

Nurturing the . . .



“ The Unknown Voices ”



Group – B6-P1

DES 102 Human Computer Interaction



Agenda



Problem statement

Requirement gathering, planning,
mind map, personas, scenario

Low fidelity designs,
Mid fidelity designs,
Layout

High fidelity designs
Modifications

User Feedback
Team members
Learnings and reflections

Problem statement

There are many people with various disabilities like visual , motor , cognition , speech. Accessing and participating in academics , professional life and in daily life, they face significant barriers.

These barriers hinder their ability to effectively communicate, learn, and perform tasks, consequently limiting their opportunities for education, employment, and social inclusion.

One potential solution to address these challenges and barriers is the provision of Scribe Services.



" I cannot do all the good that the world needs. But the world needs all the good that I can do. "

~ Jana Stanfield

About “ Sahayata App ”

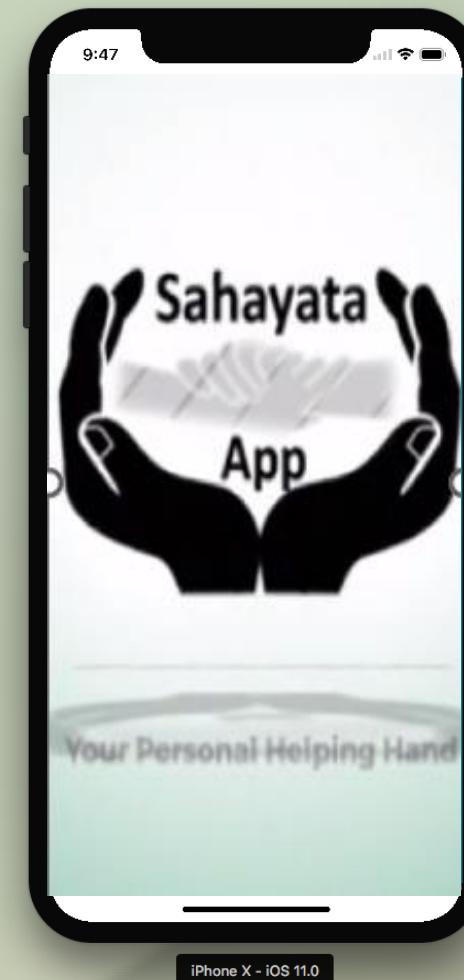
Sahayata app connects Scribes to the differently abled people or students who can't comprehend ,write and do other things on their own.

Scribes are basically people who act as an intermediary , assisting disable people in their communication, written expressions , comprehension and reading.

The current state of scribe service is often inadequate , inconsistent , and often does not meet the preferences of individuals with disabilities. Our Sahayata App want's to cater to aforementioned needs.

It further will benefit the scribes as well. They will get perks , certificates , and other benefits as well.

Educational institutions , exam bodies..health departments , NGO(s), Tutoring services etc. can also partner up with the app.



Here are some of the images of the scribes
CBSE (indian express article) -



A differently abled student taking board exam with a scribe.(Express photo by Abhisek Saha/Representational)

Scribes with Students appearing for exams (by exam conducting bodies)

Image source - Volunteers.org



Image source - Kamaraj IAS Academy



UPSC FAQs regarding scribes

FREQUENTLY ASKED QUESTIONS FOR PERSONS WITH BENCHMARK DISABILITIES (PwBD) CANDIDATES

Q.1 Who can opt for the facility of scribe?

A. The Persons with Benchmark Disabilities (PwBD) in the categories of blindness, locomotor disability (both arm affected - BA) and cerebral palsy are provided the facility of scribe, if desired by the person. In case of other category of Persons with Benchmark Disabilities as defined under section 2(r) of the RPWD Act, 2016, the facility of scribe is allowed to such candidates on production of a certificate to the effect that the person concerned has physical limitation to write, and scribe is essential to write examination on behalf, from the Chief Medical Officer/ Civil Surgeon/ Medical Superintendent of a Government Health Care institution in the prescribed proforma.

Q.2 Will the Commission provide scribe to the candidates or the candidates have to bring their own scribe?

A. The candidates have discretion of opting for his/her own scribe or request the Commission to provide for the same.

Q.3 Is there any prescribed qualification for the scribe?

A. The qualification of the Commission's scribe as well as own scribe should not be more than the minimum qualification criteria of the Examination (for example- in case of the Civil Services Examination graduation from any recognized university). However, the qualification of the scribe should always be matriculate or above.

Q.4 Will the candidates be allowed to change their own scribe before the examination?

A. If a candidate opts for own scribe and eventually requests the Commission for change, such request will be examined on case to case basis.

Q.5 Will the Commission pay any remuneration if the candidate brings his/her own scribe?

A. No, the Commission doesn't pay any remuneration to the scribe if the candidate brings his/her own scribe.

Q.6 If due to any eventuality, the candidate's own scribe does not turn up on the examination day, will the Commission arrange the scribe for the candidate?

A. Yes, the Commission will arrange its scribe for the candidate.

Q.7 If any non-PwBD candidate unfortunately fractures or injures his/her writing hand before the Examination, will he/ she get the facility of scribe?

A. There is no such provision in the Rules of Examinations. It is reiterated that only the candidates having specific disability and having the valid disability certificate as per prevailing rules are eligible for scribe.

Q.8 If any candidate has writers' cramp, will he/ she get the facility of scribe?

A. The matter is under consideration of the Government.

Some guidelines of exam conducting bodies regarding scribes

- o One of the significant CBSE relaxation for learning disability is the provision of a scribe for the child. A scribe is somebody who writes answers for the child during the examination as dictated by the child. [A scribe can only be a junior, that is, from a lower grade than the child appearing for the exam.](#)
- o Remuneration to the scribe is provided by the CBSE, not the child or their family. While a scribe is usually given by the CBSE or by the examination centre, you can also apply for your own scribe.
- o Another CBSE relaxation for [learning disability](#), is if a child has difficulty reading, they are entitled to a reader, who reads, not explains, the questions to the child. However, a child can either have a reader or a scribe and not both.
- o According to the duration of the examination, the CBSE also gives extra time to students with disabilities. For example, for a three-hour exam, 60 additional minutes are provided, for a two-hour exam, 40 extra minutes are provided and for one and a half-hour 30 extra minutes are given.
- o Children can opt for one compulsory language as against two prescribed by the board by default. And in addition, they can choose any four of the subjects offered by the CBSE and the school they go to.
- o As of January 2020, a major CBSE relaxation for learning disability is to allow the use of calculators for children who struggle with [dyscalculia](#). The board itself provides these calculators.

CBSE

I. These guidelines may be called as "Guidelines for conducting written examination for persons with benchmark disabilities 2018".

II. There should be a uniform and comprehensive policy across the country for persons with benchmark disabilities for written examination taking into account improvement in technology and new avenues opened to the persons with benchmark disabilities providing a level playing field. Policy should also have flexibility to accommodate the specific needs on case-to-case basis.

III. There is no need for fixing separate criteria for regular and competitive examinations.

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IV. The facility of Scribe/Reader/Lab Assistant should be allowed to any person with benchmark disability as defined under section 2(r) of the RPwD Act, 2016 and has limitation in writing including that of speed if so desired by him/her.

In case of persons with benchmark disabilities in the category of blindness, locomotor disability (both arm affected-BA) and cerebral palsy, the facility of scribe/reader/lab assistant shall be given, if so desired by the person.

In case of other category of persons with benchmark disabilities, the provision of scribe/reader/lab assistant can be allowed on production of a certificate to the effect that the person concerned has physical limitation to write, and scribe is essential to write examination on his behalf, from the Chief Medical Officer/Civil Surgeon/Medical Superintendent of a Government health care institution as per proforma at APPENDIX-I.

V. The candidate should have the discretion of opting for his own scribe/reader/lab assistant or request the Examination Body for the same. The examining body may also identify the scribe/ reader/lab assistant to make panels at the District/Division/ State level as per the requirements of the examination. In such instances the candidates should be allowed to meet the scribe **two days** before the examination so that the candidates get a chance to check and verify whether the scribe is suitable or not.

VI. In case the examining body provides the scribe/reader/lab assistant, it shall be ensured that qualification of the scribe should not be more than the minimum qualification criteria of the examination. However, the qualification of the scribe/reader should always be matriculate or above.

In case the candidate is allowed to bring his own scribe, the qualification of the scribe should be one step below the qualification of the candidate taking examination. The persons with benchmark disabilities opting for own scribe/reader should submit details of the own scribe as per proforma at APPENDIX-II

VII. There should also be flexibility in accommodating any change in scribe/reader/lab assistant in case of emergency. The candidates should also be allowed to take more than one scribe/reader for writing different papers especially for languages. However, there can be only one scribe per subject.

VIII. Persons with benchmark disabilities should be given, as far as possible, the option of choosing the mode for taking the examinations i.e. in Braille or in the computer or in large print or even by recording the answers as the examining bodies

Page 2 of 6

can easily make use of technology to convert question paper in large prints, e-text, or Braille and can also convert Braille text in English or regional languages.

