

Project Report : BetterBond

Abstract

Man is a social animal, we need social interaction and interpersonal relationships, we encounter many such instances of social interaction throughout the day, sometimes they are smooth and sometimes they are not, in the world we live, society is becoming increasingly complex, so are people and therefore so is social interactions, it is becoming more and more difficult to form deep meaningful interpersonal relationships.

The problem we are trying to solve is that many people long for deep meaningful relationships and are not able to find them. Human beings in this day and age are full of biases and grudges, they want good relationships but do not realise the work that goes into building them.

The challenge we will face is to convince people that they should be the ones to change in order for them to develop good relationships and that they cannot expect the other person to change.

The solution we are aiming for is to design an app that will advise the user on how to escape their own biases, how to speak to the person the user wants to build a relationship with and how to tackle the various challenges he/she faces in the process.

The video link:

<https://drive.google.com/file/d/1x44dcoAVA3L8iL9qxrUcH29i8ix76vME/view?usp=sharing>

Team Lead- Arya Abhisri

Introduction

An interpersonal relationship is a social connection or affiliation between two or more people. Interpersonal relationships can include your partner, loved ones, close friends, acquaintances, co-workers, and many others who make up the social connections in your life.

The motivation we had was that we ourselves realised how difficult it had become to have good interpersonal relationships and how important those are in our lives. We get love, affection and the will to live from healthy interpersonal relationships, these things are essential to happiness in life. For example: it is very important in childhood to have strong bonds with your family members, they are the closest to us and family is the most basic of relationships if the relations between our parents are not so good the children will be affected, if siblings do not easily get along they may not have a healthy relationship in the future. In adolescence it is necessary to have strong bonds with friends. Human beings, being social animals, need to have good relationships with people in order to behave and think properly. It was one of the major contributing reasons. In adulthood we need people to support us in every situation, and we need people with us to accomplish anything in life. If we observe the biggest companies and the most successful people, we will see that they have the best teams, the best teams are not ones with the greatest minds on the planet, rather they have people who can easily work together and collaborate to make dreams a reality. Therefore, in every phase of our lives it is important to have healthy, fruitful and meaningful relationships.

The problem we are trying to solve is not so simple nor is it easy to solve. Relationships involve the interaction of two extremely complex creatures, what we are trying to do is make these interactions as simple as can be. People are the most important resource on the planet that we must learn to value. What we are essentially trying to do is to help people build relationships that are a source of joy for them and make interpersonal interactions as frictionless as possible.

A potential user is every person on the planet, everyone needs to have a certain number of relationships to be clinically sane, we also need them to stay happy and feel loved and fulfilled. Any person on our planet who has access to the internet is a target user.

We all know that everyone in this world faces some kind of problem in their relations. Many of us are alone with nobody to open up to. Many have been facing severe mental disorders due to our relationship problems. And the pandemic has only increased this problem a thousand folds.

There are several existing challenges in relationships that affect our relations most drastically.

Arguments are the most prominent issue that builds up negative tensions between each other and causes relations to break. A bad mood can cause arguments if not handled properly, can lead to a disaster. To form and maintain strong bonds with others, a mutual give-and-take. People need to open up about how they feel and must address deep serious issues early on. Letting others in isn't always easy. By sharing, you are showing them that you trust and care for them—and allowing them to show the same care in return. However, Being open doesn't mean you should break every boundary and have no personal life. Healthy boundaries are also a vital foundation of any strong relationship.

Relations often break due to lousy communication between individuals; good communication is essential in any relationship, but it's important to remember that communicating well involves being able to listen. Listening shows that you care. It shows that you are interested in the other person's life and what they have to say.

Over the years of development of modern civilization, we've seen our society morph into one, where openly talking about any relationship is seen as taboo and is frowned upon by most. There is an enormous social stigma attached to it that makes it difficult for people to reach out to their loved ones in their time of need.

Therefore, they seek out other ways in hopes that they'll be able to resolve their issues. One of the more popular ways of resolving this is to anonymously post on social media or online forums and seek the help of people on the internet. This, while not entirely unhelpful, poses several problems that culminate in an experience that can be harmful to the person in question. The statements made by the commenters are not monitored in the slightest, therefore exponentially increasing the possibility of spread of misinformation or hate towards the original poster. Similar problems are faced by the people who try to search out these problems in the web browser. They

browse through the pages, only to encounter a plethora of articles spreading misinformation about the topic.

The only other way that is left for people in these positions is to approach a professional, but that is a task made harder by the shame attached to the idea of ‘needing help from a professional’. To add to that fact, approaching one physically is also extremely difficult due to the lack of physically available professionals available in countries like India.

The app includes some general advice for the inclusion of a huge number of users and providing a subtle and quick response. Contact with counsellor & Therapists is one the features that will be provided, which can be directly user accessible or suggested by the AI based on users need. A Open & moderated Forum is also provided if the user wants to be completely anonymous, allowing users with trust issues to get familiar with the app, before providing any sensitive information. Every Relation is unique, it requires a different set of data to provide with a specific advice/Solution. This section of the app is based on the user input. The foremost solution revolves around a powerful AI, which learns from the users and develops its own data which includes scenarios, confessions, problem's possible solution, Deniability. This data is then used to provide pin point suggestions and solutions.

