rudhirá

Find a Donor. Be a Donor.
(In Sanskrit, *Rudhir* means 'Blood')

Theme: **Design for Crisis**
Rebuild and heal the world with design
23rd July 2022 , OUTR Bhubaneswar

Team
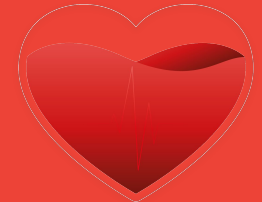
14th June is observed as the ‘World Blood Donor Day (WBDD)’ across the globe to increase awareness regarding the safe usage of syringes, celebrate voluntary and kind blood donors for their heroic acts and express gratitude towards selfless medical staff for saving millions of lives.

Source: Government of Assam, 2022

Problem Identified

TARGETED CRISIS - BLOOD SUPPLY CRISIS

PROBLEM DESCRIPTION

To request a blood donor off-guard during an emergency for blood donation is one of the most nervous and scariest moments of the person's life. You hope and pray that someone in the long chain of receivers may match the blood type and be willing to donate in the nick of time. Often on Twitter, Facebook or WhatsApp, **we come across such forwarded messages and some of us ignore them, doubting the legitimacy of the message.**

Hospitals that are short of blood often ask a patient's family to find what are called **"replacement donors"** and if it is a rare blood group, it is even more difficult. **Furthermore, due to connectivity issues (among blood banks) and shelf life of blood, a lot of units go to waste due to which the patient and** their family suffer and have to look for blood donors and find difficulty in looking for donors through social media.

Problem Identified

PROBLEM DESCRIPTION NARROWED DOWN

"India Today Faces shortage of **10% relative** to its blood requirement ". Despite its large and mainly young population India faces extreme shortage of blood in Hospitals as many remain wary of donating blood mainly unfounded fears ,even though many hospitals and civil society groups has been volunteering it for years.

SYSTEM/GOVERNANCE -

➔ Hence its a major crisis problem at a **system/governance level .**

➔ To ensure these systems and the governance be citizen inclusive or citizen-led with people as stakeholders **collaborations and coordinations need to be made with NGOS and various youth organisation , blood bank and citizens** for efficient implementation in bridging the gap between blood donor and recipients.

Urgency/Importance

Why Is It An Urgent Problem ?

❖ Over **12,000** person die everyday across India as they failed to receive blood.

❖ **1.8 million** of units of blood waste every year due to lack of connectivity among blood banks.

❖ According to NGOS working in this domain, India needs about *26.4 million units per annum, the total supply is around half of the required amount i.e- 13.5 million units.*

Urgency/Importance

❖ **1/4 maternal deaths** in India is due to excess loss of blood and shortage of blood in hospitals to sustain the patient's blood level .

❖ About **60 million** trauma induced surgeries are performed in the country every year. It is a witness to more than **1,200 road crashes** everyday.

❖ The **230 million major operations 331 million cancer-related procedures like chemotherapy and 10 million pregnancy complications** require blood transfusion.

Urgency/Importance

❖ The WHO report showed **119 out of 196 countries** - mainly in Africa, Oceania and South Asia- do not have enough supply to meet hospital demands.

❖ Patients may need a blood transfusion if they are suffering **anaemia, sickle cell disease, a bleeding disorder such as hemophilia, or cancer.** A cancer patient, on an average, needs at least **100 units of blood.**

❖ **0.5%** of **India's** population donates blood due lack of awareness. **1.95 million blood** shortage in **2019** due to less number of voluntary donors.

Urgency/Importance

❖ According to **2016-2017** data, India fell short of the WHO Standard by **1.9 million units (or 15%**)

❖ The overall global blood shortfall is **100 million units.**

Blood Donor

Rahul is involved in a voluntary blood donation organization. He manages blood for people in emergency situations. Also, he is a regular Blood Donor.

Feelings

Worries : Majority of the donors worry about contamination of syringes, health complications, improper procedures that might lead to unwarranted injuries like bruising, bleeding, dizziness etc.

Goals & Values

Goals : It is to find a platform that connects blood donors with receivers with ease, updates if blood is managed, have predetermined fixed time from blood receiver to avoid long waiting hours while donating blood, transparency and seamless UX.

Values : Regular blood donation is linked to lower blood pressure, boosts production of Red Blood Cells (RBCs) and a lower risk for heart attacks. It also increases red blood cell count.

Motivations : Altruism, Supportive family, Self-satisfaction and Self-rewarding.

Pain Points

Fears : Trust issues with the donation process and inexperienced medical staff.

Frustrations : Lack of transparency and outdated data in the existing systems. Often blood seekers do not inform an exact time donor must wait in hospital.

Challenges : Time consuming process, issues of long distance, lack of awareness and long hours of communication.

Rahul Sharma

- **Job Title :** Graphic Designer

- **Blood group:** B+

- **Gender :** Male

- **Age :** 30 Years

- **Family and Social Setting :** Lives with his mother and a dog

- **Income :** 6.5 lpa

- **Education :** Graphic Design, B.Des

Receiver/Family Member of the Receiver

Anamika's mother is a leukemia patient. So she has to manage blood for her mother several times. While seeking blood she has to go through a lot of hassle .She want a platform where she can easily find donors in emergency situations.

Feelings

Worries : Majority of the receivers as well as their loved ones worry about contamination of syringes, health complications, improper procedures that might lead to unwarranted injuries like bruising, bleeding, dizziness etc. Moreover, their concern is focused on finding the right donor within the compatible blood group.