NTA guidelines
regarding scribes

Requirement gathering

Differently abled individuals - One user base includes differently abled people who can not write on their own in any condition. The user can simply reach out to the “Sahayta App” and find the required scribe as per his/her requirement. The client may be enrolled in an educational institution e.g.- school or college , etc. or any other exams he/she has applied for.

Educational institutions and Exam conducting bodies - One user base can be the Educational institutions for specially abled children or exam conducting bodies which have to take into account the differently abled people. They can partner up with our app , this way the students can find easy access to help at every step they might require. E.g. - CBSE , ICSE , UPSC , SSC , JEE , NEET and other

Expanding the apps scope - One user base might include NGOs who work for the upliftment of the differently abled people and students. They can hire the scribes or ask for help in any work through our app which might go beyond its scope. As it can also include differently abled help or assistance in near future based upon the user response. We also agreed on included medical assistance and tutoring service on the home screen after user feedback.

Scribes - One user base includes Scribes. These are the people who will write on behalf of these differently abled students. We have already mentioned that the scribes can gain certain perks and certificates whether e-certificates or physical ones and other prizes too.



Plan for the app interface development

Discovering

synergize **Perspectives**

Define

disseminate **Features**

Develop and design

coordinate **Design**

Deliver

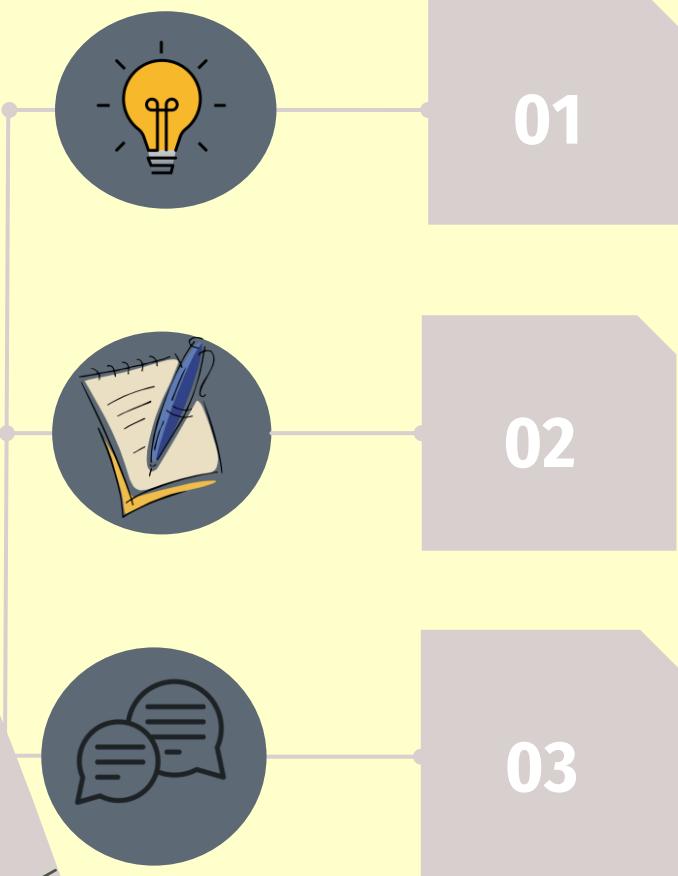
foster holistically **The Feedback**

Launch

deploy **The Final Prototype**



How we get there



Brainstorming ideas

Discussing and exploring different topics and agreeing on the "Sahayata App". Creating mind maps and basic layout of the app

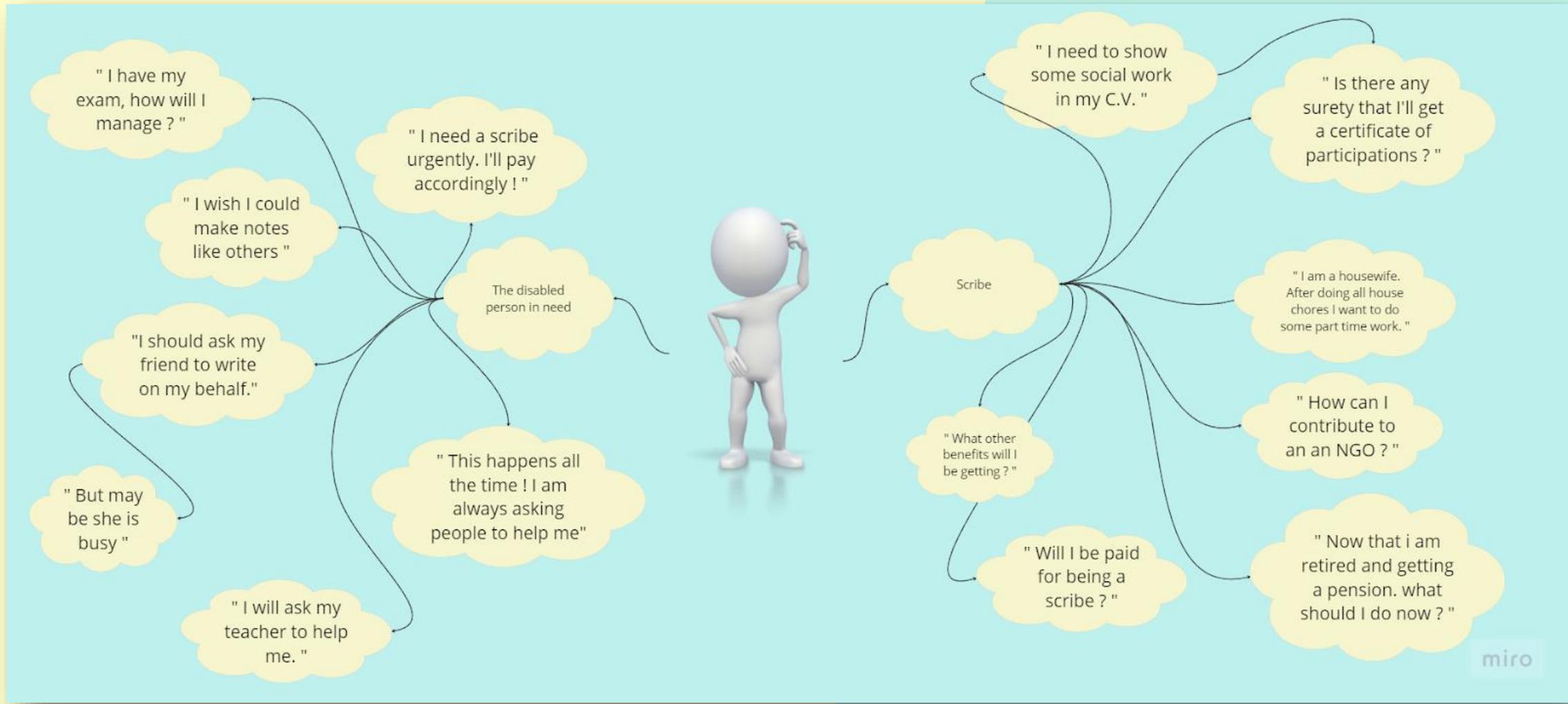
Research

Exploring different exam bodies and educational institutions' guidelines regarding Scribes and PWD students.

Constant user evaluation

Exploring suggestions about the app and modifying accordingly.

Mind map





Personas

PERSONALITY

Sarah is passionate about helping others and has experience working as a scribe she is dedicated to support disabled students in their academic journeys.

FRUSTATIONS

Sarah's main frustration includes balancing multiple students which affects the quality of support she provides and regarding miscommunication which leads to less effective support.



Sarah Khanna
28 years old
majoring in education

GOALS

Sarah's primary goal is to empower students and increase their efficiency by providing them with the necessary support to succeed academically.

NEEDS

Sarah needs a user-friendly scribing platform between the scribe and disabled user. She needs some features that facilitates the ease for scribe to understand and assist with users needs.



Rohan Sharma

21

New Delhi

Live with his parents and sister
Intern in a software company

Goals

He wants to get a good job as soon as possible. He also wants to add in his CV some kind of social and community work.

Personality:

He has selfless nature.
He genuinely cares about the needs and well being of others.
He possesses a strong capacity of empathy.
He is an attentive and active listener.

Frustrations
He may become frustrated when his efforts go unappreciated. Sometimes, he may overcommit himself, taking on too many responsibilities, leading to frustration.

miro





Personas



Aditya Kumar
15
New Delhi
Lives with his parents
Govt Boys Senior Secondary School

Frustrations

He often needs significant support from his classmates or his teachers. He may become frustrated when he cannot participate in physical activities or perform tasks as easily as his peers.

He says that such if such an app like Sahayata App really existed then it would be great help.

Goals

He wants to take part in social activities, build his self confidence and enhance his social skills which is an essential goal for him. He also wants to learn to use assistive devices effectively.

Personality:

He has a positive and hopeful outlook on life.
He has a strong sense of determination and also falls into the bright students categories.
He often becomes adept at adapting to new situations and environments.

Om Prakash
17 y/o



Student Meerut

Needs

An app that allows him to easily organize his thoughts and some assistant system to help him in real time during exams and classes.

Om, is a bright and motivated individual with a passion for learning. He faces challenges in writing due to her physical disability, making it difficult for her to take notes during lectures or exams.