Note-A user can make sure that his data can or cannot be used as the main set of data for the AI. As this solution requires something which is beyond current development this can be considered as challenging to develop but the main point is we can surely develop AI on a much lower level which indeed is also beyond the scope of this project, So we will keep this in mind when going forward with the Development of the project.

Methodology

a) Problem Statement:

Our interpersonal relationships are the essence of what makes us human. Having healthy relationships increases our quality of life, therefore we need to make sure that our relationships are happy, safe and healthy. There are not many options available for people suffering through issues in their relationships and the social stigma attached makes it hard for people to get the help they need. Through the development of this app, we want to be able to help the ones who are alone and suffering, in hopes that they too, can resolve the issues plaguing their relationships.

b) Target User Group and Stakeholders:

Our target user would be anyone who is not having blissful experience in their relationship. Since our app has so many features described earlier, anyone who is even at a happy place in their relationship and wants to take it to the next level or build a bond which is even stronger is a target user. Potential stakeholders are the users, the relationship therapy providing professionals, and also the people who are giving advice on the forum since they will be rewarded with money whenever their advice proves to be helpful to more than 5 lakh people. Parents can use this app to better manage adolescent teenagers, to sometimes even resolve sibling rivalry issues.

Managers in corporations can use it to better manage employees. This app can essentially be used wherever two or more people must interact.

c) Requirements Gathering:

According to the survey we conducted, an overwhelming majority (89.5%) of the people said that they had less than five people who they were able to share everything openly with. The number remained surprisingly static for our next questions, when we inquired about how many people they'd *like* to share with (only 17.1% of people were interested in wanting more than five confidants). It seemed as though people aren't very concerned with having a large number of people that they are very open with; instead, they seem to prefer having a few people (ranging from 1 to 5), as long as there is someone there for them.

When we enquired about whether people would like the responses of a person predicted before they engaged in conversations, people were split on the issue. They gave mixed answers (though the responses leaned more towards the 'yes' or 'maybe'), indicating that while not everyone is entirely comfortable with the idea, several people were willing to try and would utilise this option if available.

An 89.6 percent majority had never received any professional guidance from people, and 55.7 percent were open to it, while an enormous 40 percent refused any guidance whatsoever. A majority of people also stated that these resources are not too accessible to them as of now.

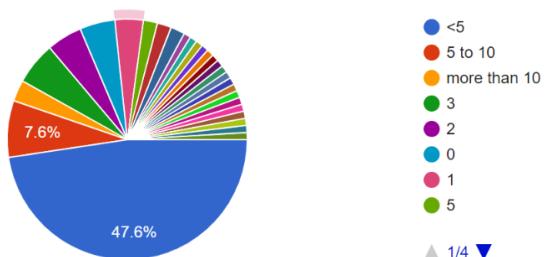
A majority of people also said that after arguing with a loved one, most of the time, they do feel guilty and remorseful and, in hindsight, think of better ways they could have reacted in.

The link to the form is:- <https://forms.gle/YQwSZhGGHLqzvBkk6>

Given below are the responses that we received while conducting the survey :

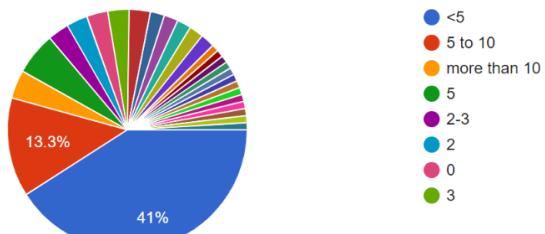
How many people do you share everything openly with?(number of people)

105 responses



How many people do you WISH you could share everything with?(number of people)

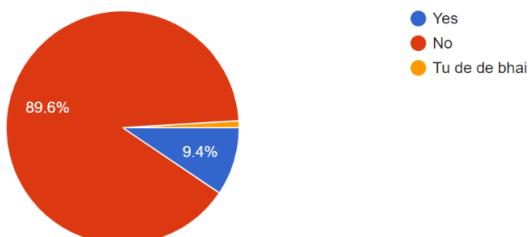
105 responses



▲ 1/4 ▼

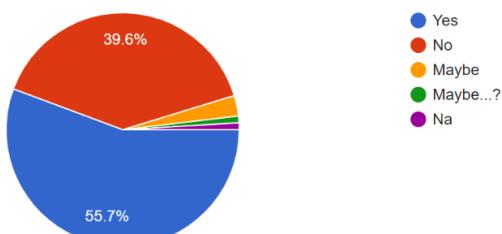
Have you ever received professional guidance for interpersonal relationship issues?

106 responses



Are you open to receiving professional guidance?