Goals & Values

Goals : Is to find a platform that connects blood donors with receivers with ease and transparency. She wants a platform where she can find donor in emergency situation. Looking forward for a seamless UX.

Motivations : Survival crisis, might be family responsibilities.

Pain points

Fears : Unavailability of compatible blood donors, trust issues due to lack of transparency.

Frustrations : Inability to find the compatible donor within the limited time frame and in the same city.

Challenges : Time consuming process, lack of awareness and absence of updated data in nearby blood banks.

Anamika Sen

- **Job title :** Teacher

- **Blood group :** AB+

- **Gender :** Female

- **Age :** 22 years

- **Family and social setting :** Lives with her family

- **Income :** 1.8 lpa

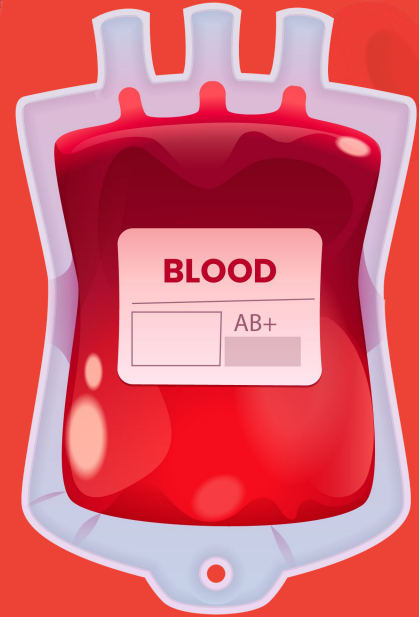- **Education :** Bachelor of Education (B. Ed.)

References

1. Ayu, K., 2022. *World Blood Donors Day 2022: Severe shortage of blood in India - Media India Group*. [online] Media India Group. Available at: <https://mediaindia.eu/society/world-blood-donors-day-2022/> [Accessed 20 July 2022].

2. Kheria, V., 2022. *Bloody crisis*. [online] Downtoearth.org.in. Available at: <https://www.downtoearth.org.in/news/bloody-crisis-21374> [Accessed 20 July 2022].

3. NDTV.com. 2022. *Why Is There A Blood Shortage In India*. [online] Available at: <https://www.ndtv.com/health/why-is-there-a-blood-shortage-in-india-1712012> [Accessed 20 July 2022].

4. Sharma, M., 2022. *Why India is facing a huge blood crisis*. [online] India Today. Available at: <https://www.indiatoday.in/mail-today/story/why-india-is-facing-a-huge-blood-crisis-1619927-2019-11-18> [Accessed 20 July 2022].

5. Srivastava, V., 2022. *Blood Donation Crisis: Here's How COVID-19 Has Affected Other Medical Facilities In India*. [online] Thelogicalindian.com. Available at: <https://thelogicalindian.com/trending/blood-donation-crisis-india-covid-19-34762> [Accessed 20 July 2022].

End of Phase 1

Thank you

Source: This presentation is created with SlidesGo template, images from Pexels.com and icons from Flaticon.

STAGE 1

SUBMISSION

Now that you have completed all the previous slides, please submit & share your deck to team@umo.design

Make sure you have completed:
Slide 4 - Problem Identified
Slide 5 - Why the identified problem is an urgent one
Slide 6 - Target user persona(s)

IMPORTANT INSTRUCTIONS:

- Share a link to your Google Slides document or your Microsoft Powerpoint which ever you are working with, to **team@umo.design**
- For sharing a Google Slide deck properly click on the Share (yellow button in the top right corner), Make sure "Anyone with the link" option is enabled. Then copy the link and email.

Explorations

❖ Initially we thought of creating an online platform to promote Indian tourism highlighting our root culture through folktales, local myths and urban legends.

❖ Afterwards, we brainstormed on several other ideas which can enhance existing systems. Like a platform where there will be a verification of authentic donating websites as there is an increase of scams in the name of donation.

❖ We thought of creating an innovative product that can help rural women to carry heavy gallons of water with ease and cover long distances over a shorter span of time. Currently, in remote areas of Indian rural women carry heavy weights of their shoulder and walk over miles to reach homes. This leads to permanent shoulder damage among these women.

Final Solution & Innovation

- A structured, innovative and well-defined mobile application platform for quick supply of blood during emergency times. The blood will be procured from nearby donors and first-time users (people who would like to donate blood) as well as from nearby blood banks.

- The broader vision will be to extend the donation to platelets and plasma.

- This mhealth app will facilitate citizens to become blood donors with ease and aid patients to connect with nearby donors/blood banks seamlessly, efficiently and in shorter span of time periods.

User Experience

- The experience for the users will be minimal, seamless and streamlined for easier procedures. The design and information architecture will make the interface user-friendly and easy to navigate.

- Multilingual - We are offering this mHealth App in 22 official languages in India to respect regional sensibilities, better communication and encourage more donors to participate.

- The mhealth app uses Global Positioning Systems (GPS) for precise tracking and identifying potential donors.

- The system provides factual data to burst myths surrounding blood donations in order to eradicate fear among the youths.

- The system allows donor to track their donated blood, thus giving them a sense of satisfaction and servitute to mankind.