Goals

Om's primary goal is to pursue his academic interest, be as independent as possible and to connect with his peers and actively participate in academic and social activities.

Frustrations

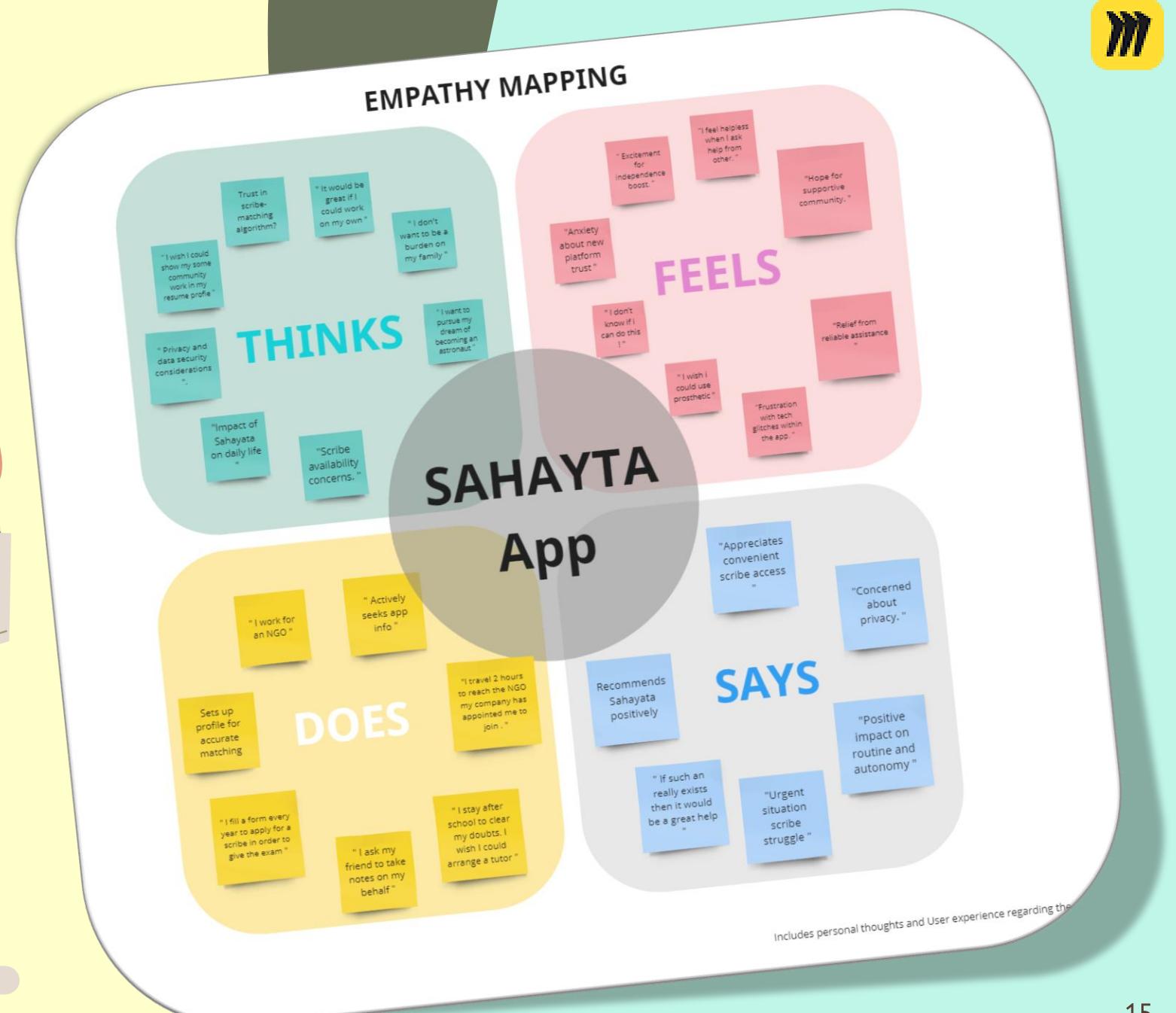
Om often finds himself dependent on others, writing tasks take him longer and he struggles to keep up with pace of lectures and exams. A lot of tools are not tailored to his needs making it difficult for him to navigate in his academic environment efficiently.

Scenario





Empathy map





Low - Fi designs 2



Mid - Fi designs



9:47

Email / phone number
name@example.com

OTP
Enter the OTP sent

New Password
.....

Confirm New Password
.....

[Login](#)

iPhone X - iOS 11.0

9:47

Sahayata App

email
xyz@gmail.com

password
.....

[Login](#)

[Forgot password?](#)

[Privacy](#)

iPhone X - iOS 11.0

9:47

Name

Identifying myself as (Client / Scribe)