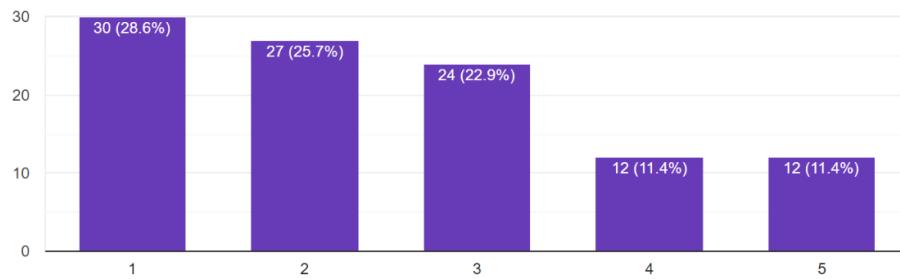
106 responses



How accessible are these services to you right now on a scale of 1 to 5

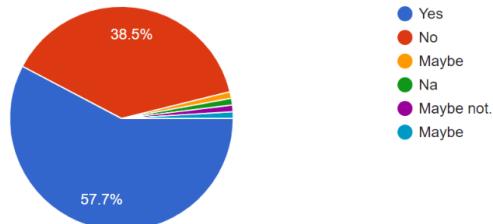


105 responses



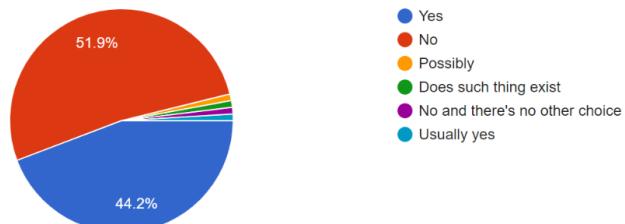
Would you like us to predict the response of a person before you ask them a question?

104 responses



Do you think you are able to devote proper time to your loved ones?

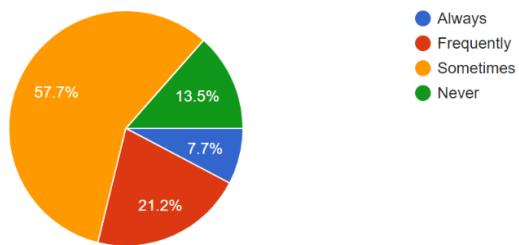
104 responses



How often do you end up having arguments with people close to you?



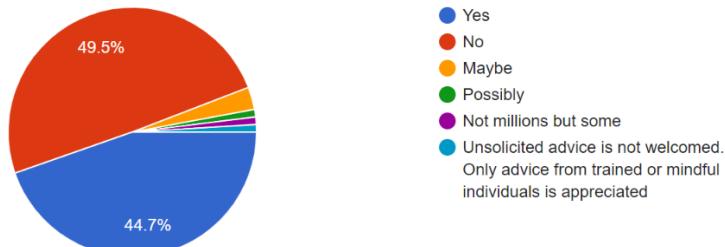
104 responses



Would you like to receive advice from millions of people who are also trying to form and maintain good relationships?



103 responses



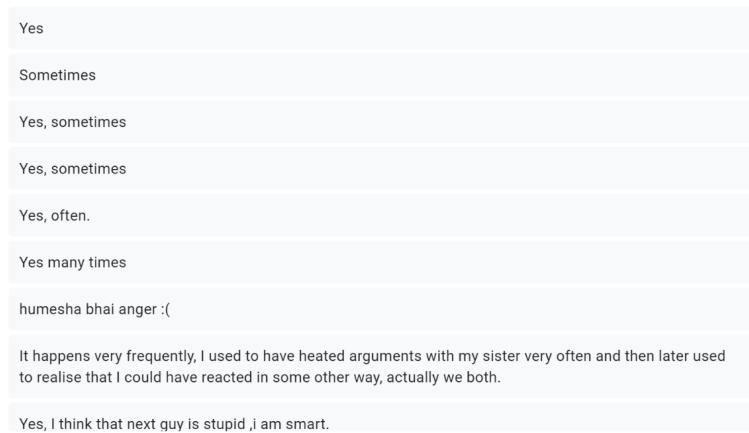
Do you feel disconnected to your family and peers? If yes, What according to you is the main reason for this?

70 responses

- I don't feel so
- workload,time management
- Workload
- Lack of communication, fear of disturbing them by reaching out
- now after coming to iitd ,now i feel left out because i not have any coding background and i took time to learn, so because of that- mere loodeeeee lage hue h ip me and none of my friends is ready to help me
- Only a few times when I feel everyone around me is busy and I shouldn't disturb them
- Noyes
- I don't feel disconnected
- Sometimes I do feel disconnected but only because the possibility of being judged on opening up is scary

After an argument or disagreement with someone close to you, do you feel that you could have reacted in some other way? If yes, how often does this happen?

67 responses



d) Ideation

The problem of helping people find and develop interpersonal relationships requires one to one interaction with people. The following are the ways that we could think of to solve this problem:

1. Build an app to advise people on developing relationships, connecting them with professionals and building an AI system to simulate such conversations.
2. An app to connect users to our team of people who will advise them on relationships and simulate conversations pretending to be the other person. The team will also conduct surveys regularly to get answers to questions about relationships asked by the users.
3. Another possible solution was to open physical spaces (something like therapy clinics) where people could come to discuss their problems and use an app for appointments.
4. We could also design a device that records all the interactions a person has with anyone throughout the day for a few weeks. Our AI, after constant monitoring, suggests changes for the user to make in their behaviour with other people.

We chose the first solution after a lot of debate and improvements because it involved minimal human labour and maximum human-computer interaction. It was the solution in which we could

include the maximum number of features in the easiest possible manner. Rejected the second because involving so much workforce was unnecessary, rejected the third solution because it was also not so practical and hardly had any human-computer interaction. We had to reject the fourth option because we realised that it was too intrusive and no one should have that kind of data about anyone, even if they want to willingly give it in exchange for better relationships.