Curtin Healthcare Services

BLOOD MONTH DONATION DRIVE

January 15-17, 2020
8 AM to 5 PM
Curtin Health Center

January is Blood
Donation Month.
Start the New Year Right.
Resolve to donate blood.
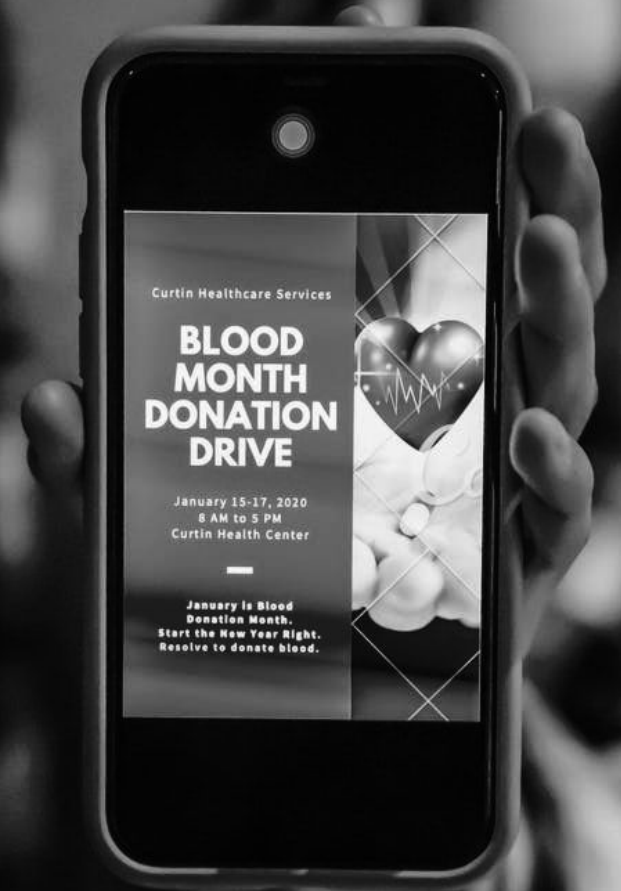
5 Final Slides -

Kindly download the video from the following link -
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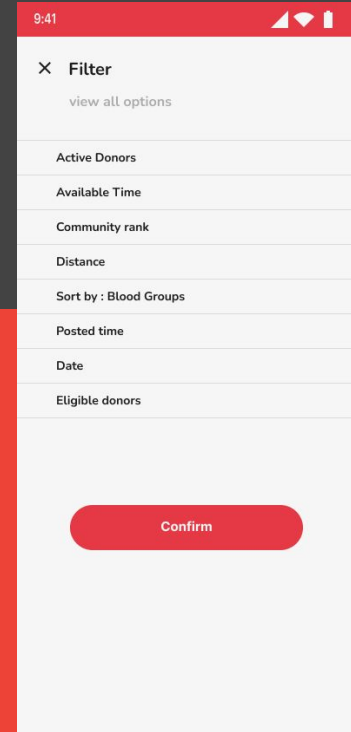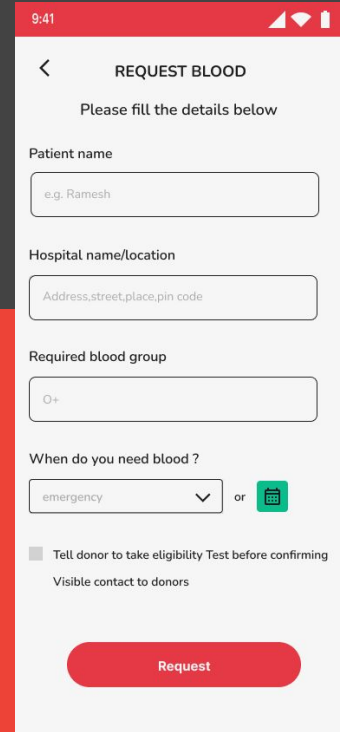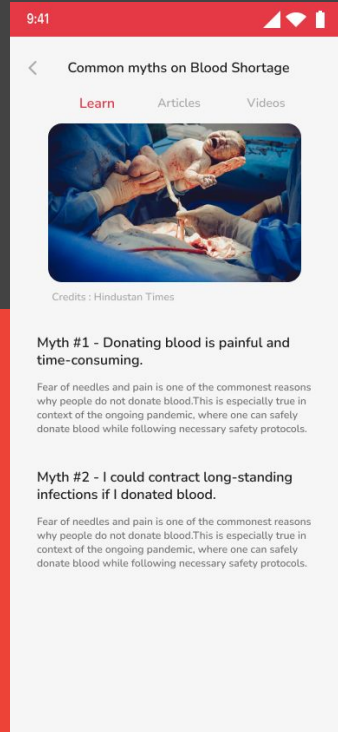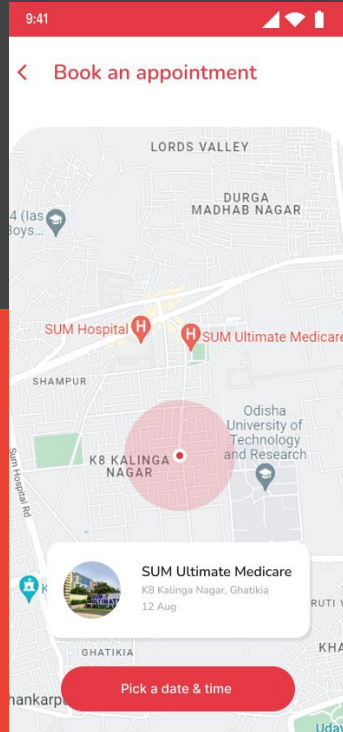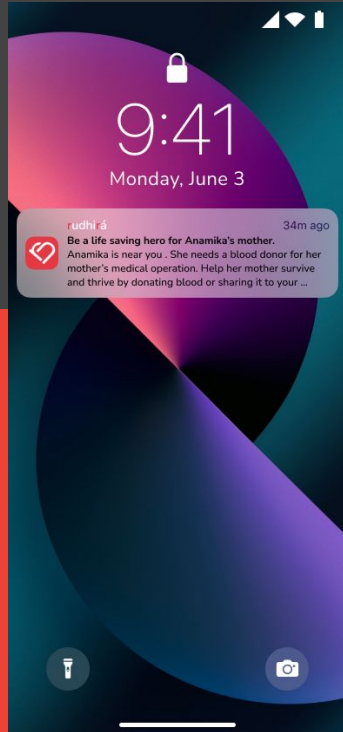
Design Process