Email

Re-enter password

Password

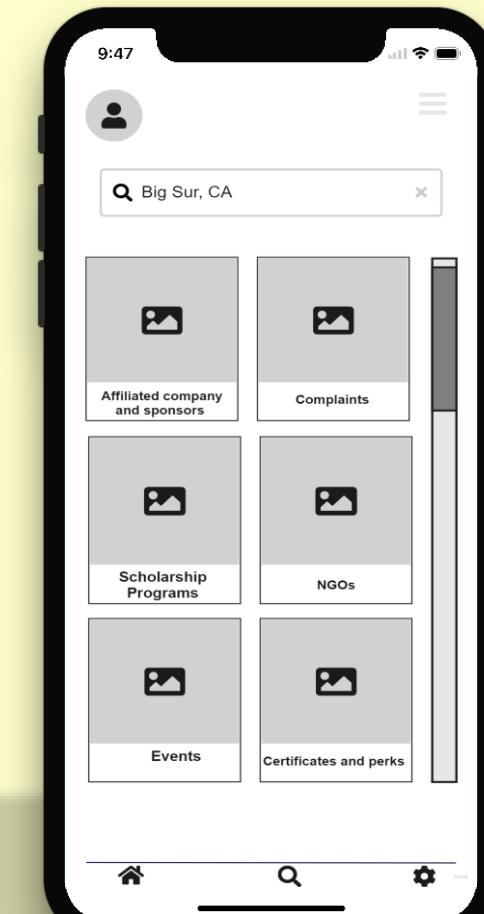
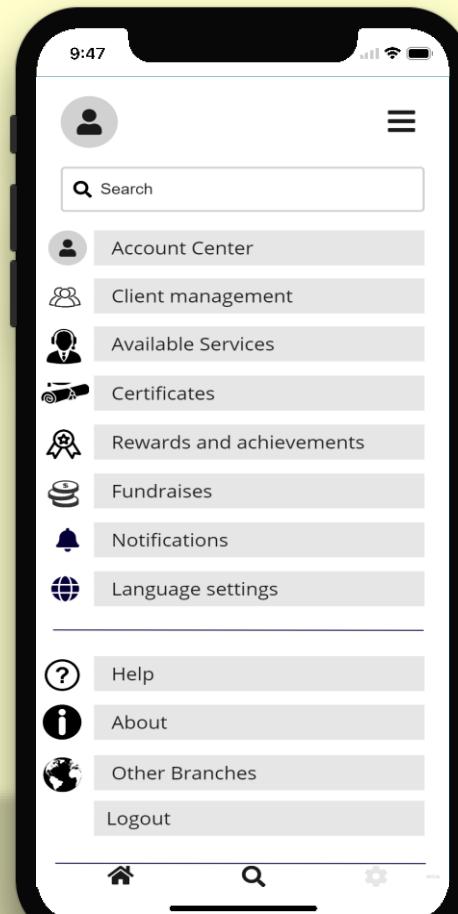
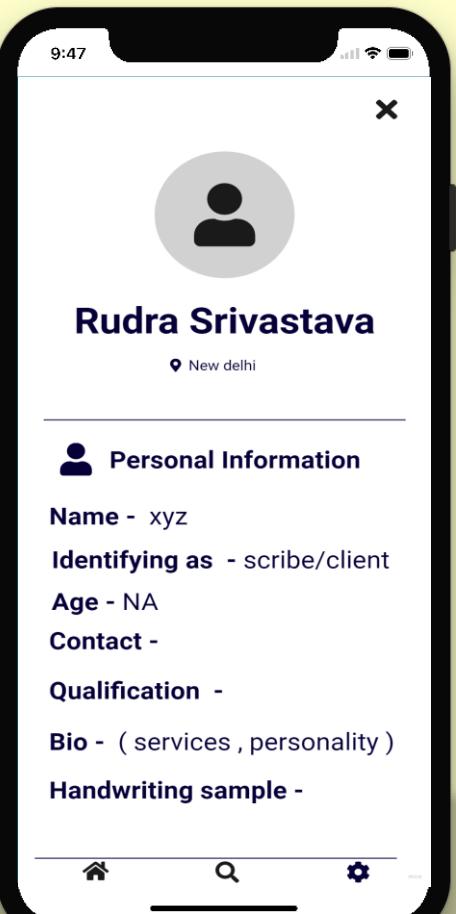
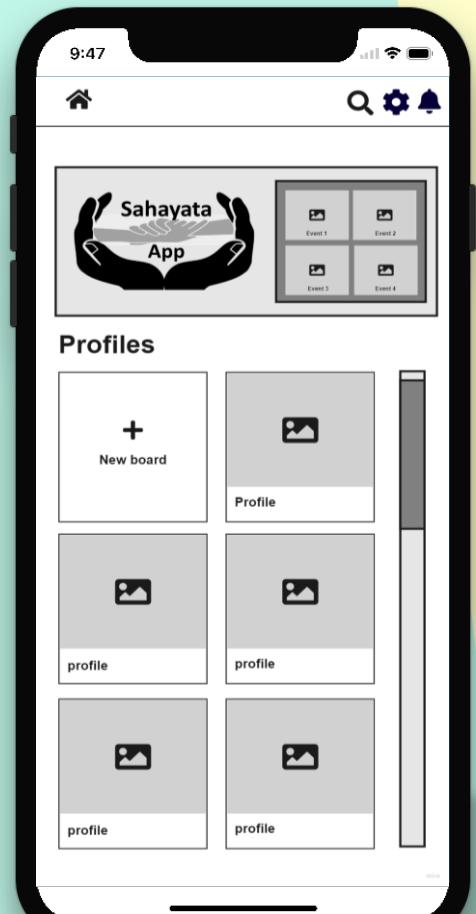
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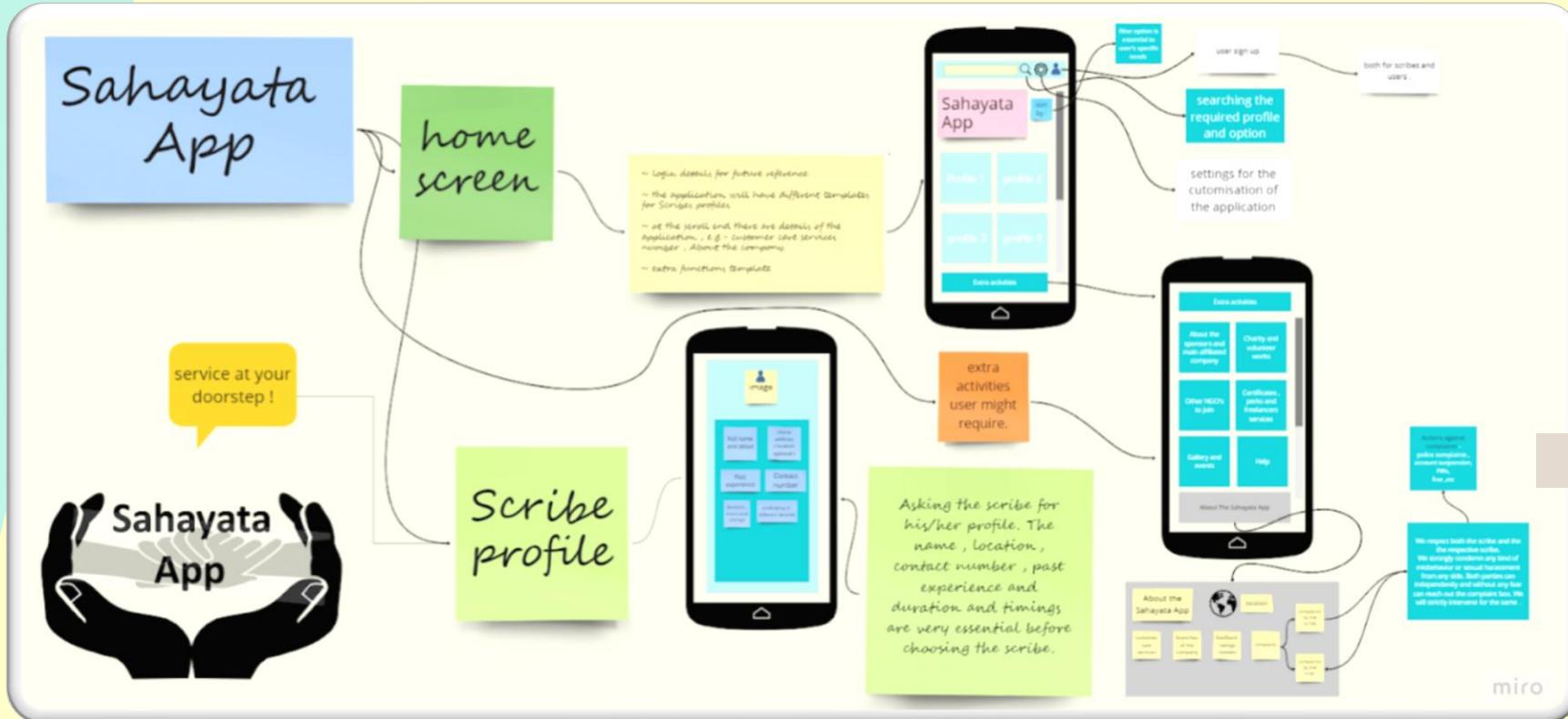
[Sign up](#)

iPhone X - iOS 11.0

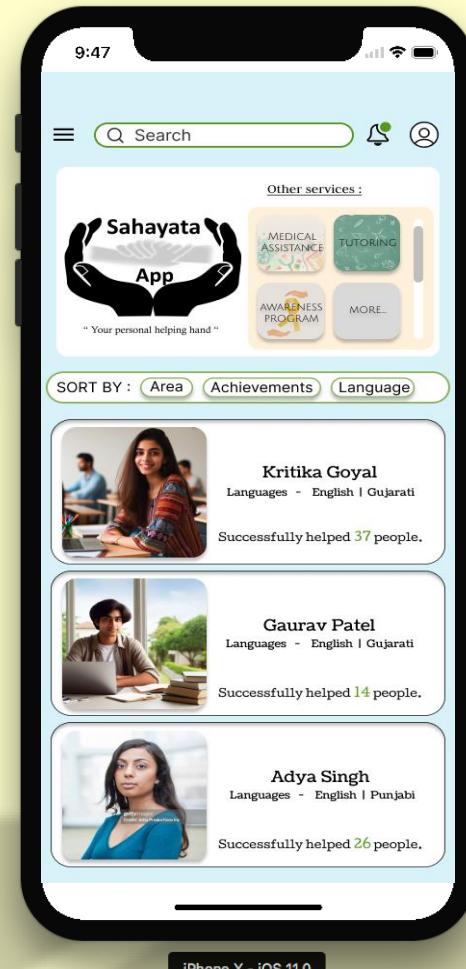
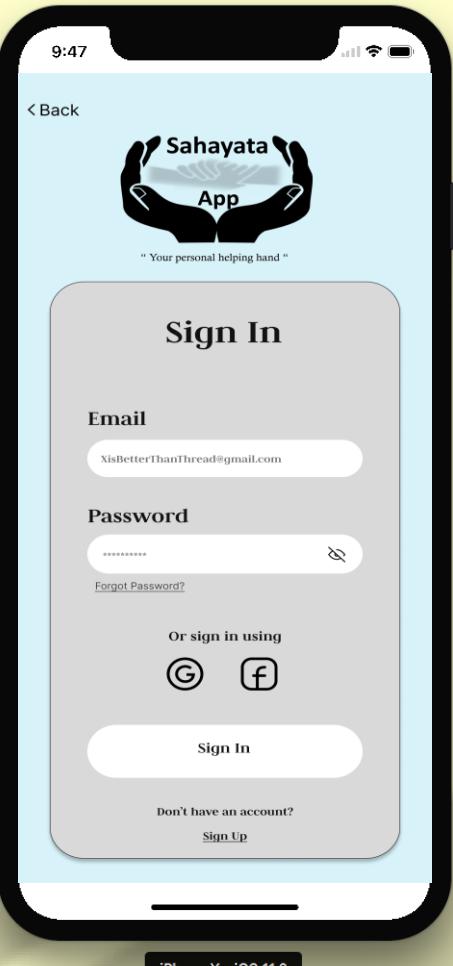
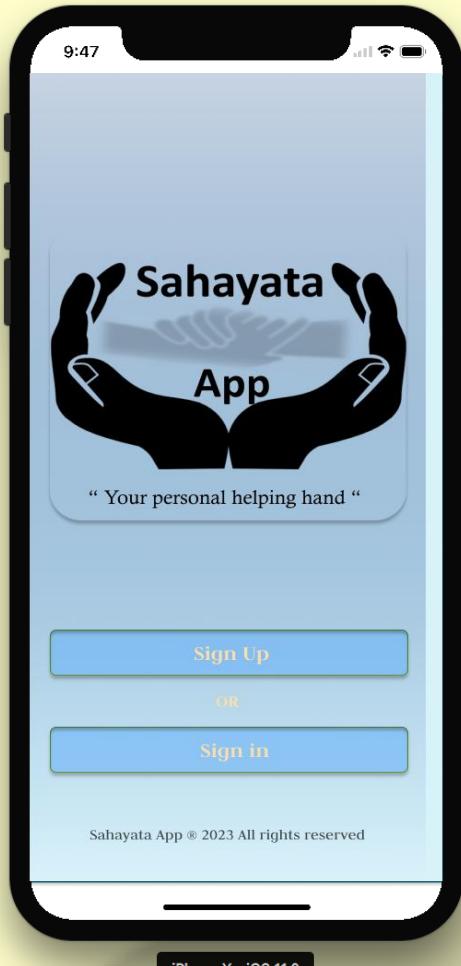
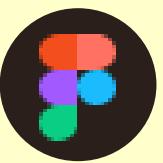