The first solution was better because we could achieve the most through it. Our goal was to advise people on relationships, which could be done more efficiently through the app. Also, it would take a lot more effort for the users to come and meet with people as in option 3, and hence it was less likely for people to follow through with our methods and program for long durations of time.

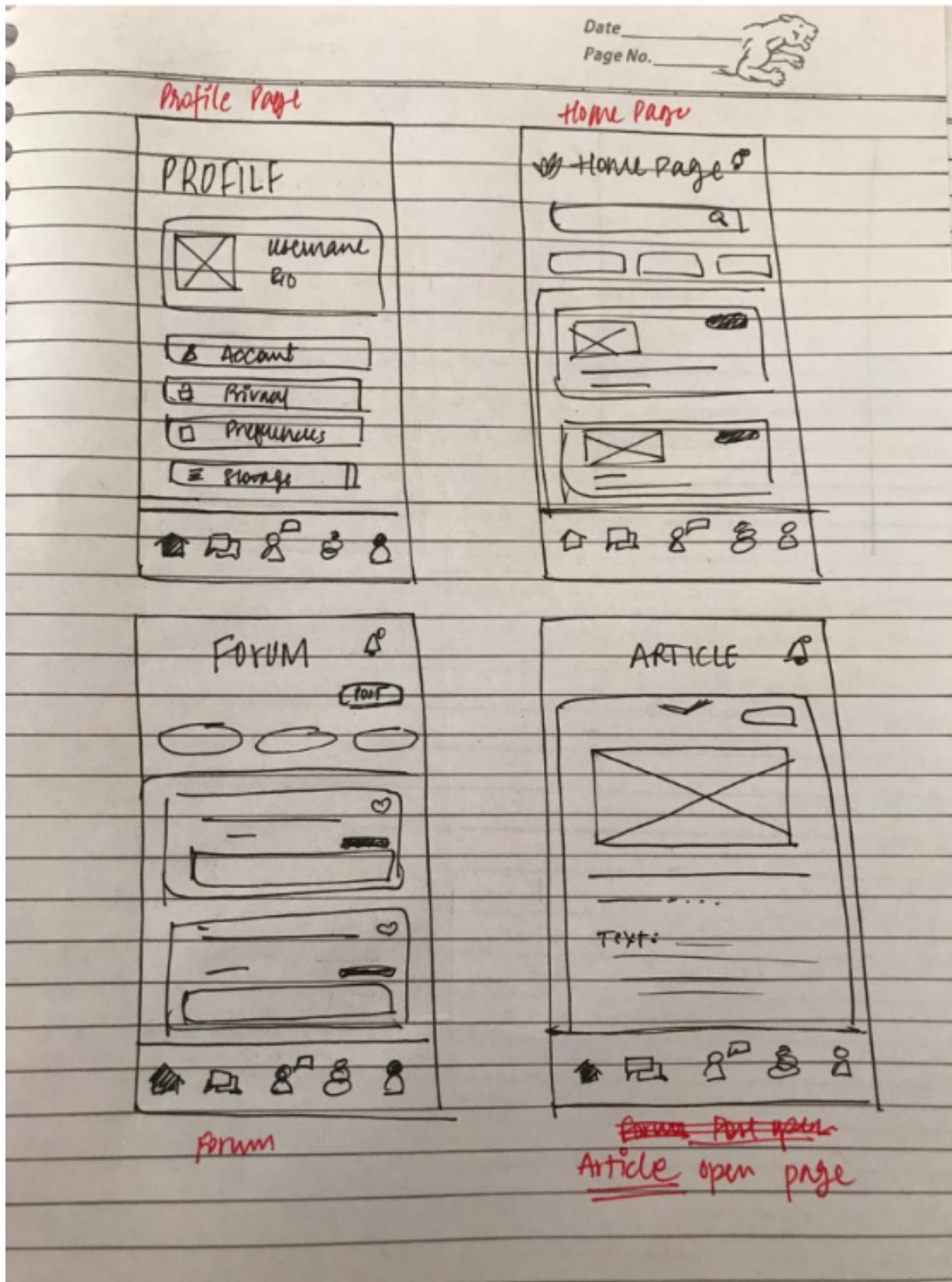
Pasted below, is the picture of the brainstorming session done by our group members on miro