We documented our design methodology into 2 segments below -

1. Research Phase -

- Brainstorming Sessions -
- Market analysis - researching on existing Blood donation apps
- Survey (Google Forms)
- Online Resources - Reading articles, publications by Red Cross etc.

2. Designing Phase -

- Sitemap and Work Flow Charts
- Figma Learning from Scratch
- Prototyping and presentation
- Video Editing from Scratch

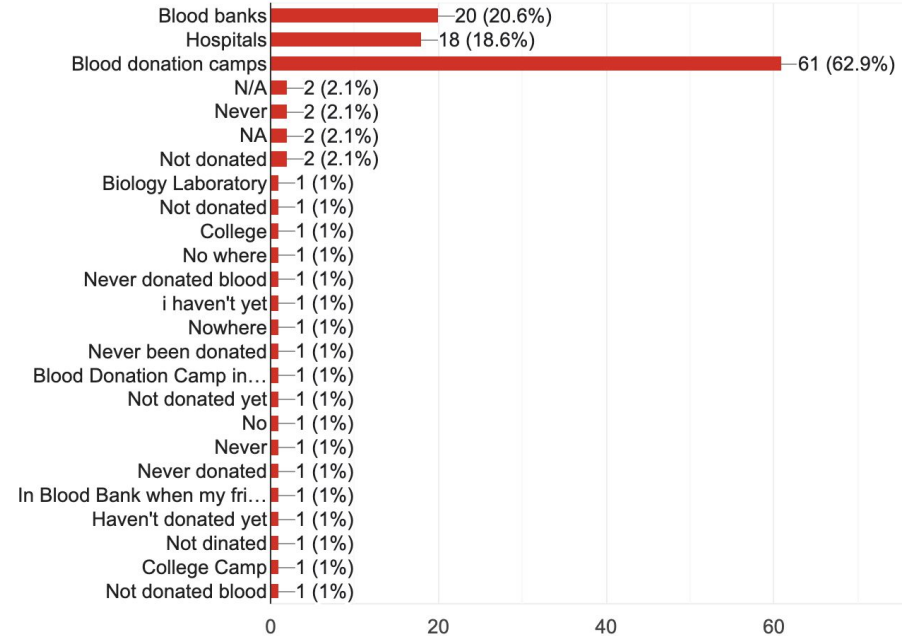## Developing the Survey Form

Research Phrase -

Brainstorming Sessions & Market Analysis

- The team sat and brainstormed almost all the permutations and combinations of obstacles we could stumble by. Starting from verification of donor to authenticity if requirement, we have thought our best to reduce miscommunication among users.

- The application has been structured to make it as feasible as possible to people in the most remote places of this country who are not comfortable with the technological world. The simplicity in approach to this complex problem is what we have laid our minds into. Every person matters. Every life matters.

- The team studied and researched about available websites and applications. Analysis of the current blood donation apps in the market and identifying the loopholes had been our priority. We found bugs and drawbacks which we tried to overcome in our app.

Where did you donate blood ?

97 responses

Blood banks	20 (20.6%)
Hospitals	18 (18.6%)
Blood donation camps	61 (62.9%)
N/A	2 (2.1%)
Never	2 (2.1%)
NA	2 (2.1%)
Not donated	2 (2.1%)
Biology Laboratory	1 (1%)
Not donated	1 (1%)
College	1 (1%)
No where	1 (1%)
Never donated blood	1 (1%)
i haven't yet	1 (1%)
Nowhere	1 (1%)
Never been donated	1 (1%)
Blood Donation Camp in…	1 (1%)
Not donated yet	1 (1%)
No	1 (1%)
Never	1 (1%)
Never donated	1 (1%)
In Blood Bank when my fri…	1 (1%)
Haven't donated yet	1 (1%)
Not dinated	1 (1%)
College Camp	1 (1%)
Not donated blood	1 (1%)

Finding - **62.9% of Responders donated blood through blood donation camps. While only 20.6% donated in Blood banks.**
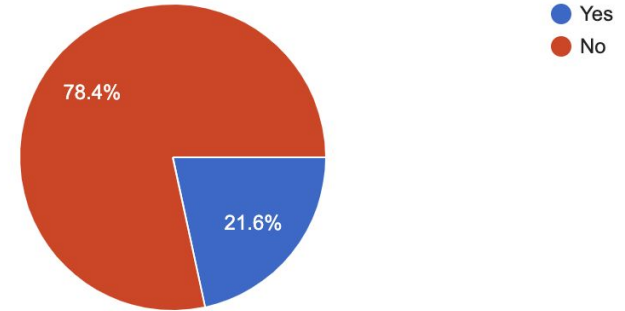
Research Phrase -
Survey Form

Key Highlights -

1. Around 94% of our people who submitted our survey were under the age of 30. As we have mentioned earlier, youth is the dynamic strength of our nation and we are not short of it.