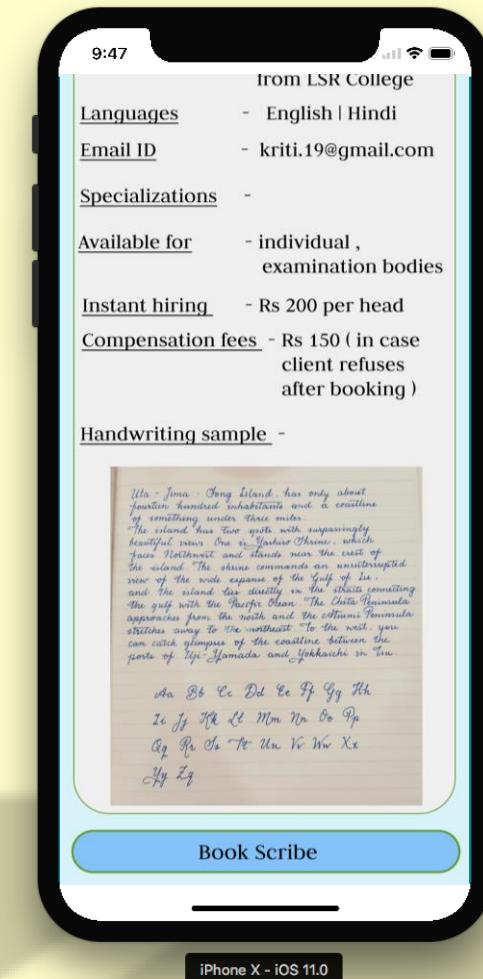
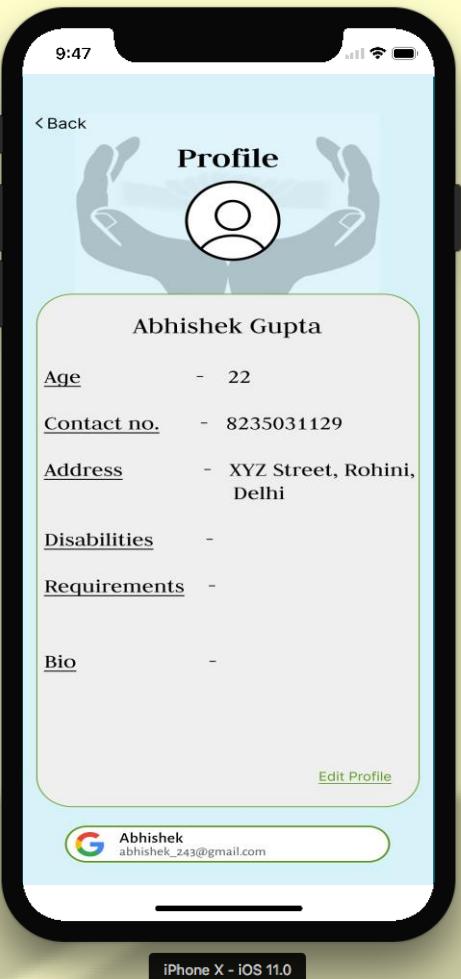


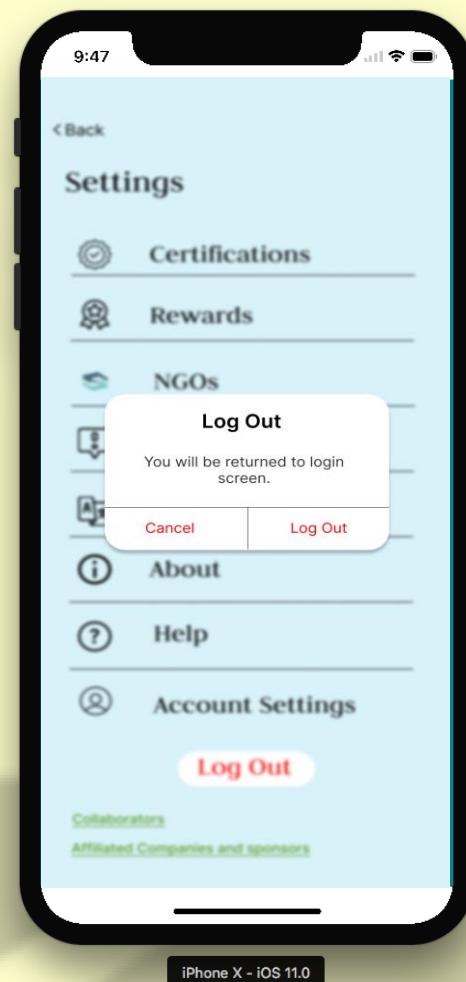
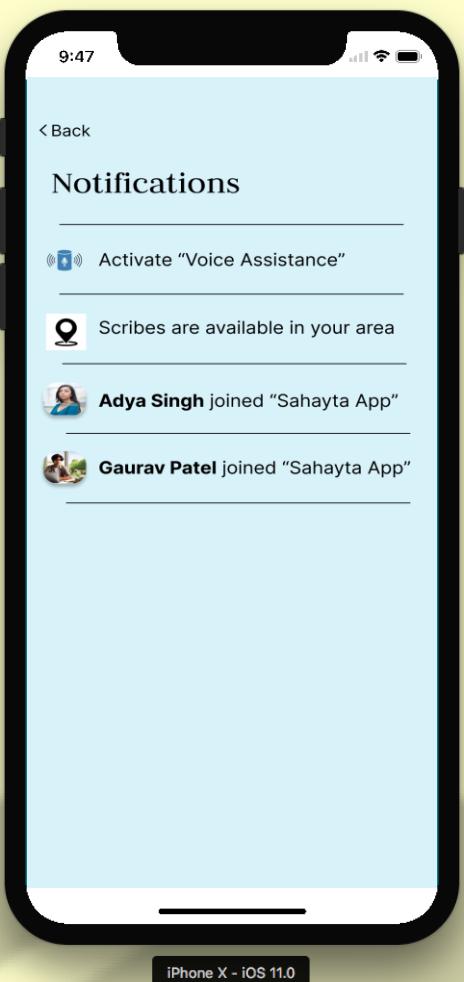
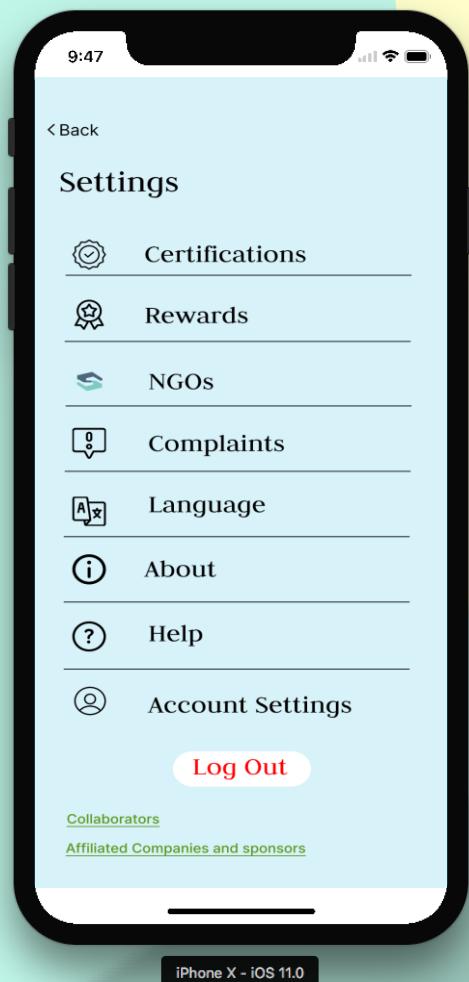
Layout