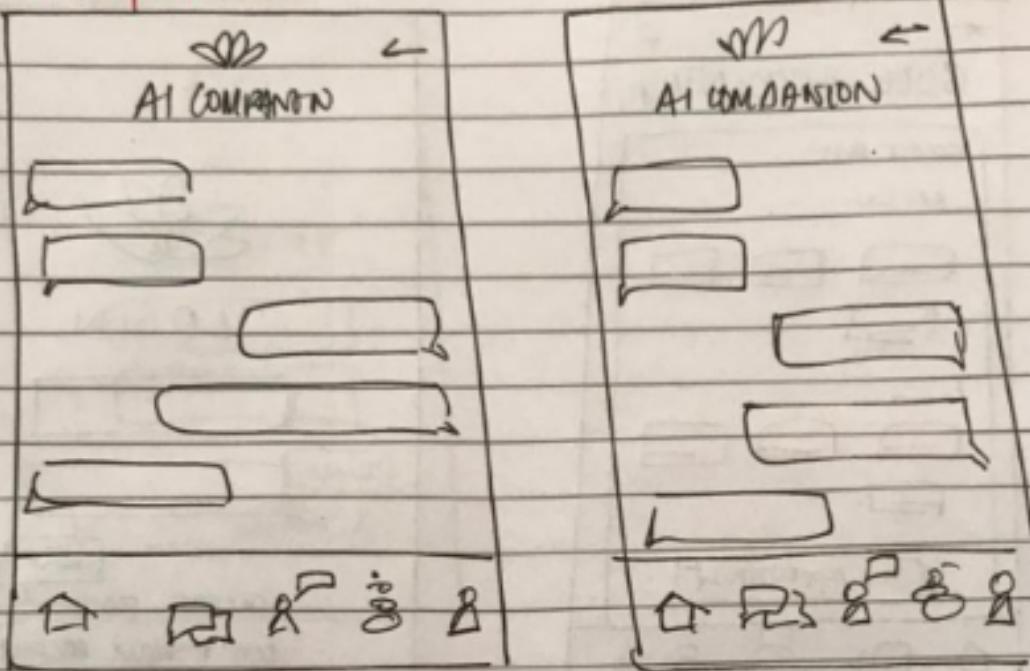
e) Lo-Fi Prototyping

Our initial design of the lo-fi prototype included only a handful of pages like:

1. The Opening Page: The first page you see on opening the app, connected to all other pages.
2. Forum Page: This page lets the user ask questions that anyone in the world can answer; it will have a few sections like which is the most popular post right now, which is the latest one.
3. Connect with professionals: This page lets the user contact professionals for help. Designed in a simple manner, it offers the user multiple types of relationships to choose from; it also provides the user with the choice of professional nearest to them, along with a rating of the counsellor as reviewed by other users. This has an extension that lets us see our history of appointments and our upcoming ones.
4. AI Companion Page: This page lets our AI system read all the messages of your interaction with another person, asks you for more info about them and once it has sufficient data, it begins a simulation of a conversation that you will have with that person.
5. Profile Page: This page is where the user's personal information about their account is displayed, like their name, email id, phone number etc.
6. Sign up Page: This is where the user, on first accessing the app, enters their data like name, age, gender, email id, phone number etc.



AI companion



CONNECT

Hello !

choose time

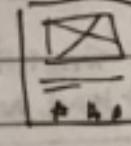
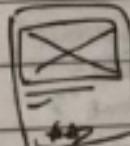
FAMILIA

FRENDSHIP

ROMANTIC

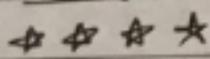
RELATIONAL

recently



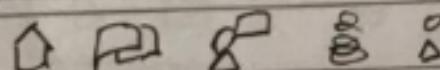
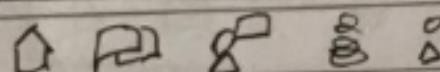
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Mr XYZ