2. Around 86% people have seen messages related to urgency of blood requirement of which approximately 40% see this message frequently but sadly 65% have never donated blood.

3. Surprisingly 50% people tend to collect blood from the ones they know and others stay in hope and 44.6% gamble on blood banks and rest depend on hope.

4. 78.4% of responders have fear in donating blood. Hence, we created a section in the mobile application that bursts myths surrounding blood donations.

Do you have any fear related to blood donation ?

162 responses

- ● Yes
- ● No

78.4%

21.6%

What is your age?

188 responses

- ● <18
- ● 18-20
- ● 21-30
- ● 31-50
- ● >50

33.5%

60.1%
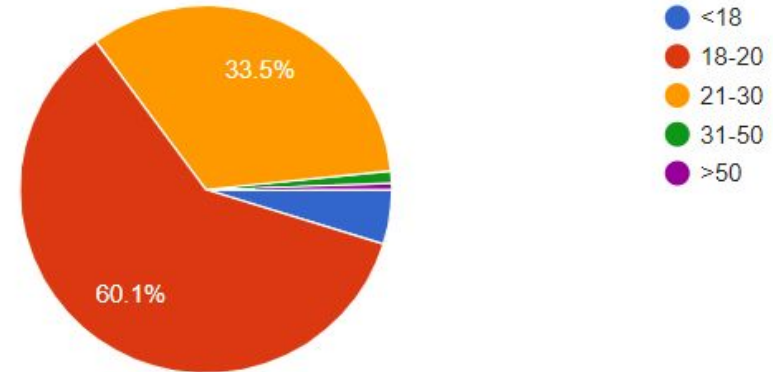
Research Phrase -
Survey Form

Insights -

- People face challenges during this. Some do not get their respective blood group and even if they find people hesitate to donate.

- Requirement of volunteer to check the process is something people want. People aren't interested in donating blood due to lack of faith. Sometimes blood banks remain ideal and that becomes a problem.

Quotes from responders, on challenges they faced during the procedure -

- *"Most of the people don't know about it, the procedure and they're not aware of benefits of blood donation. Specially in villages and small cities."*

How many times have you donated blood?

184 responses

- Once
- Twice
- Thrice
- More than 3 times
- never

64.7%
16.3%
9.8%
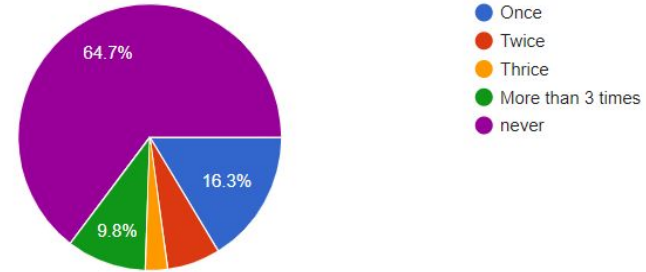
Have you ever donated blood?

185 responses

- Yes
- No

64.9%
35.1%
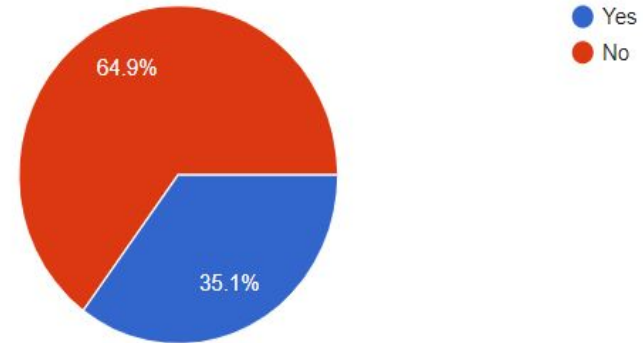
Research Phrase -

Moodboard
Click here

- We took inspiration from sources to set the mood to finish our prototype in the most modern style and graphics of this generation.

