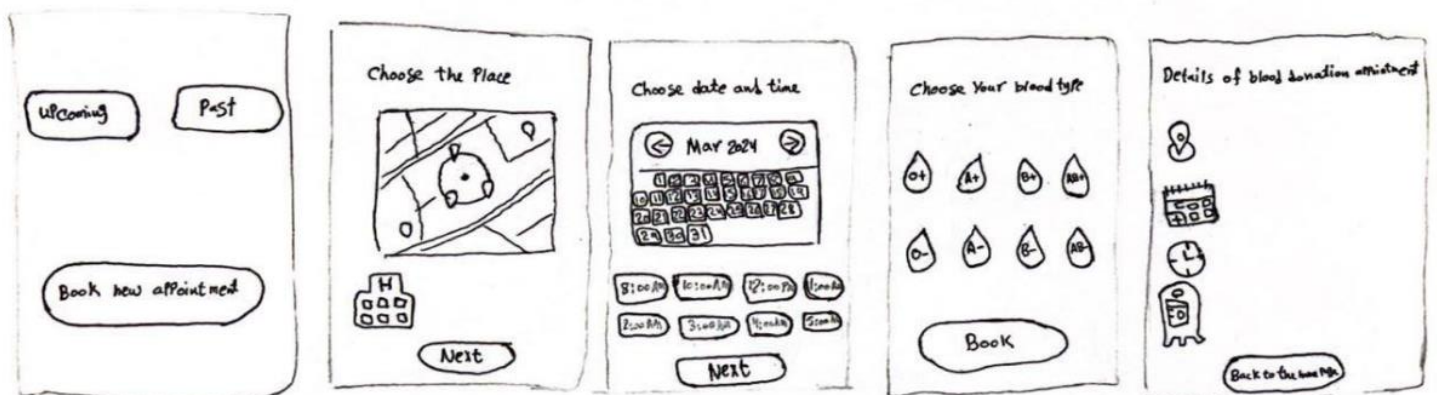
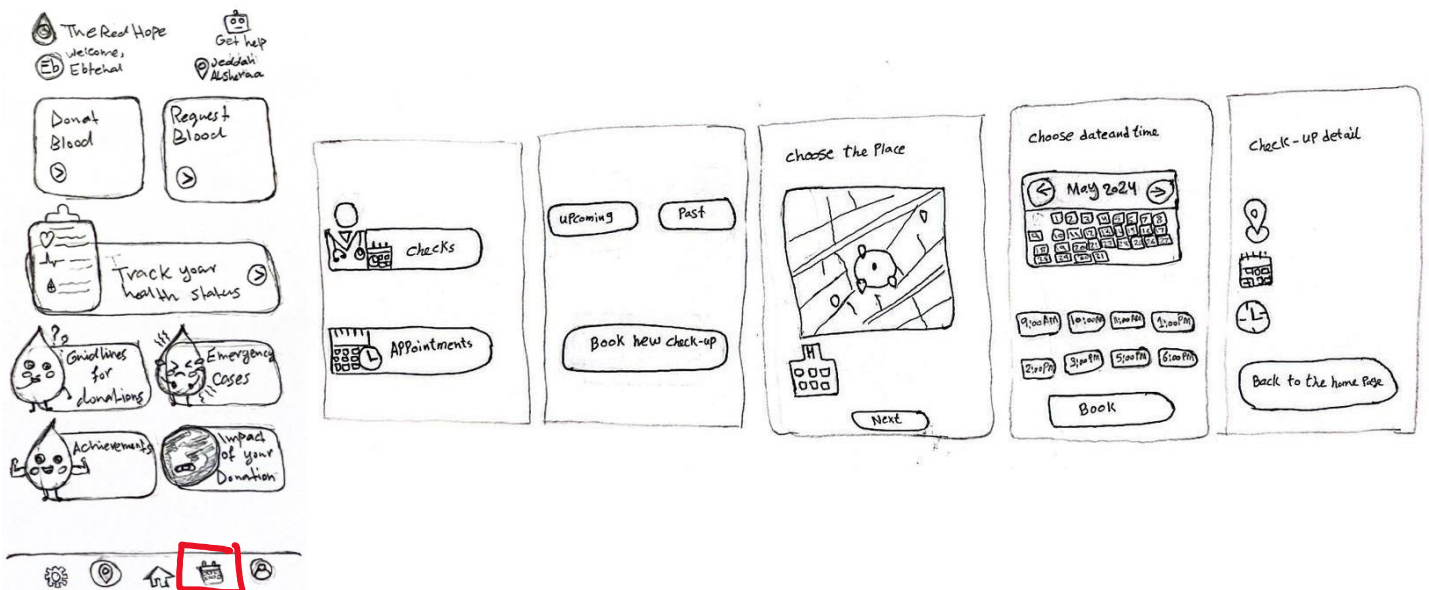
14.3 Third Task:

Creating a feature that allows donors to view previous or upcoming medical examination appointments and book new appointments. Donors can view previous or upcoming blood donation appointments and schedule new blood donation appointments, This interface simplifies appointment management and encourages regular blood donation participation.