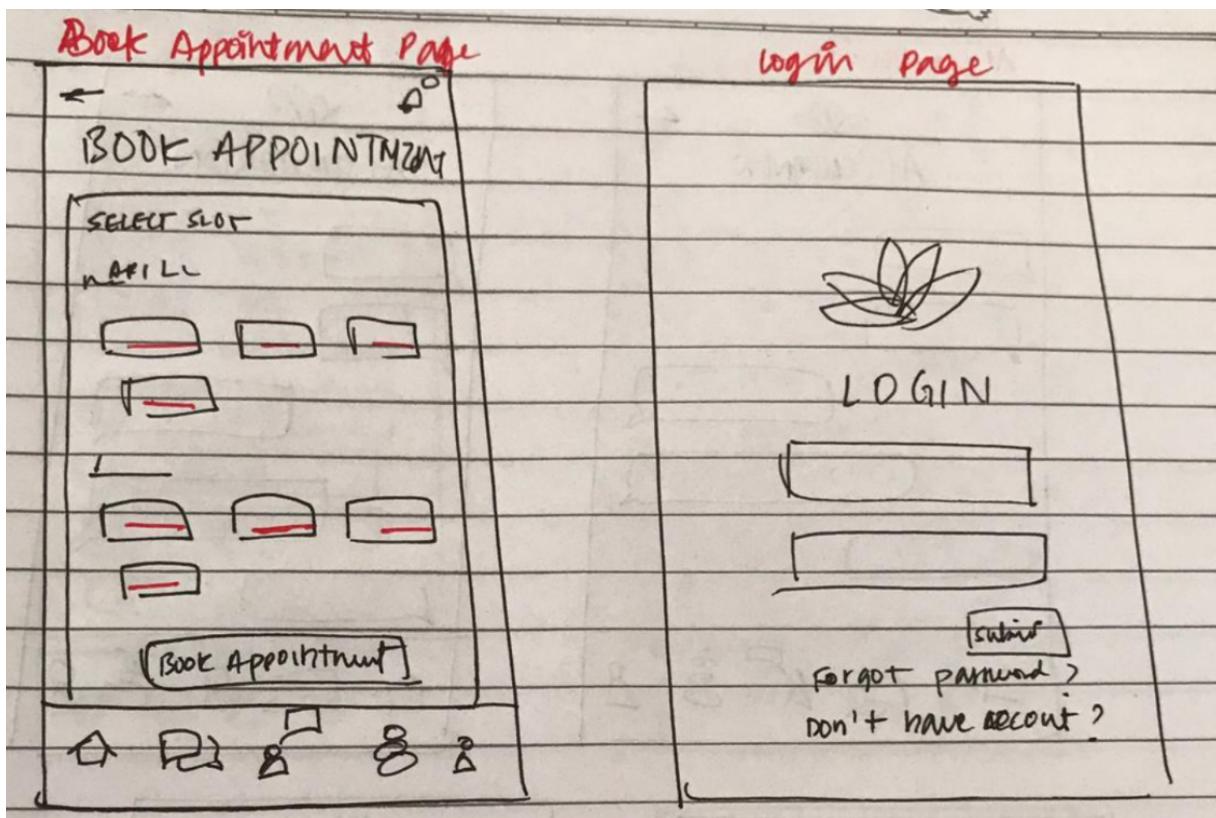
About -

BOOK



profile of professional

Connect with
professional



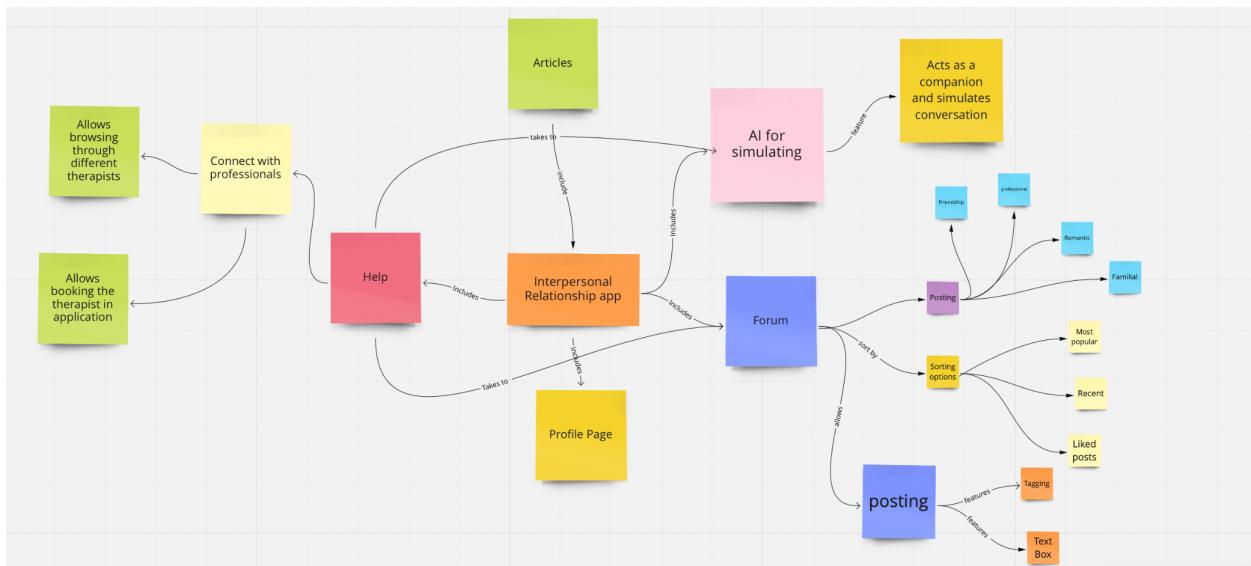
f) Hi-fi Prototyping

Our Hi-fi prototype includes all of the features we initially decided to include in the lofi and more. It comprises about 20 pages that are all interconnected and work very smoothly and has been designed on Figma to give an idea of the look and feel of our app.

The hi-fi prototype can be accessed through the following link:-

<https://www.figma.com/proto/Vj8ki928VIQ0IGKNPMb6TA/Relations?node-id=120%3A160&scaling=scale-down&page-id=0%3A1&starting-point-node-id=120%3A160>

The user flow of our hi fi prototype :



g) Evaluation Plan

A google form has been prepared; its questions follow:-

Q1. How easy is it to navigate through the app? (Scale of 1 to 10)

Q2. Rate the User Interface of the app. (Scale of 1 to 10)

Q3. Do you think that the product's design matches its purpose?

Q4. How useful is this app for you? (Scale of 1 to 10)