- We have implemented our thoughts into this slide ad much as we could and tried to keep the slide as light as possible for this heavy problem.
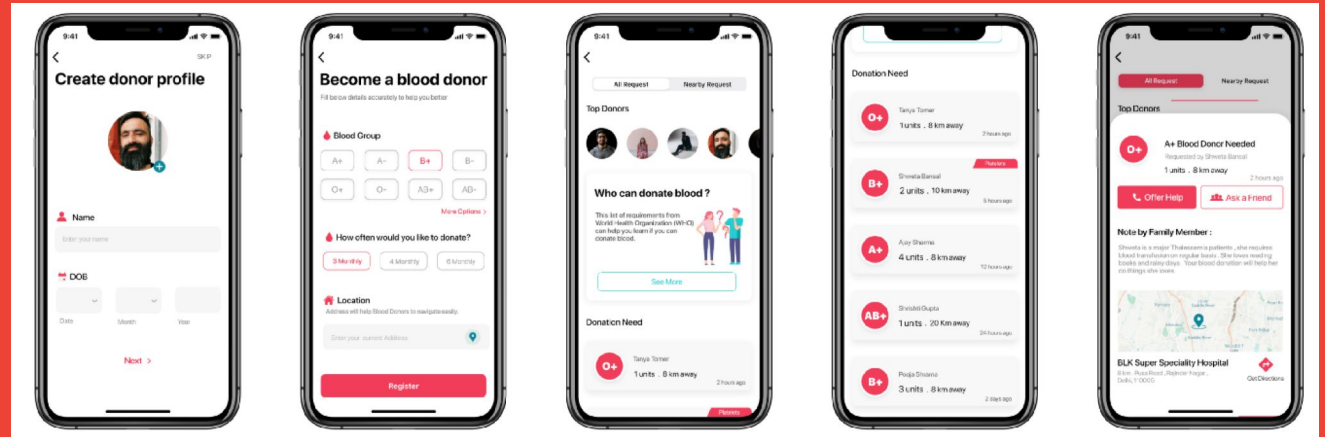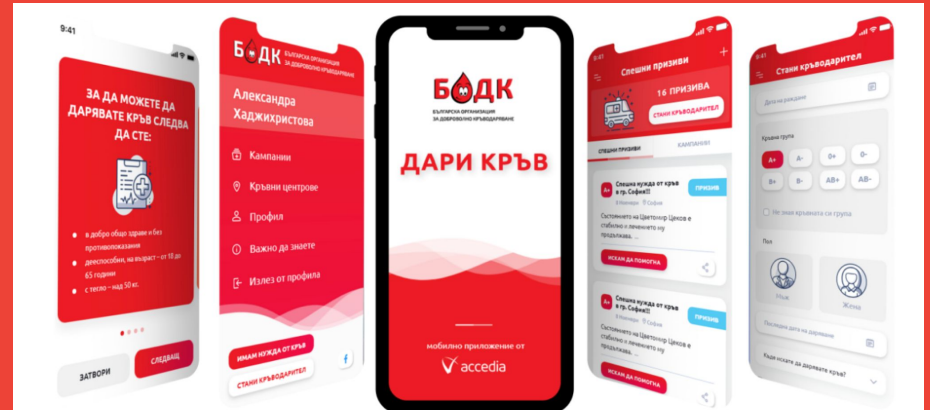
Research Phrase -
Site Map

- As soon as the user open the app, flash screen pops up. If the user doesn't have an account, the app will ask to sign up linking the Aadhar Card. If they do, it will ask to log in. Once you do the needful it will direct you to home page. The navigation bar comprises 4 bars - (a) Home (b) Donate (c) Receive (d) Profile. The user needs to select accordingly.

- The dashboard has profile having yours and the community page - it's impact, feed and rank. And the personal profile would be having option for donating. We would be keeping data of our blood donation and guide the one donating as per eligibility.

- The user can schedule for its date for donation for which they would be given virtual badge of honour.

Impact on the Society

- This initiative will drive the community closer and responsible for each other. The spirit of brotherhood will be instilled in each and every person.

- To treat people with kindness and rejoice at others happiness will be developed. Helping others gives more strength to the one who actually helped. With this mindset, the society will be directed to a friendlier atmosphere.

- We are promoting good healthcare and well-being of the citizens by imbibing good values.

Practicality & Business Viability

- The solution can be implemented by targeting the dynamic youth of this nation in donating blood by educating them the benefits of blood donation.

- We will encourage blood donors by educating them about the benefits of blood donation -