Hi fidelity designs





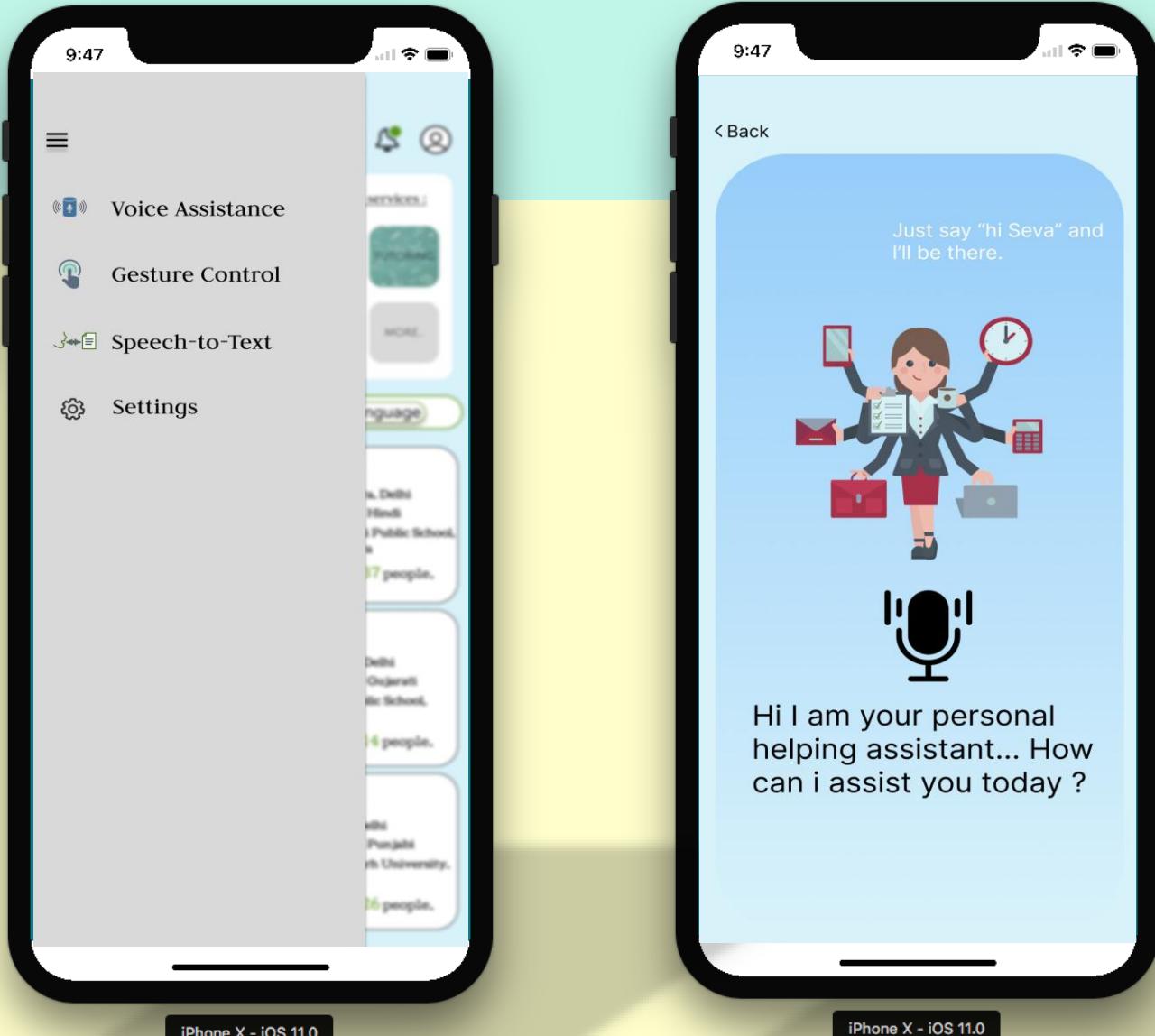




Modifications

Including more user friendly features according to the scope of our app .

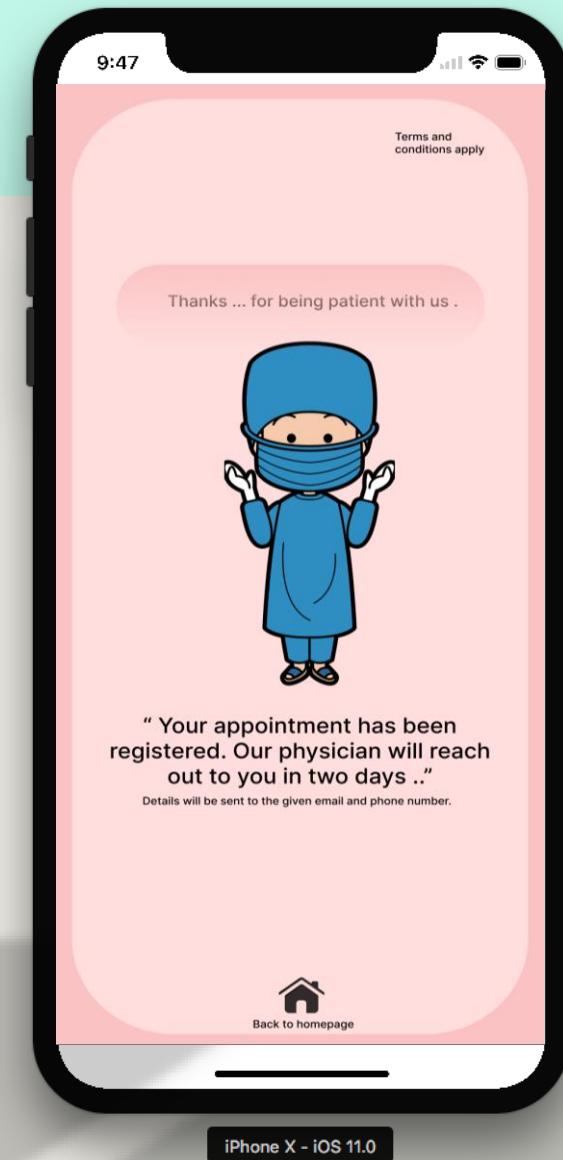
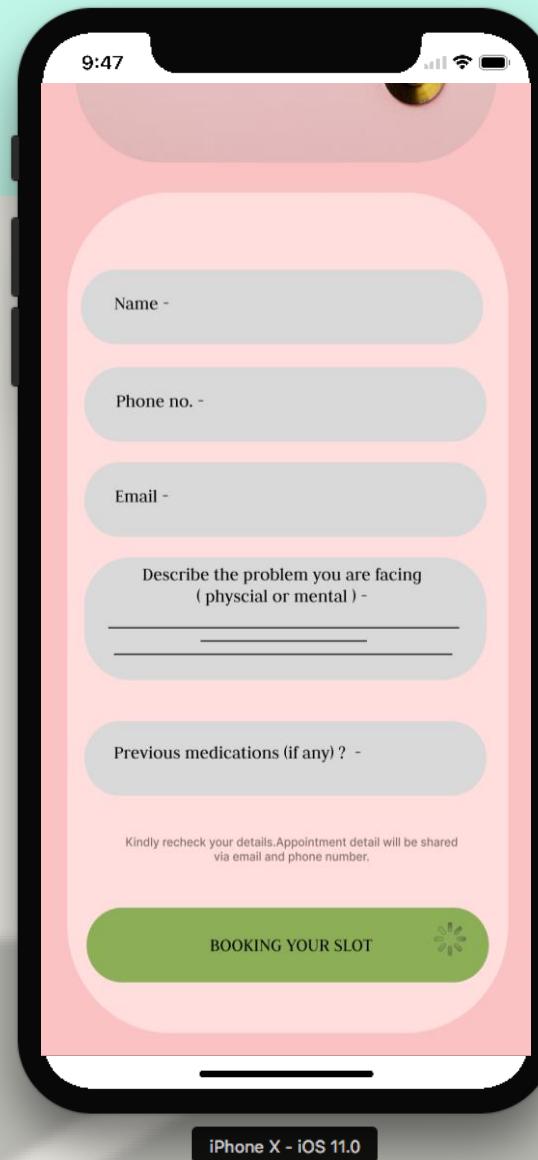
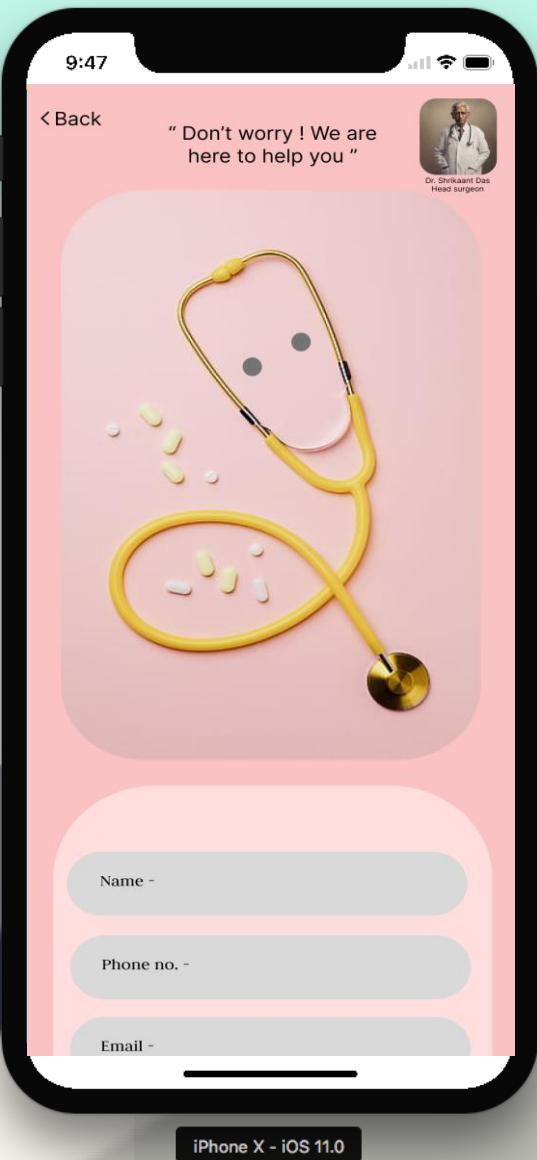
“ Just say “hi... Seva” and I’ll be there “