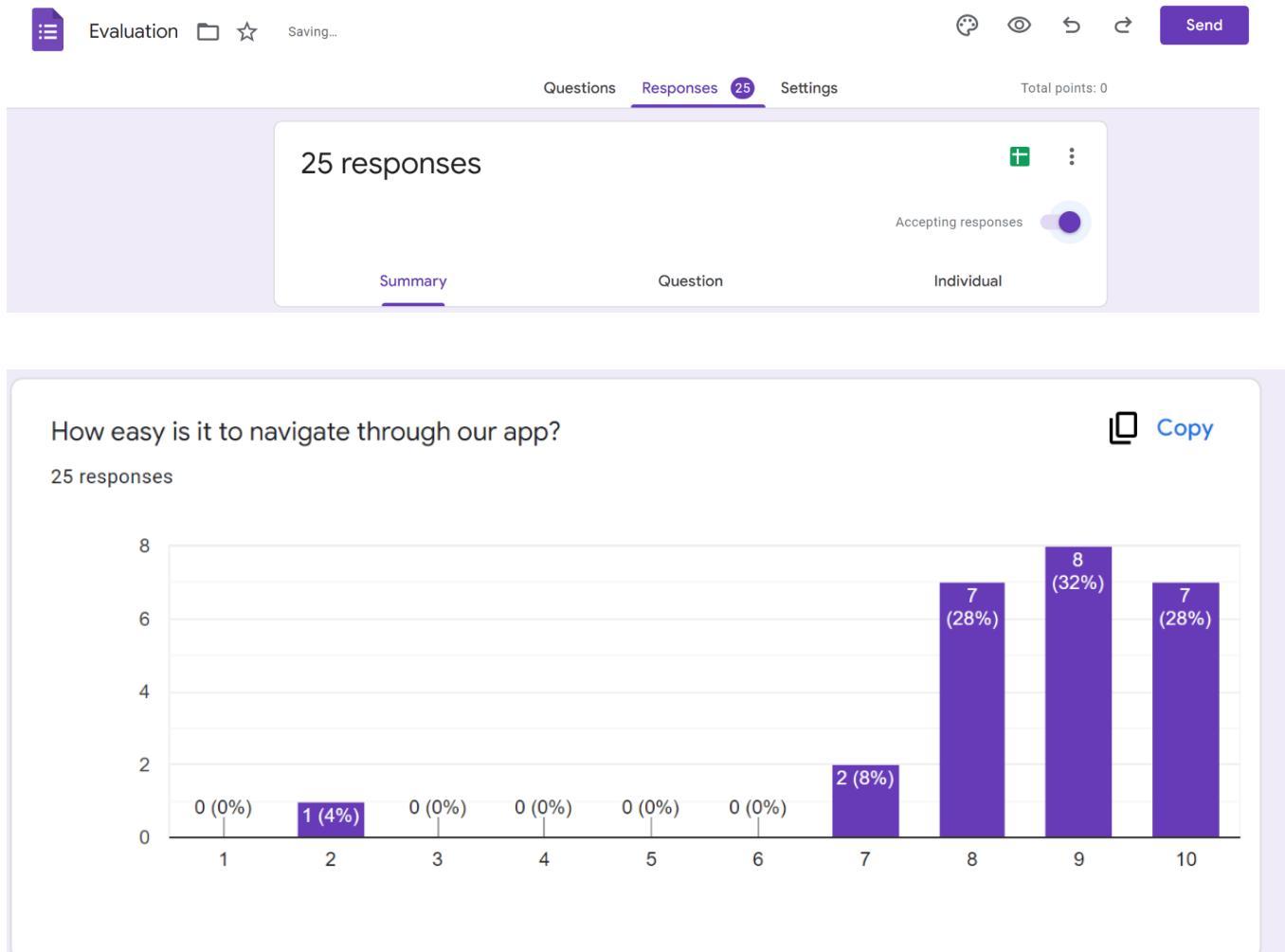
Q5. How likely are you to recommend this app to your friends/colleagues/peers?(scale of 1 to 10)

Q6. What improvements would you like us to make to our product? Please suggest.

The link for the form is:- <https://forms.gle/26TSdXZHFdTLTndB8>

h)Evaluation

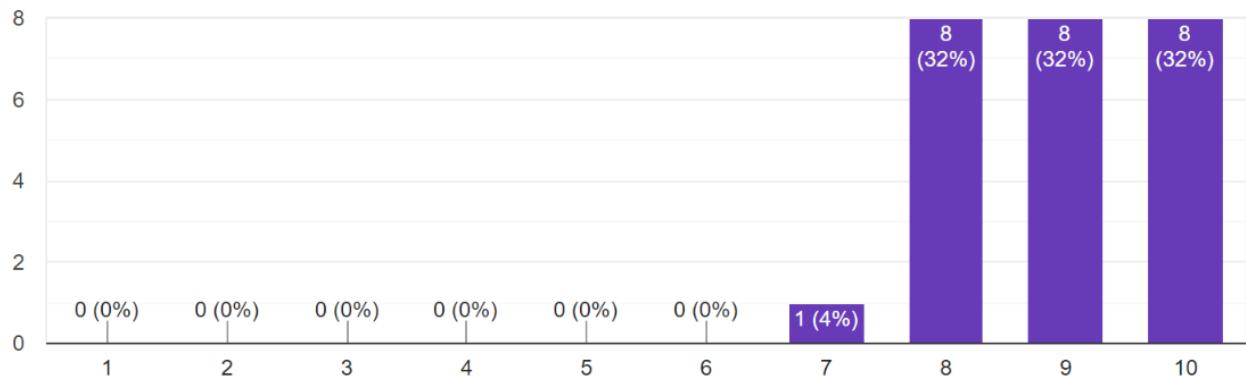
The following are the responses that we got:-



Rate the User Interface of our app

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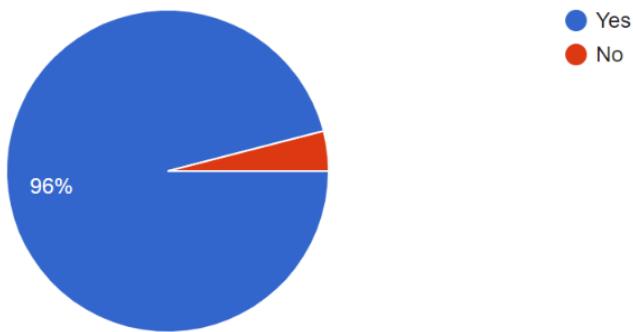
25 responses



Do you think that the product design matches its purpose?