1. Reduces the risk of heart and liver ailments
2. Stimulate production of blood cells
3. Prevent Hemochromatosis Reduce Excess iron is stored in your organ, especially your liver, heart and pancreas
4. Reduces the chances of blood cancer
5. Lower blood pressure
6. Lower risk for heart attack
7. Improve your cardiovascular health
8. Lower cholesterol and triglyceride(the fat find in blood)level
9. Improve your insulin hormone production
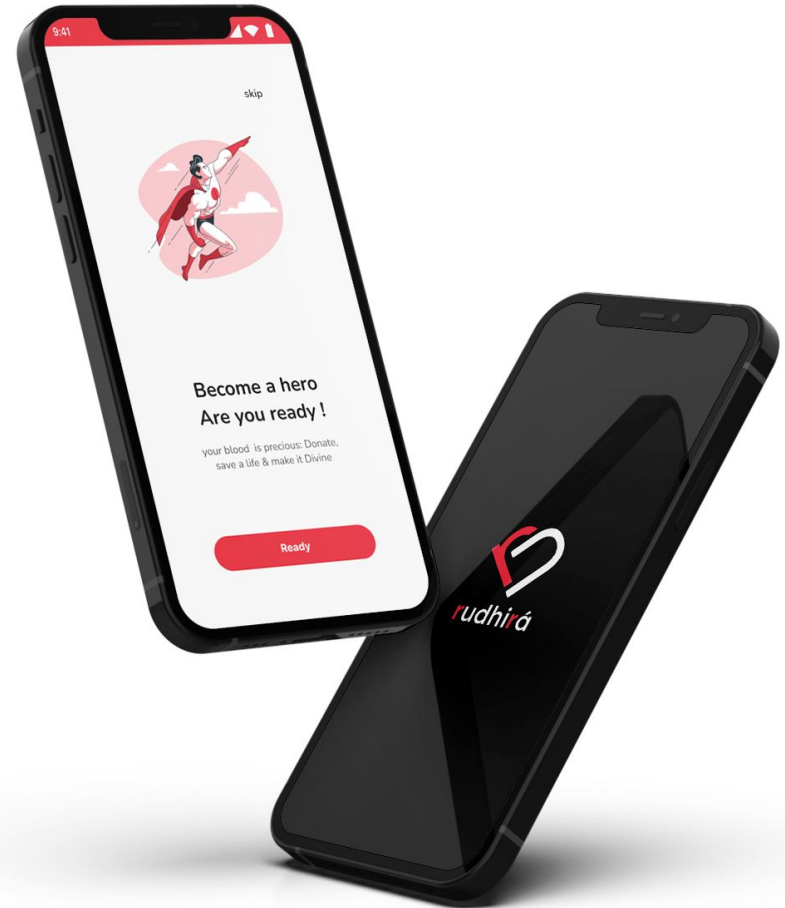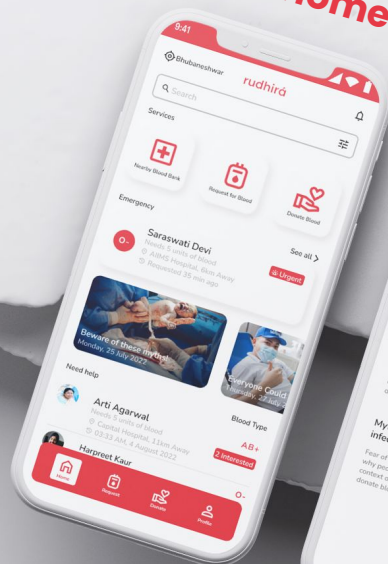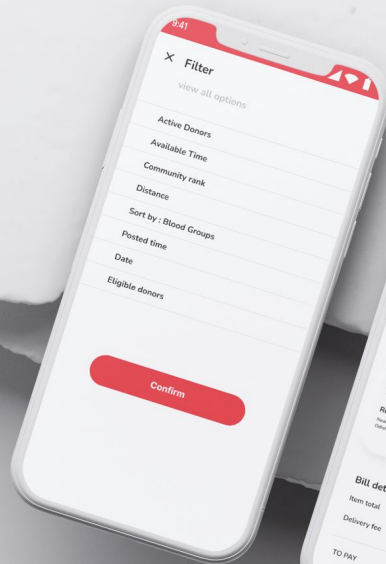
Onboarding 1
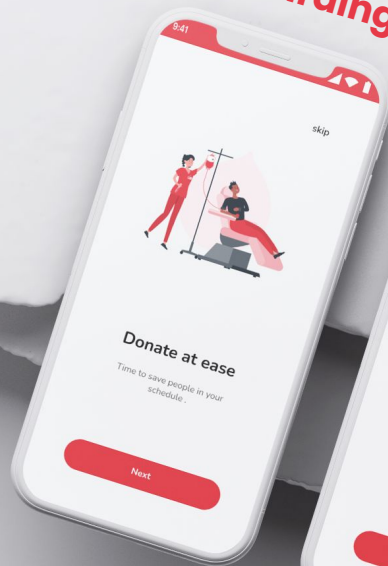
Onboarding 2
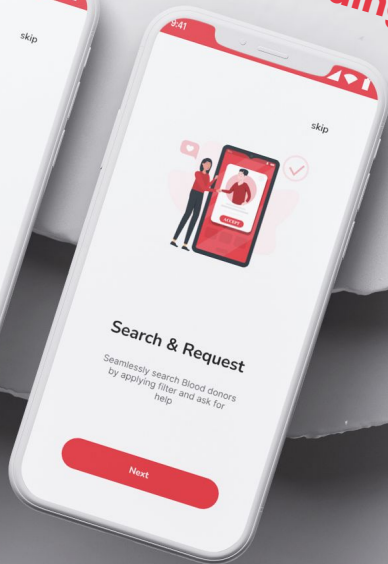
Sign Up
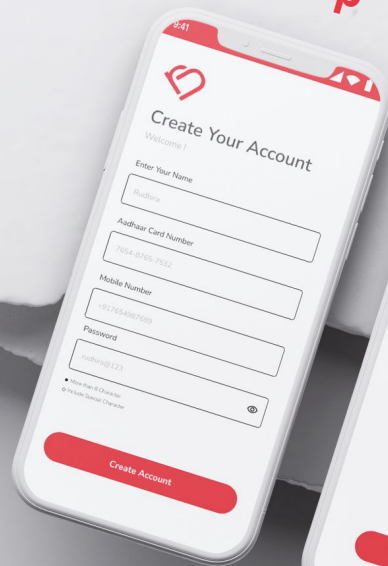
Log in
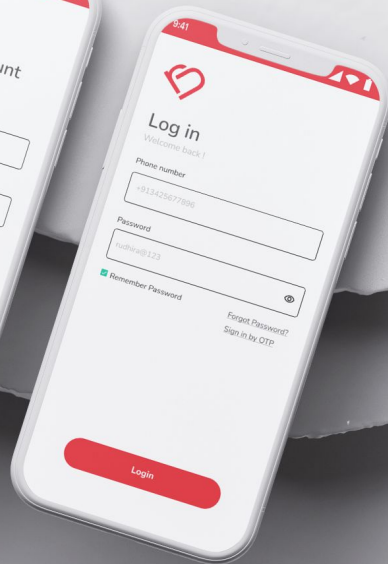
Home