Modifications

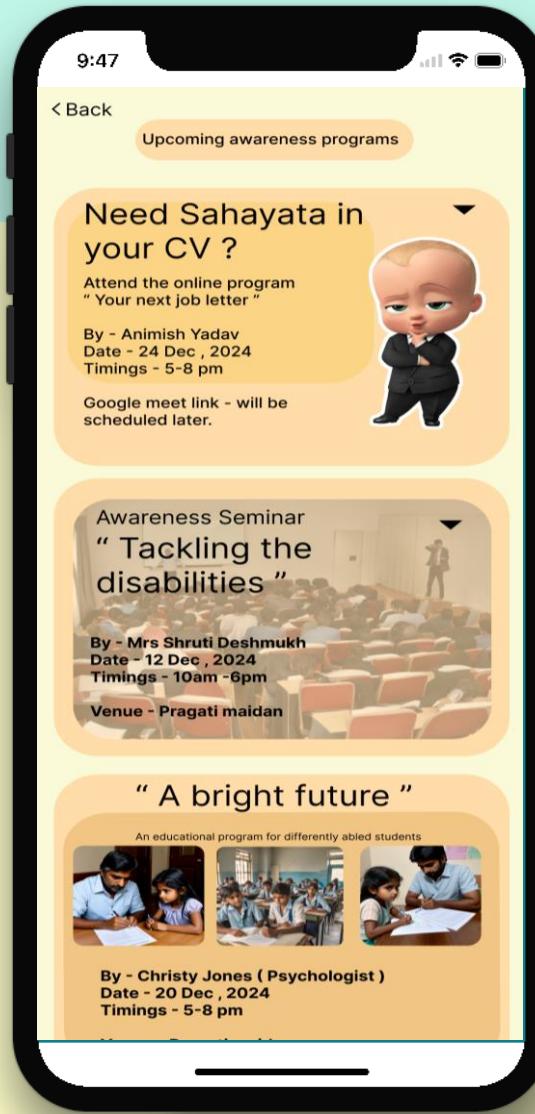
Including medical assistance for disabled .



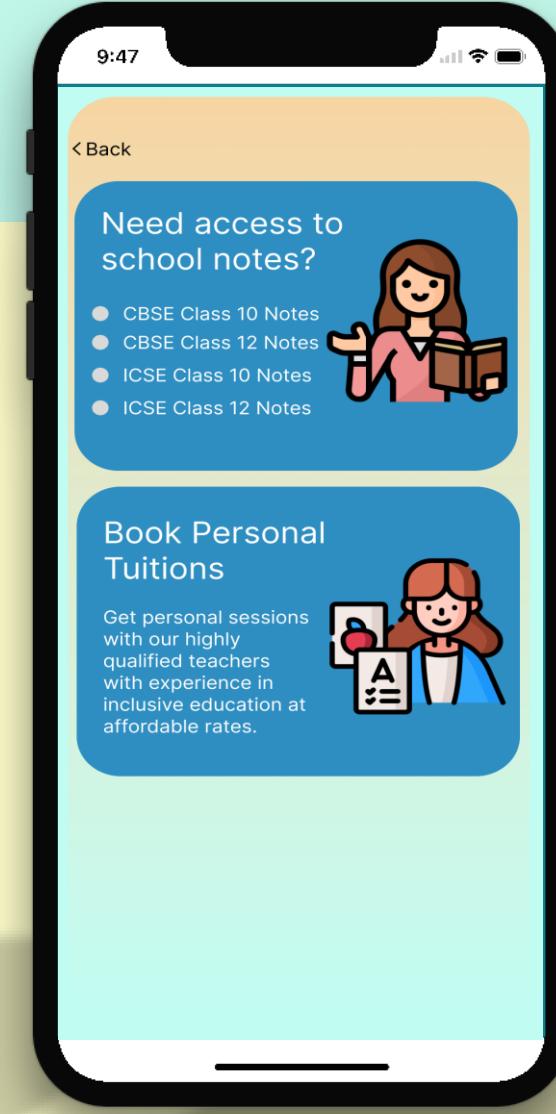


Modifications

Including awareness programs and tutoring services ..



iPhone X - iOS 11.0

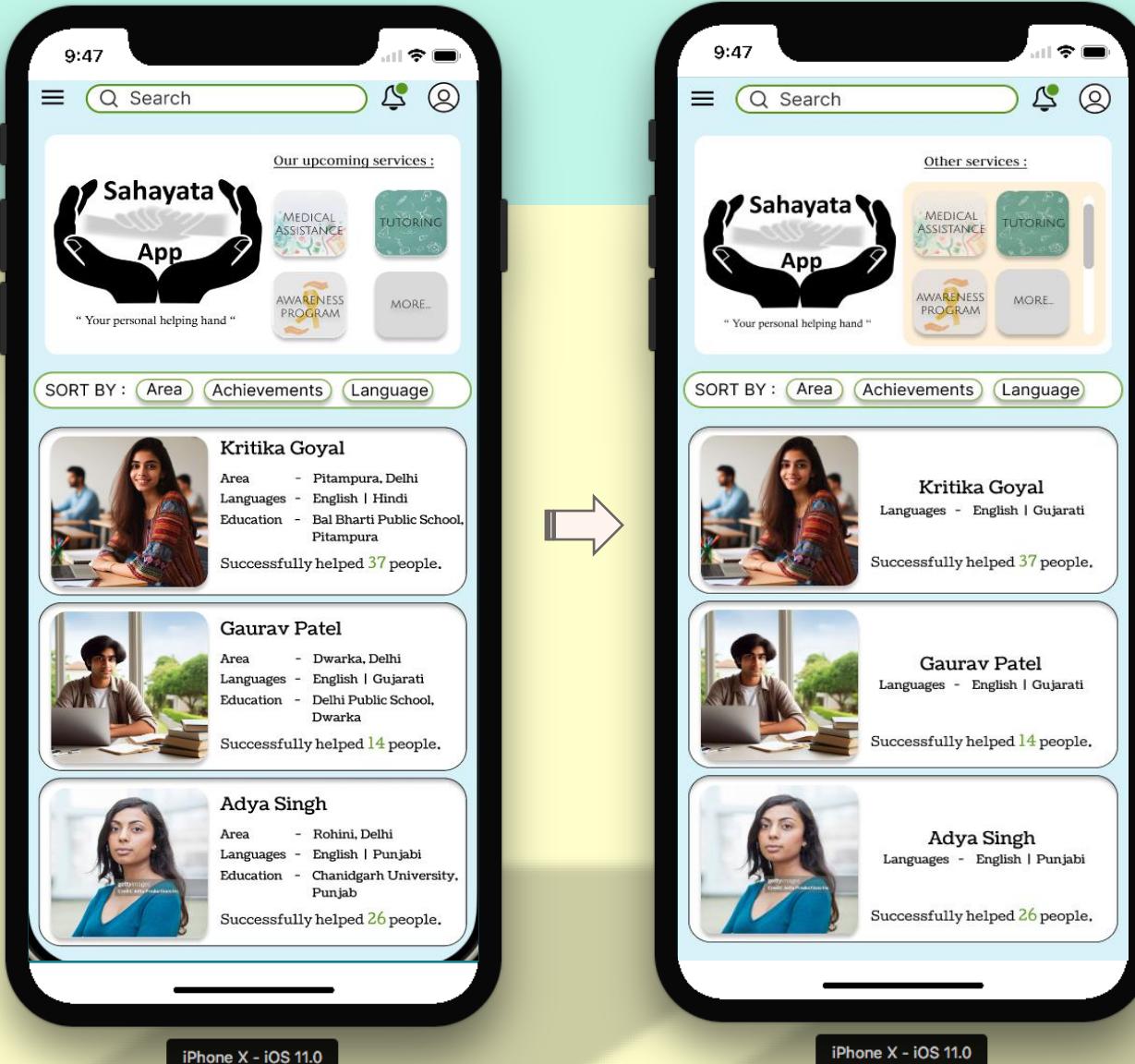


iPhone X - iOS 11.0



Modifications

Reducing cognitive load on the home screen according to the user feedback ...



User feedback

We had carried out surveys through google forms for getting user feedbacks.



We accepted different perspectives and accordingly kept modifying the interfaces .

The screenshot shows a Google Form titled "Sahayata App Survey". The form has a decorative header featuring a colorful illustration of autumn trees. The main content area contains the following text:

Sahayata App Survey

"Your personal helping hand"

This application is a beacon of empowerment for individuals facing a wide spectrum of disabilities, from those affecting vision, motor skills, cognition, speech, to physical impairments. It stands as a bridge over the challenges these individuals face in everyday communication and writing. How does it achieve this? By introducing the concept of scribes.

In essence, this application serves as the catalyst for a powerful transformation. It connects those in need with dedicated scribes who wholeheartedly write on their behalf. The app acts as a compassionate intermediary, facilitating a seamless and profoundly impactful collaboration between scribes and individuals seeking to express themselves, share their thoughts, or communicate their needs.

We require a genuine feedback from your side.