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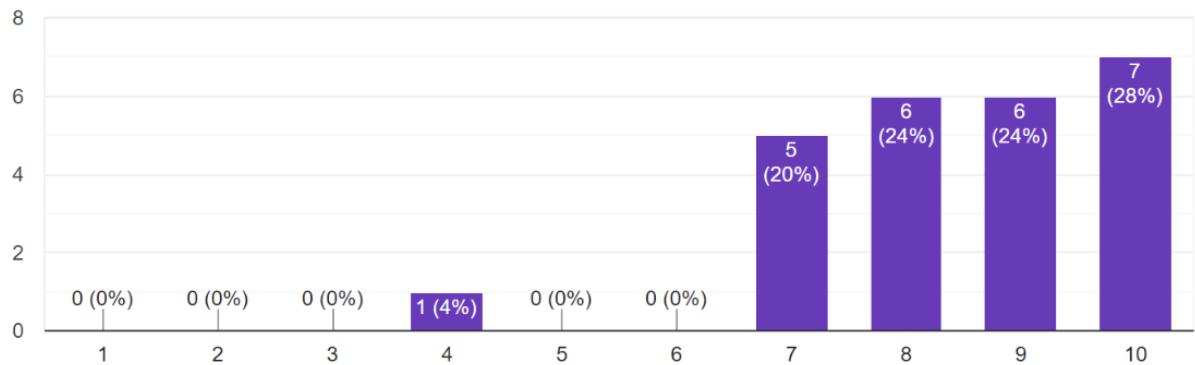
25 responses



How likely are you to recommend this app to your friends/ colleagues/peers?

 Copy

25 responses



What improvements would you like for us to make in our product?

25 responses

Good

No, I think its fine as its

Better color scheme

Na remove chirag

It's amazing.

I think it's great for a prototype. The design is pretty and interactive. It can be developed a little more though to make it more accessible

Not improvement as such now

Adding scrollable screen in the application

The following are the **improvements** in the hi-fi prototype that we made:-

1. Font size and style has been standardised.
2. The colour of the buttons on the forum page were altered.
3. Sizes of the article previews on the homepage were adjusted.
4. The connection issues from the ‘book appointment’ page and the ‘post’ page were fixed.
5. The positioning of the title of ‘forum’ and the logo were altered.
6. The size of text in the buttons for the forum posting page were altered.
7. The ask page was made to look more appealing by removing the ‘ask me’ picture.
8. The keyboard overlay was fixed to close when any point, other than the keyboard, on the page was touched.
9. The name of the app was included in the sign up and login page.

Analysis and Future Work:

This is a very useful app for people to build deep meaningful relationships, and has much scope in the future, most of our features are quite practical and implementable even today, only one feature which is the AI companion needs to be worked upon and developed and will take another 4 to 7 years of development in the future before we can properly implement it, and of course it will get better with time and use, so will all other aspects of our app.

What we understood from the initial surveys was that our app was useful to quite a lot of people and that a lot of people also needed the facilities being provided by us, such as easy access to professionals, AI companions, etc. Our prototype was difficult to make, but it came out simple, it is good to look at and works smoothly. Building the hifi prototype gave us a better idea of how our app should actually look and function, one thing is to make sketches on paper and another thing is to interact with the interface of the app by ourselves, and the latter enables us to improve it more. Using the hi fi prototype we could evaluate our app first hand and came to know about the shortcomings in its design, moreover it was used in usability testing by target users to validate it and suggest improvements.

The hi-fi prototype told us that we need to standardise font and style throughout our app and that we needed to adjust the size of the buttons to make it look more appealing. We also got to fix a few more issues before our presentation like fixing the keyboard overlay and the name of our app on the first page. A few limitations that our product has are that it lacks a human touch, no matter how much we try, even the AI companion will not be able to provide that feeling of interacting with another human being, another limitation is that we can't constantly monitor and correct advice shared on the forum page, even if it is guiding people in the wrong direction. The forum page on our app will most probably lead to certain people who give good relationship advice a certain number of times to become very popular and people blindly accepting their personal thoughts and opinions about relationships in the future.

Contributions :

Ideation: Whole Team

Data Collection: Arjun Gupta, Hardik Singh

Lo-Fi prototyping: Arya Abhisri, Hardik Singh

Hifi: Arya Abhisri, Aditya Yadav, Hardik Singh, Saumya Trivedi

Evaluation Plan: Arjun Gupta

Evaluation by Users: Arjun Gupta, Arya Abhisri, Aditya Yadav

Prototyping: Arya Abhisri, Aditya Yadav, Hardik Singh

Project Report: Arjun Gupta

Video: Saumya Trivedi, Arya Abhisri, Hardik Singh

Presentation- Arya Abhisri, Arjun Gupta, Aditya Yadav