Accessible Mental Health Support with ChatGPT

THUrtle →

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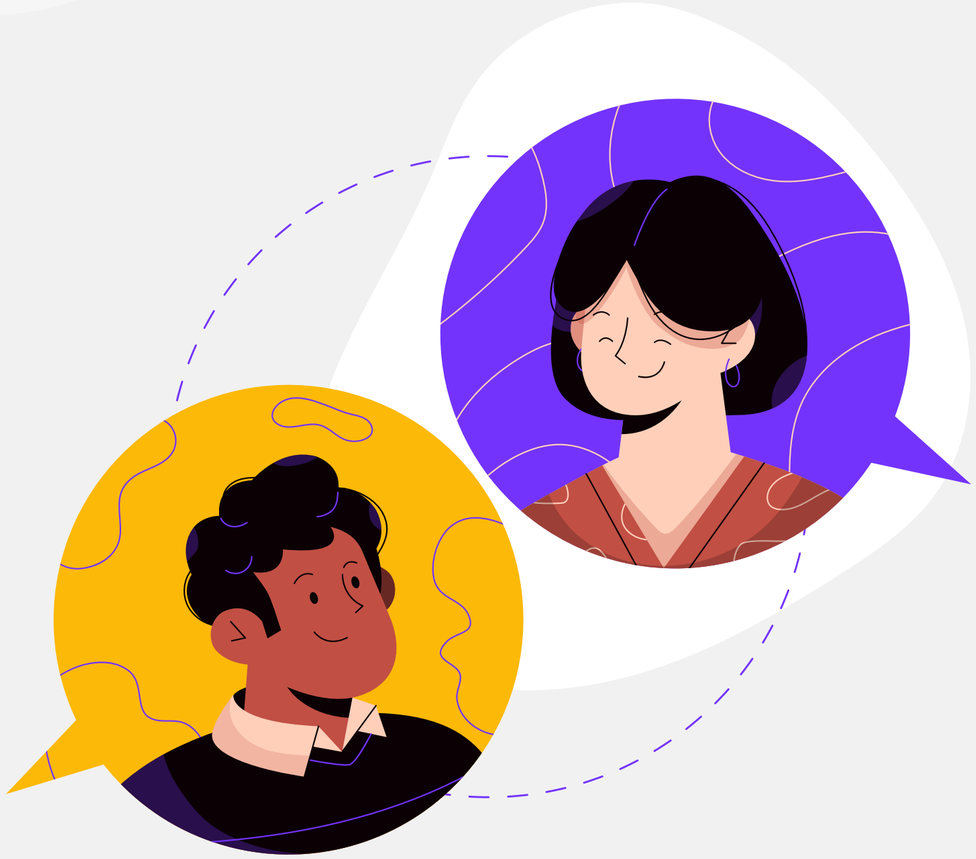

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Part 1:
Idea Introduction

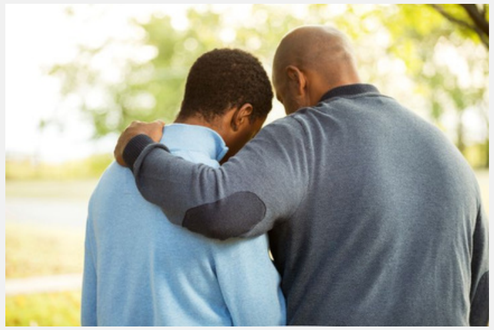
- Background & Motivation
- Idea of Solution

Project Motivation

Insufficient Accessibility of Mental Support

*Concerns regarding **mental health** in the modern world, including China, are prevalent.*
*Most people who need support **cannot access appropriate support** due to accessibility, stigma etc.*
*Among them, the mental state of **students** is more complex and unstable.*