Explain:

- 1. When the user click schedule icon bottom of the page on the home page will presents two choices: checks and Appointments.**
- 2. When the user select checks will display page with 3 choices: Upcoming and past and book new check-up.**
- 3. If the user select past choices will display check-up past dates.**
- 4. If the user select upcoming choices will display check-up upcoming dates.**
- 5. If the user select Book new check-up the user will be able to book new check-up.**
- 6. After the user select Book new check-up will be asked to Choose the hospital where he wants to be check-up then click Next button.**
- 7. The user will be asked to Choose the date and the time he want and then will click Book button to book the check-up date.**
- 8. Will display all check-up date information (place, date ,time).**
- 9. Then the user click Back to the home page button if he want back to home page.**
- 10. When the user select Appointments will display page with 3 choices: Upcoming and past and Book new appointment.**
- 11. If the user select past choices will display Blood Donation Appointments past dates.**
- 12. If the user select upcoming choices will display Blood Donation upcoming dates.**
- 13. If the user select Book new appointment the user will be able to Book new Blood Donation appointment.**
- 14. After the user select Book new appointment will be asked to Choose the hospital where he wants to be donate blood then click Next button.**

15. The user will be asked to Choose the date and the time he want and then will click Next button.
16. Then the user will be asked to Choose his blood type then will click Book button to book the Blood Donation appointment.
17. Will display all Blood Donation appointment date information (place, date ,time, blood type).
18. Then the user click Back to the home page button if he want back to home page.



Student Name	ID	Tasks
Ebtehal Alzahrani	2210441	Task 1 (logo-sign up/log in, home page)
Razan Aljadaani	2210535	Task 3
Muruj Alshaikh	2210505	Task 1 (Survey)
Shahad Hasnoon	2210508	Task 2
Lana Ibrahim	2210369	Task 2