At the bottom of the form, there is a note: "This form is automatically collecting emails from all respondents. Change settings".



some screenshots of the feedback

Is the name of the app justified ?
52 responses

Yes App's name is justified and doesn't need any modification.	25%
No , could have thought of a better name	75%

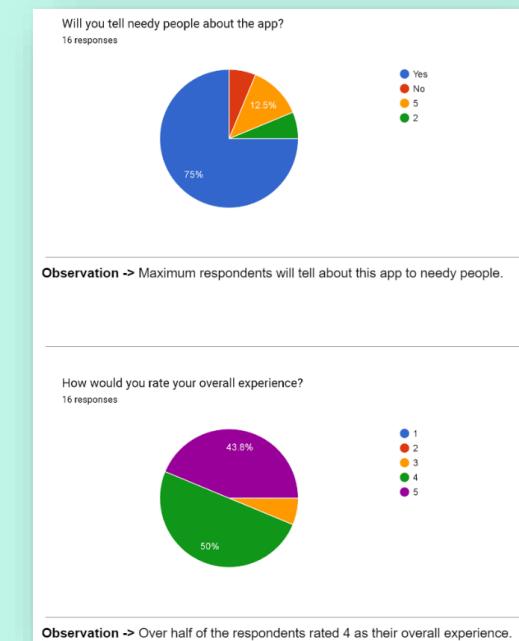
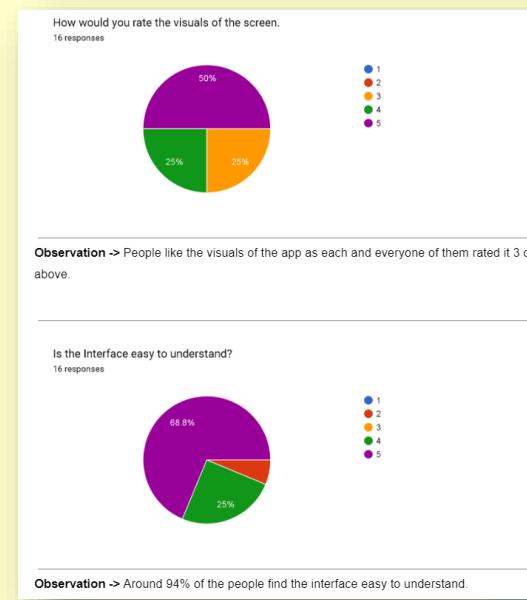
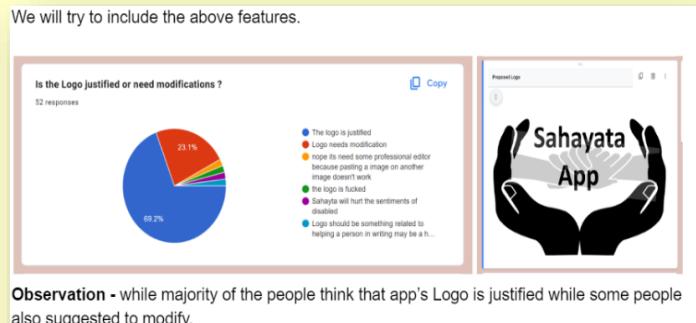
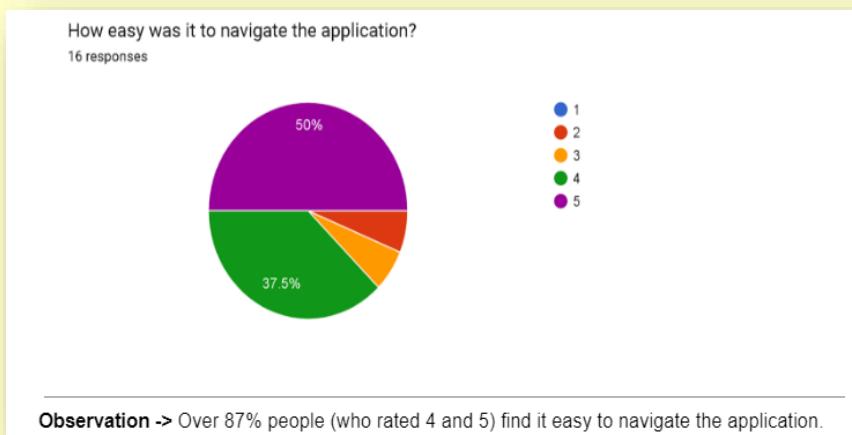
Observation - Majority of the people think that the "Sahayata" name of the app is appropriate.

We were open to suggestions -

What should be the appropriate name according to you ?
16 responses

- App, for your name is too simple
- In my opinion, the name is good to this app. It fitting
- Sahayata
- Helping hands
- Sahayata is a very good name but very broad term, name which can relate to the work
- Border of Me
- Assistance to the needy
- Helping hands
- Address

Observation - After discussing and analyzing, we decided to keep the app name as "Sahayata" only .



some screenshots of
the feedback

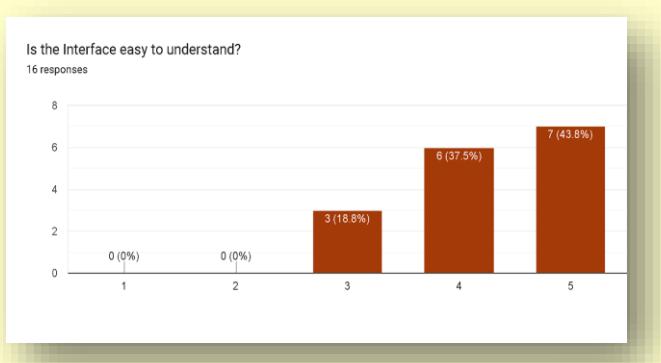


User Evaluation Survey (**The Sahayata App**)

Our project aims on making an easily accessible scribe service application for the benefit of the disabled people.

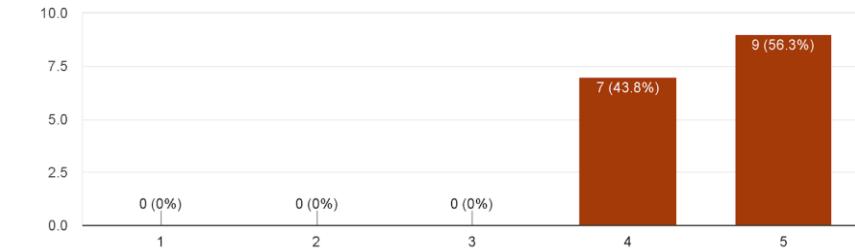
mayank23316@iiitd.ac.in [Switch account](#)

* Indicates required question



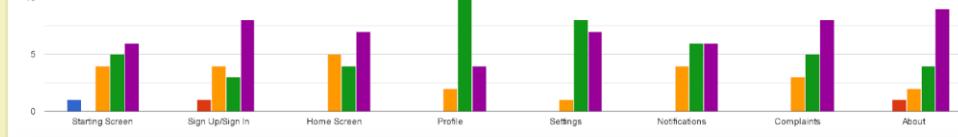
How relevant and helpful do you think it is for the needy people?

16 responses



How good were the visuals

16 responses



Any additional comments/suggestions regarding the prototype?

11 responses

You all are doing a very great job. It will surely benefit the PWD students and scribes

nice initiative

spacing

Very nice topic

I believe no modifications are necessary for this application. In my view, everything is perfect and ready for deployment.

Nice one

Everything's good i also wanna be a member

I believe that there should be an option for medical assistance in this ap and except that everything is perfect and ready for deployment.

An informal feedback - When we were showing the app to one of our batchmates , he said that It was difficult to digest too much information on the home screen. So we accordingly modified the interface to reduce cognitive load.

Meet the team



MAYANK KATARIA



PRATEEK RAJ



NADISH GULATI



NISHCHAY SONI



PARTH PANWAR

Learnings and reflections

This project allowed us to learn more about the plight of disabled people and how simple solutions can make their lives so much easier. During the course of the project, we noticed many problems and challenges that disabled people face while looking for scribes, who are people who help them with tasks like reading, writing, and taking notes. Some of these problems may include limited availability, lack of skills, geographical constraints, lack of awareness, etc. We tried to solve all these problems by creating an interface that connects disabled people with scribes and provides them with all their relevant information.

Midway through the project, we also realized that apart from being unable to find scribes, there are so many other services disabled people need that are not readily available, like people who can provide them with medical assistance or people who can educate them and make them more aware. We aim to solve those problems as well by the medium of our app.



Based on our TA's feedback we included features such as medical assistance, awareness programs, and tutorials to make this app more useful and increase the scope .We also realized that we need funding to run our app and provide the scribes who volunteer on our platform with rewards and certifications, so we decided to partner up with NGOs that work for the betterment of disabled people.

Our app aims to create a platform that does not discriminate and provides consistent quality support with technological accessibility. We considered feedback from users and improved the accessibility and usability of the app, and we believe that there were instances where user feedback led to significant improvements.

The dynamics within the team were very balanced as we worked keeping in mind some key concepts such as Double Diamond, User experience and Usability goals, Interface designs, Social interactions ,Gestalt's principles, Millers principles, etc. helped as developing the UI designs.



Moreover, every single team member gained essential knowledge and insights about the project's technical and design-related aspects that will contribute to continuous improvement in the future.

Thank you



Canva link



Video link



PNG, JPG, Clipart images,
videos have been downloaded
or created from google.
A Presentation Design by
Mayank Kataria