FAQ & Learn

Filter
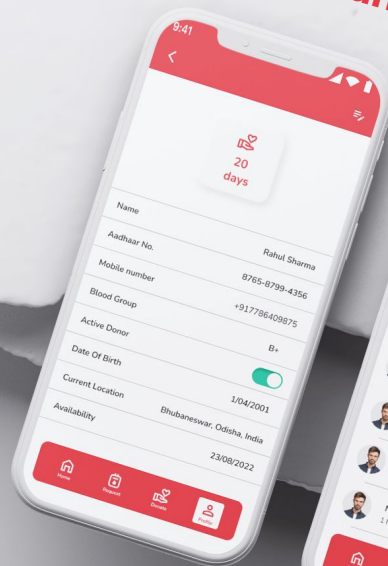
Order Confirmation
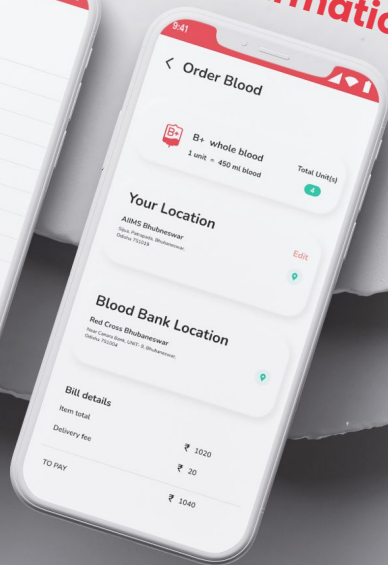
Booking
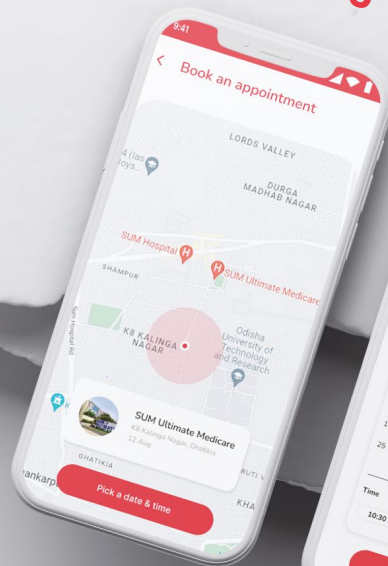
Schedule
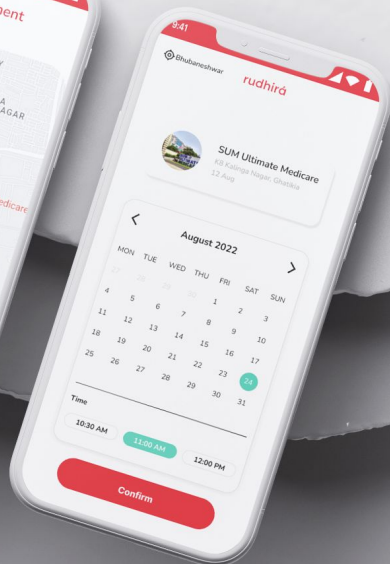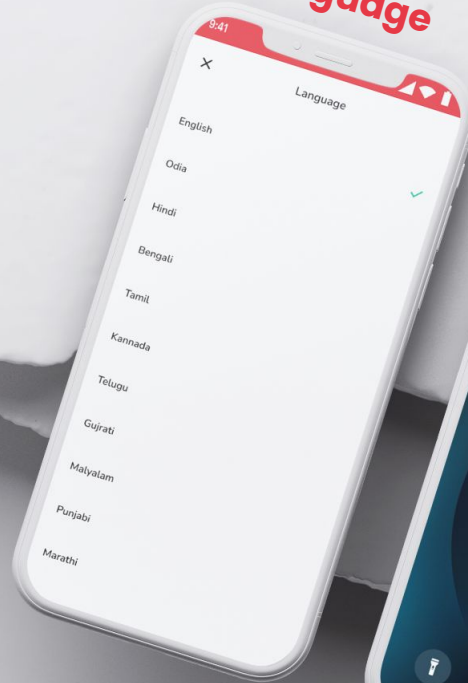
My Account

Community

Language

Notification

Sustainability

- This app is solely targeting the people around in the time of emergency.

- We have tried to fix the broken blood supply chain due to lack of faith. We have added security processes and other procedures.

- Regular updates regarding blood availability and the chance of receiving when needed.

- The app which we have designed had been customized as per the today's generations' attention and is comparatively more reliable than other sources. We have tried to secure this process.

- The app also have rewarding badge feature and getting ranks in community for blood donation. This will encourage the donors to donate .

STAGE 2

Final Submission

Now that you have completed the all sections in the deck. Please send an email out to ensure that your submission is on time.

IMPORTANT FINAL SUBMISSION INSTRUCTIONS:
Please ensure that you submit the following:

- **Presentation Deck** - Review your deck for completion and submit
- **Video** - Create a 3 min video (DO NOT EXCEED 3 mins) for the jury to evaluate and for the public voting. Imagine watching your video without any context. It should tell everything about the project, highlighting the problem, solution, and impact. Structure your video based on the evaluation criteria here
- **Submission form** - Complete a final submission form and embed a video link and the presentation link here

Final Submission form link
To be published

Submitted

Thank you