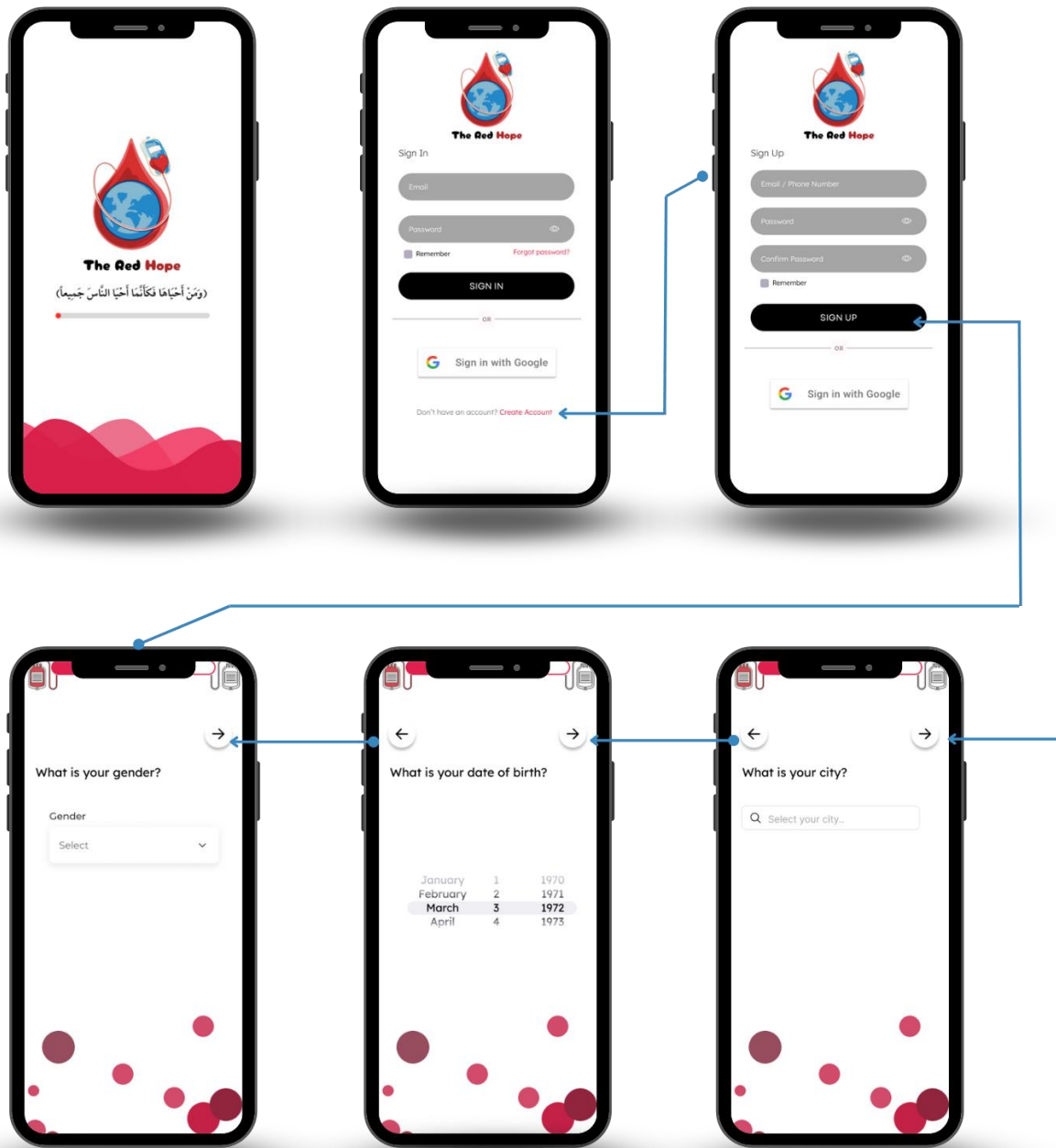
14. High-Fidelity Interfaces