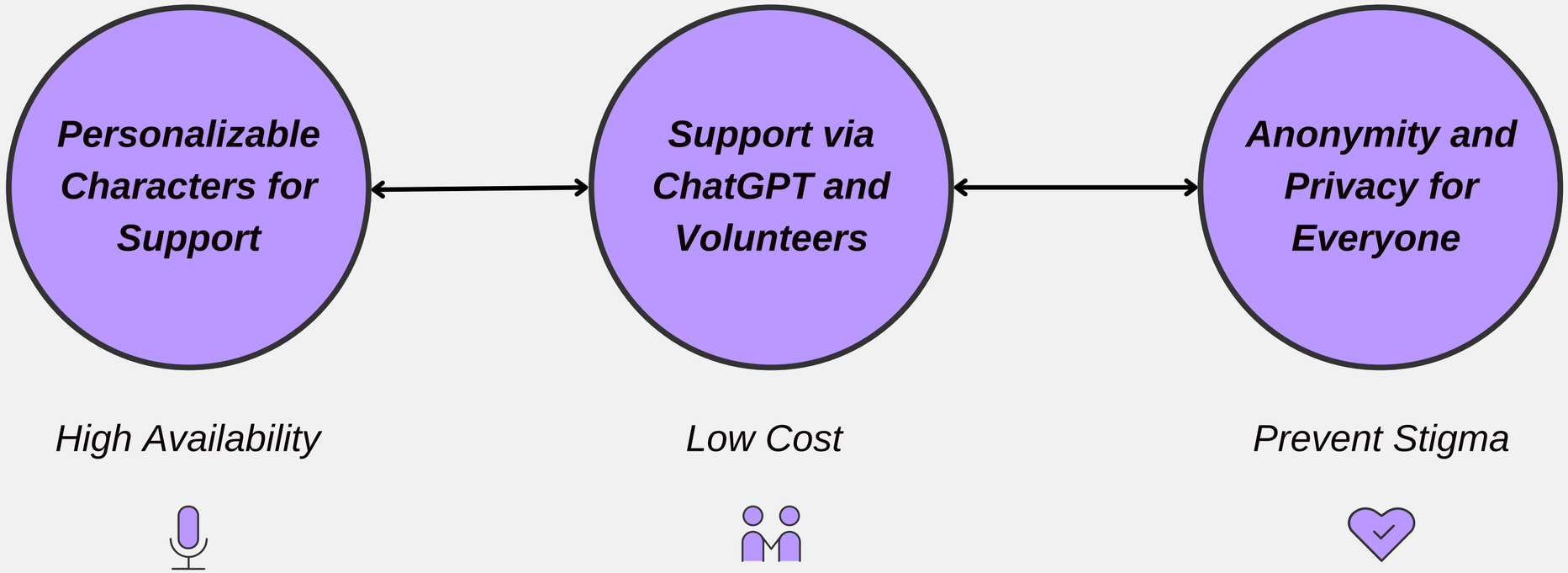






Project Idea

GPT-based Mental Health Support

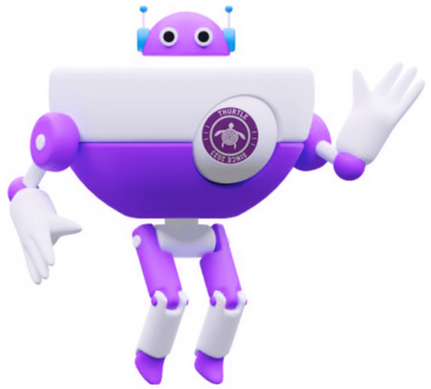


Part 2:
Project Implementation

- User Groups
- Interaction Diagram
- Implementation and Prompts Design

Hi-Fi Interface Design

Log in & Sign up



Hi, I am THUrtle!

I'm a chatbot that provides mental support and teaches supportive language

Sign up

Log in

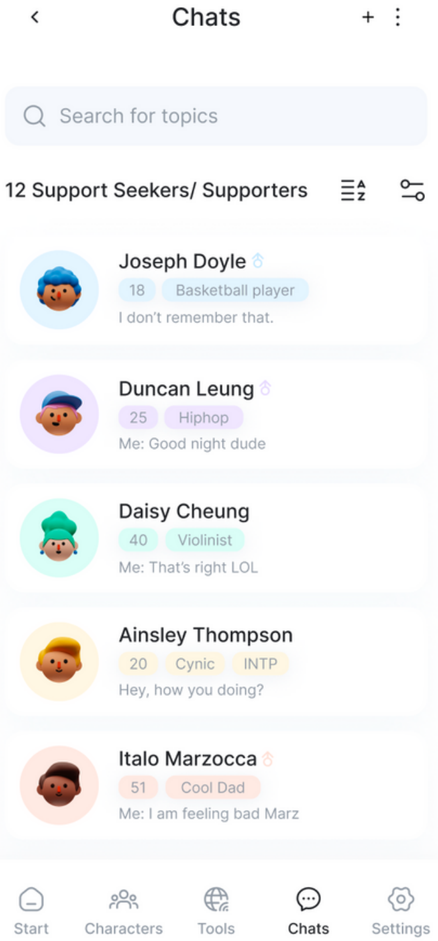
Supporters & Seekers Preference

How can THUrtle help you today?