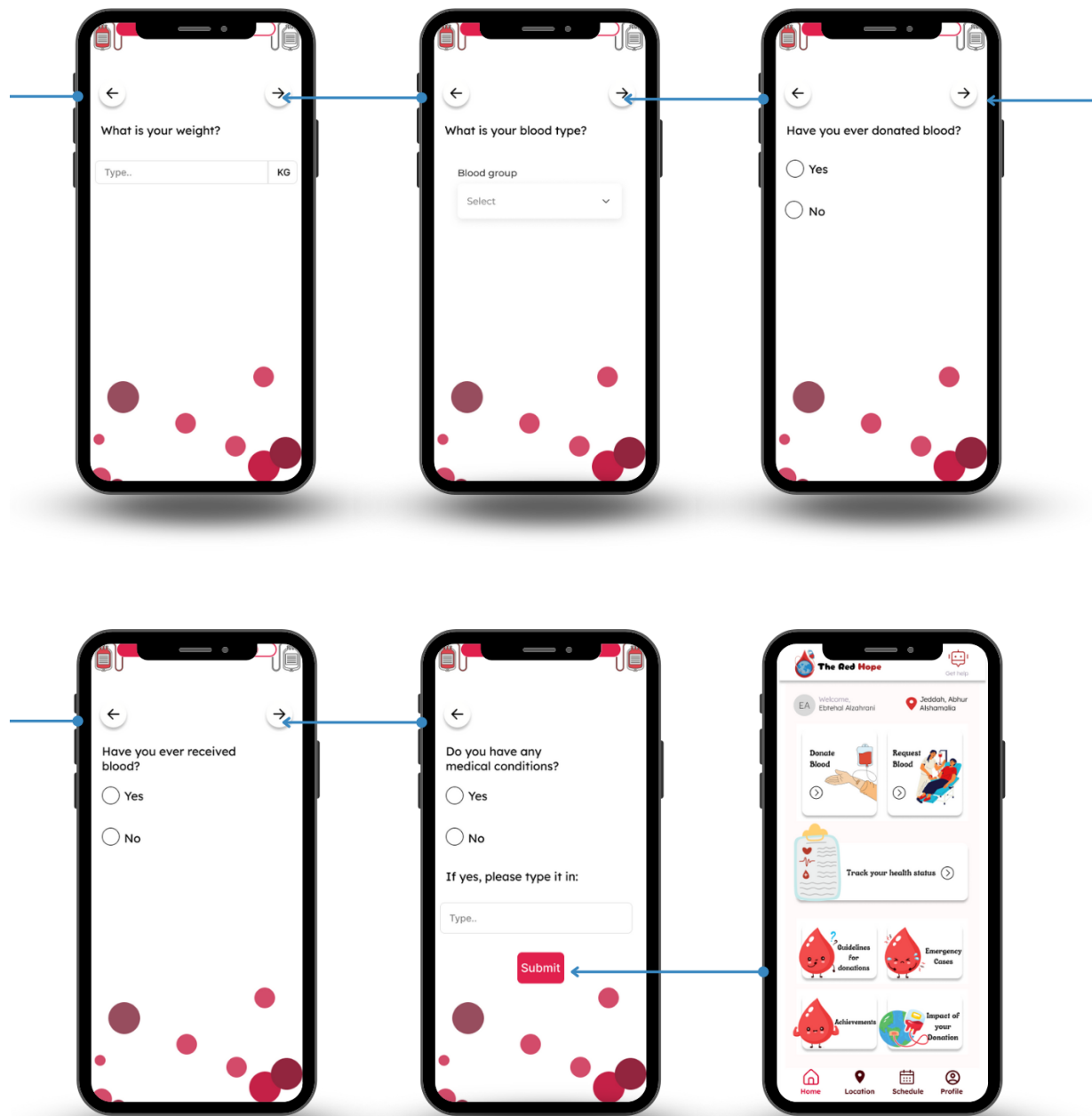
15.1 First Task:

Establish a feature that enables donors and recipients to securely share and verify their full health status and blood type with each other before the donation. This will ensure compatibility and reduce the risks associated with blood transfusions.

Explain:

- 1. Users will start by logging in or signing up to the app.**
- 2. Upon successful login/signup, users will be directed to a survey to provide their information.**
- 3. Users must complete all survey questions to proceed to the home page by clicking submit.**
- 4. After answering each question, users can navigate to the next question by tapping the designated symbol.**




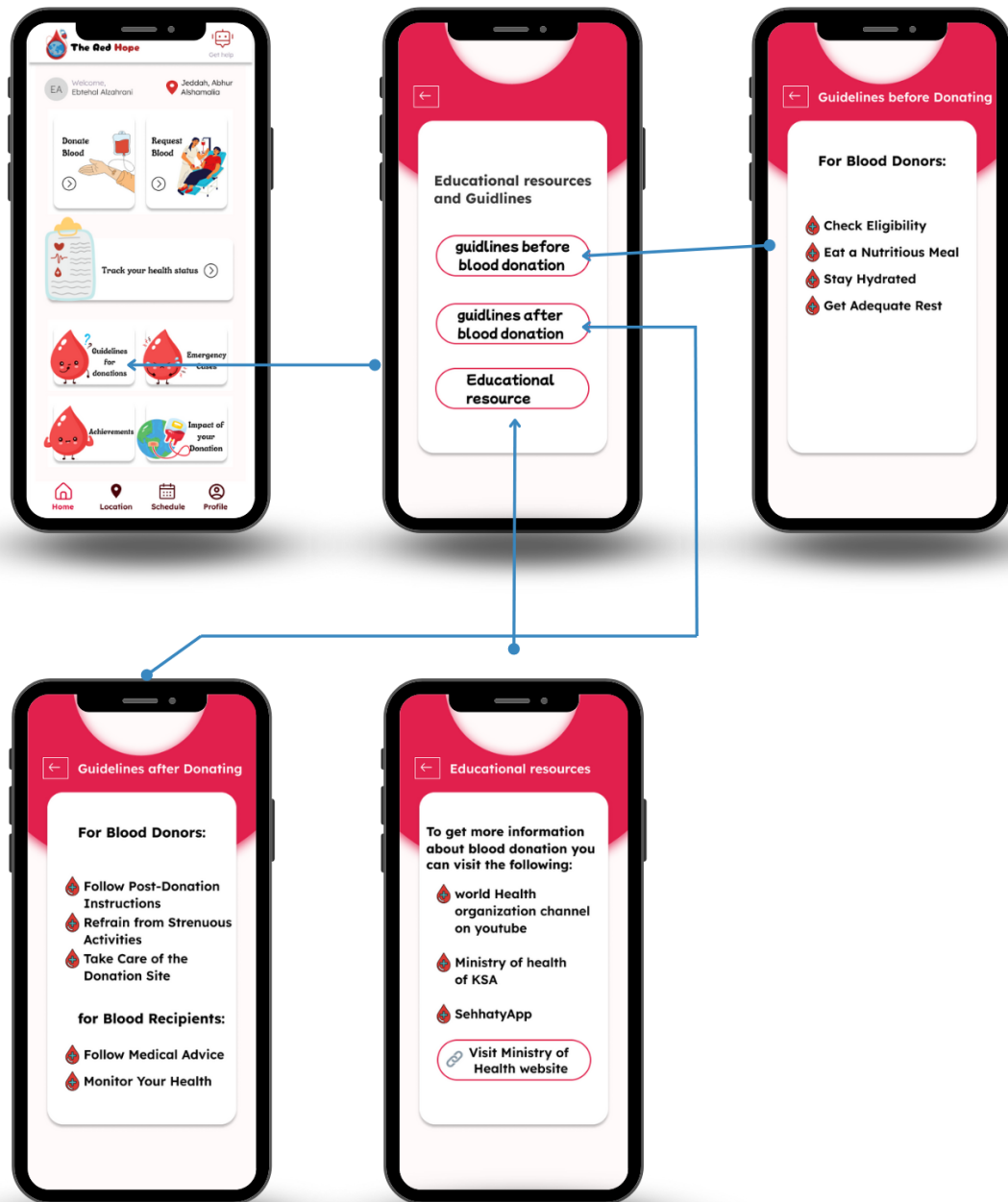


15.2 Second Task:

Provide comprehensive educational resources and guidelines for both donors and recipients before and after blood donation/transfusion, including information on possible side effects, safety measures, and post-transfusion care to minimize risks.

Explain:

- 1. If the user wants to learn more about blood donation and get instructions before and after donating, all he/she has to do is press Guidelines for donation in the home page to take it to educational resources and Guidelines.**
- 2. In the first interface, the user can choose the type of information he/she needs from the list by clicking on one of the existing buttons and they will be taken directly to the required. This button  indicates going back, as it returns to the home page when pressed.**
- 3. The second interface contains reliable sources for obtaining information about blood donation, and the user can directly access the Ministry of Health website when clicking the button at the end of the page.**
- 4. the third interface gives a guideline after donation for donors and for blood recipients, in order to provide them with all the necessary information to give them a pleasant experience.**
- 5. the last interface gives a guideline before donation for donors to make sure they enough care before donating.**