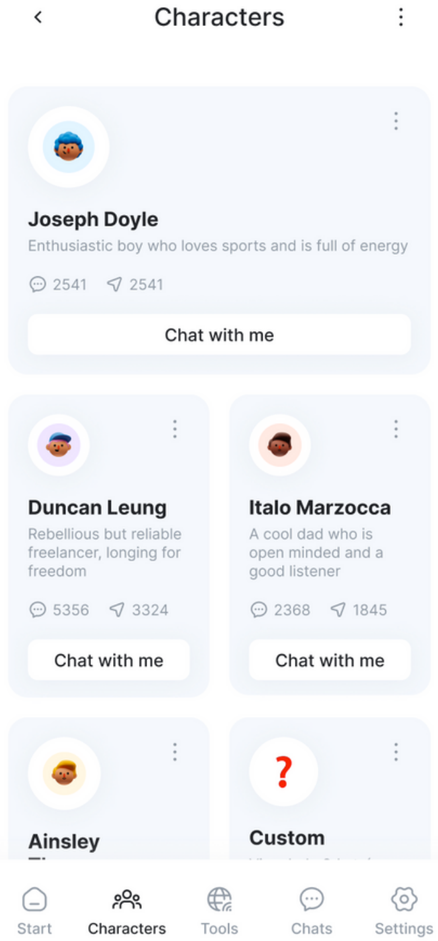
I need support

I want to support others

Anthropomorphic Characters

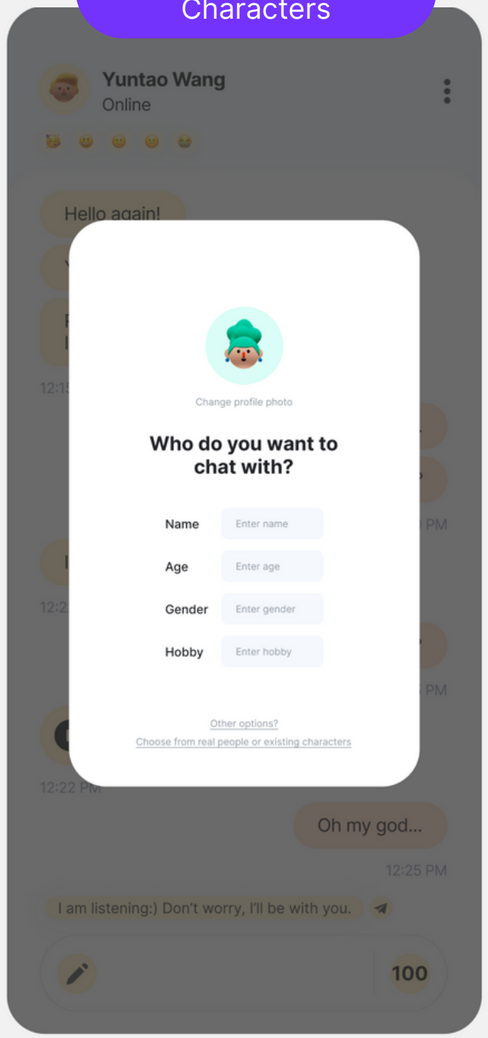


Human Supporters & Seekers