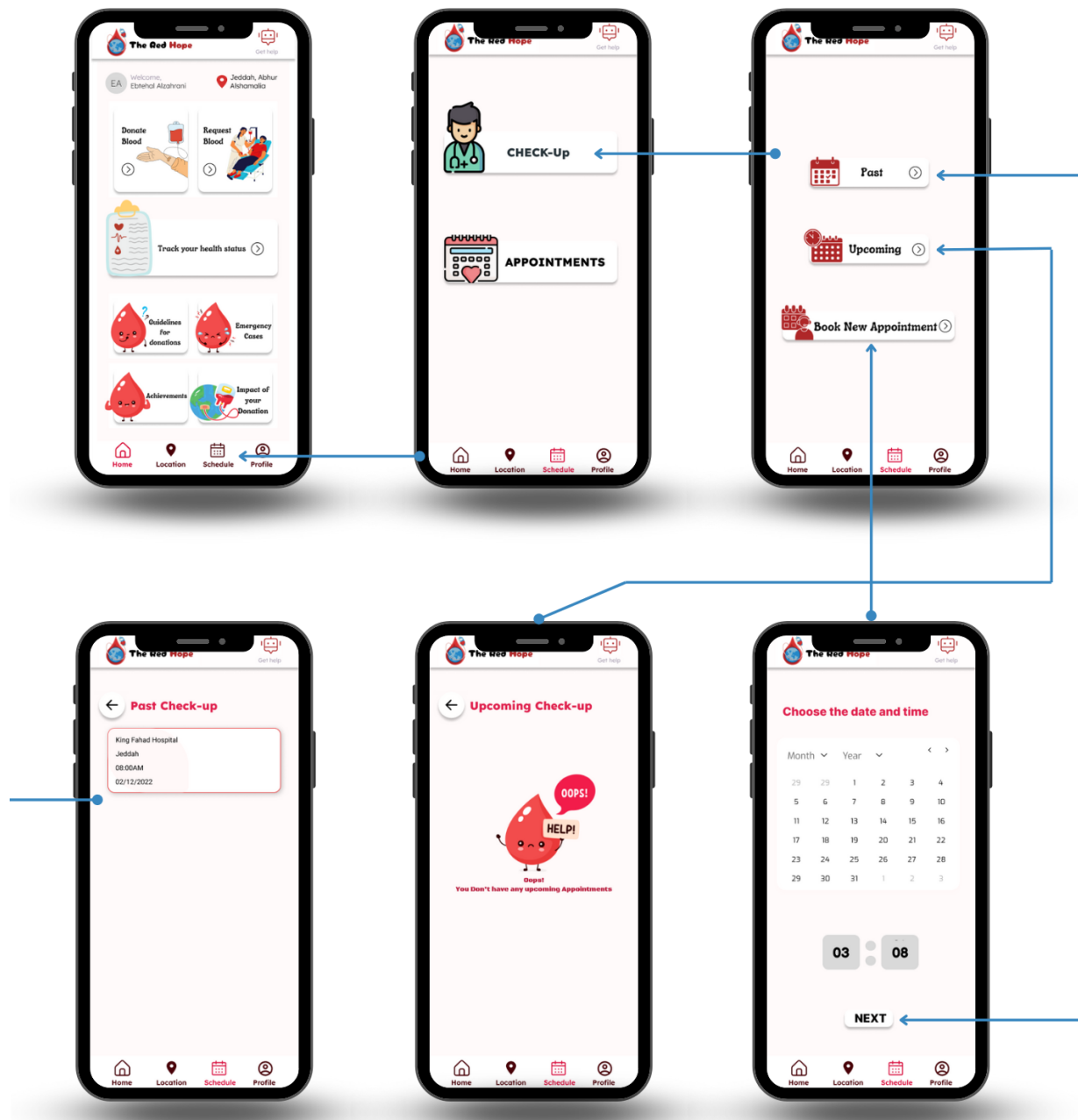


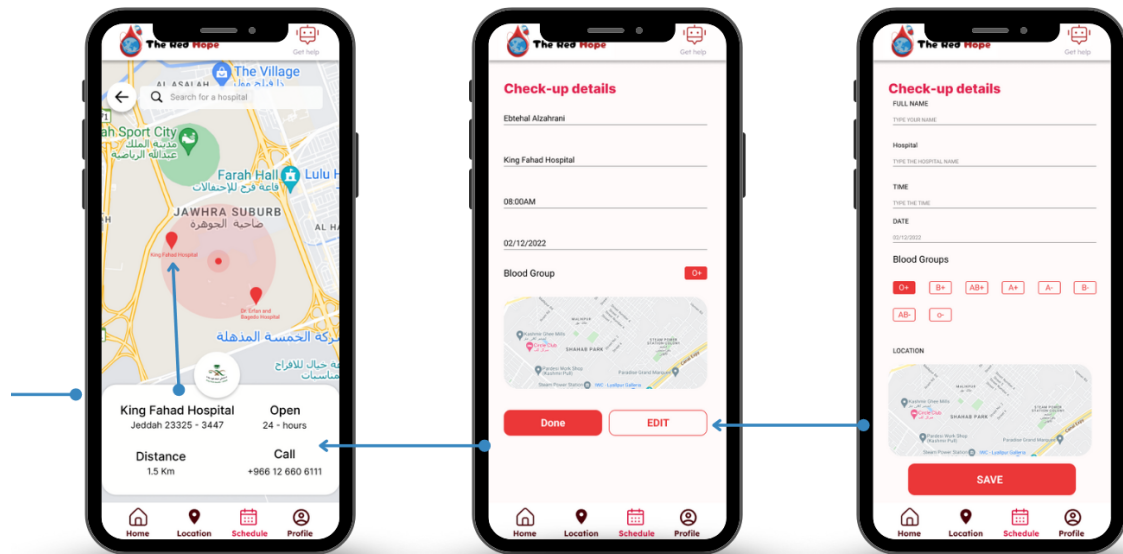
15.3 Third Task:

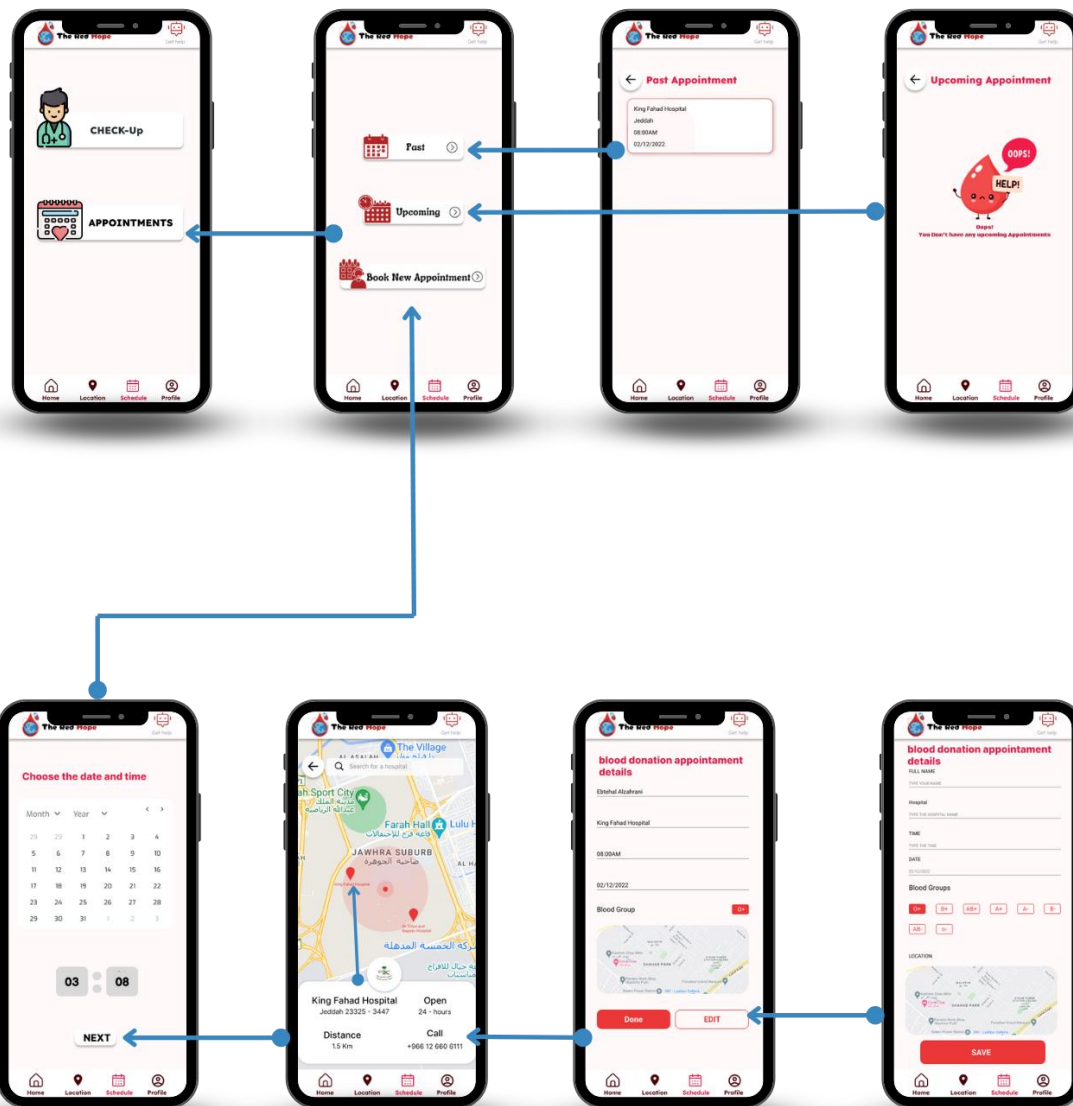
Creating a feature that allows donors to view previous or upcoming medical examination appointments and book new appointments. Donors can view previous or upcoming blood donation appointments and schedule new blood donation appointments, This interface simplifies appointment management and encourages regular blood donation participation.

1. If the user click schedule icon in the bottom in the home page then will display two option to the user (check-up and appointment)
2. If the user click the check-up option then will display page contains 3 option (past , upcoming, book new appointment)
3. If the user click the past button will display the past check-up information (name of the hospital, city, time , date) if there past check-up
4. If the user click the upcoming button will display the upcoming check-up information(name of the hospital ,city ,time ,date) if there upcoming check-up
5. If the user click the book new appointment button then will display page allow the user to select the date and the time he/she want then will click next button
6. Then the user select the hospital he/she want from the map then will display hospital information(name, open or close , distance, call number)
7. After the user click on name hospital Then will display page contain the details of the check-up(full name, hospital name , time, date , blood group , location) .
8. If the user select the done button then the user will go to the home page if the user select the edit button then will display page that allow the user to edit he / she information then the user will click save button to save the information after edit then will go to the home page.
9. If the user click the appointment option then will display page contain 3 option (past, upcoming, book new appointment)
10. If the user click the past button will display the past appointment information (name of the hospital, city, time , date) if there past appointment
11. If the user click the upcoming button will display the upcoming appointment information(name of the hospital ,city ,time ,date) if there upcoming appointment
12. If the user click the book new appointment button then will display page allow the user to select the date and the time he/she want then will click next button.
13. Then the user select the hospital he/she want from the map then will display hospital information(name, open or close, distance, call number)

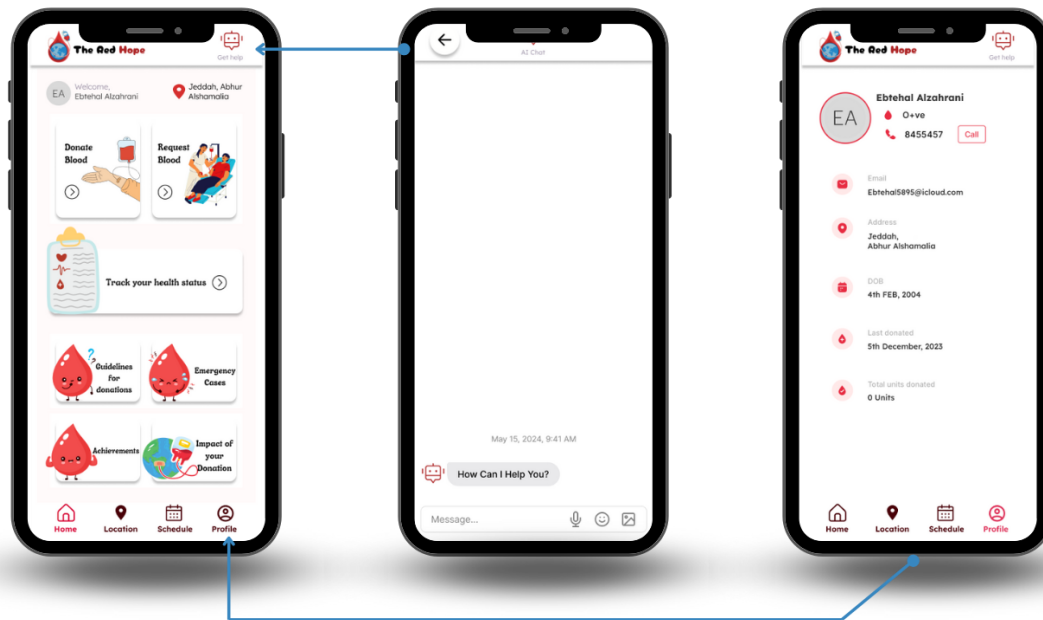
- 14. After the user click on hospital name Then will display page contain the details of the appointment (full name, hospital name, time, date , blood group, location)**
- 15. If the user select the done button then the user will go to the home page if the user select the edit button then will display page that allow the user to edit he / she information then the user will click save button to save the information after edit then will go to the home page.**







15.4 Additional Features:



15.5 Application Explanation:

Our redesigned application prioritizes user needs with intuitive features aimed at enhancing blood donation processes. Users begin by logging in or signing up, then complete a comprehensive survey to securely share and verify crucial health information, ensuring compatibility and reducing risks. Educational resources are readily accessible, providing donors and recipients with essential guidance before and after donation/transfusion. Appointment management is simplified, allowing donors to effortlessly schedule medical examinations and blood donations. Real-time updates and notifications keep users informed about the impact of their donations, fostering a sense of appreciation and community involvement. Overall, our innovative design ensures seamless interactions and empowers users to contribute effectively to life-saving initiatives.

16. Figma link:

<https://www.figma.com/file/oaBF3X87s0sisokVCwu0hZ/THE-RED-HOPE-APP?type=design&node-id=0%3A1&mode=design&t=pB3Ze1KKIXolrUDE-1>

Conclusion and suggestions:

Conclusion:

In conclusion, The Red Hope stands as a beacon of hope in the realm of blood donation and distribution. By addressing the challenges faced by donors, recipients, and blood banks alike, the app emerges as a powerful tool in the fight against blood shortages and medical emergencies. Through its intuitive interface, comprehensive features, and unwavering commitment to user satisfaction, The Red Hope embodies the potential of technology to make a tangible difference in people's lives. As we move forward, let us embrace the promise of The Red Hope and work together to ensure that no one faces the uncertainty of inadequate blood supply in times of need.

Suggestion:

To maximize the impact and reach of The Red Hope, we must consider partnering with local hospitals, blood banks, and community organizations to raise awareness and encourage participation. Additionally, continue gathering feedback from users to refine and enhance the app's functionality, ensuring that it remains a trusted and indispensable resource for blood donors and recipients alike. By fostering collaboration and innovation, we can harness the full potential of The Red Hope to save lives and make a lasting difference in the fight against blood shortages and medical emergencies.

17. References:

Ministry of Health:

<https://www.moh.gov.sa/HealthAwareness/EducationalContent/PublicHealth/Pages/017.aspx>

World Health Organization (WHO):

<https://www.who.int/ar/campaigns/world-blood-donor-day/2019/who-can-give-blood>