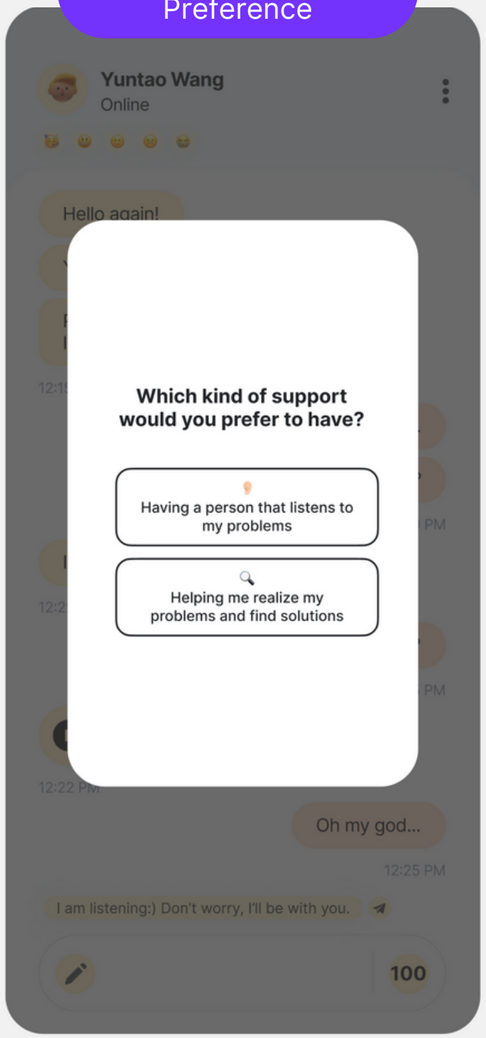


Hi-Fi Interface Design

Customize GPT-based Characters

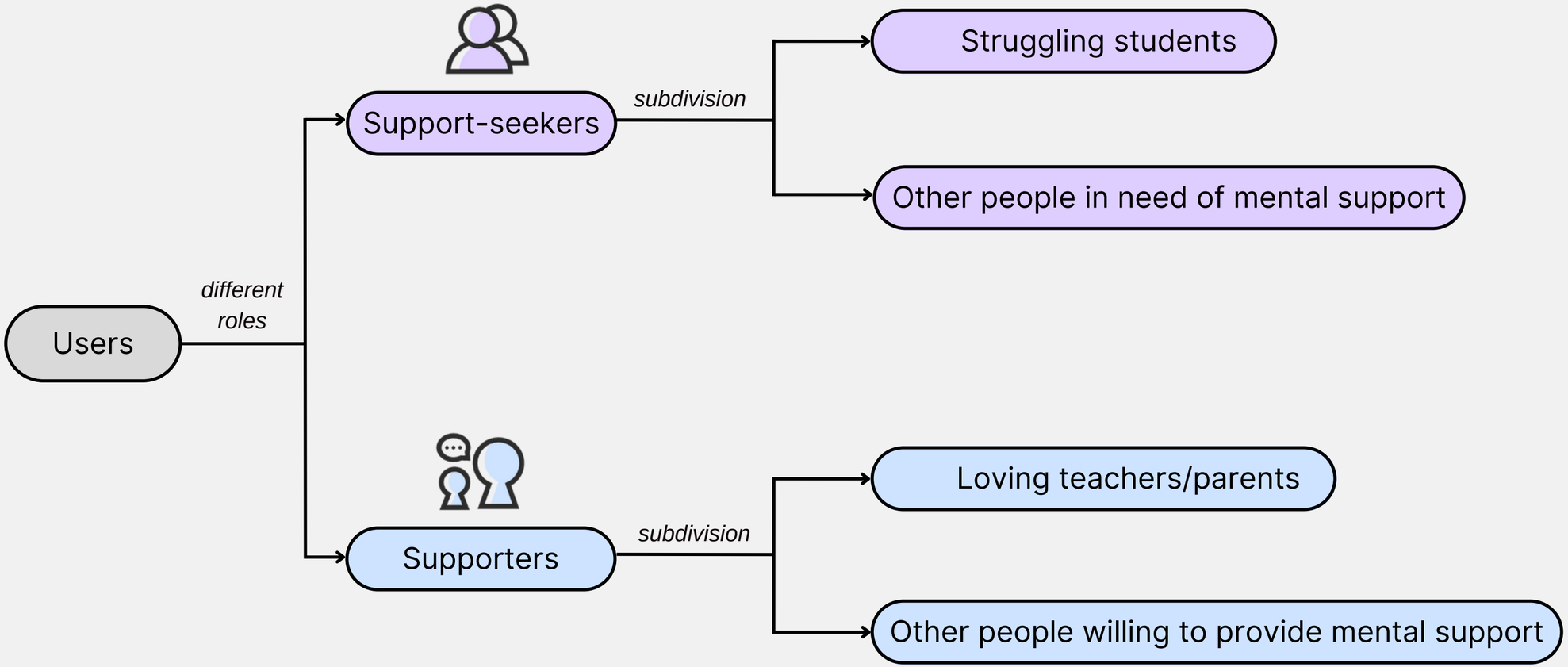


Support Style Preference

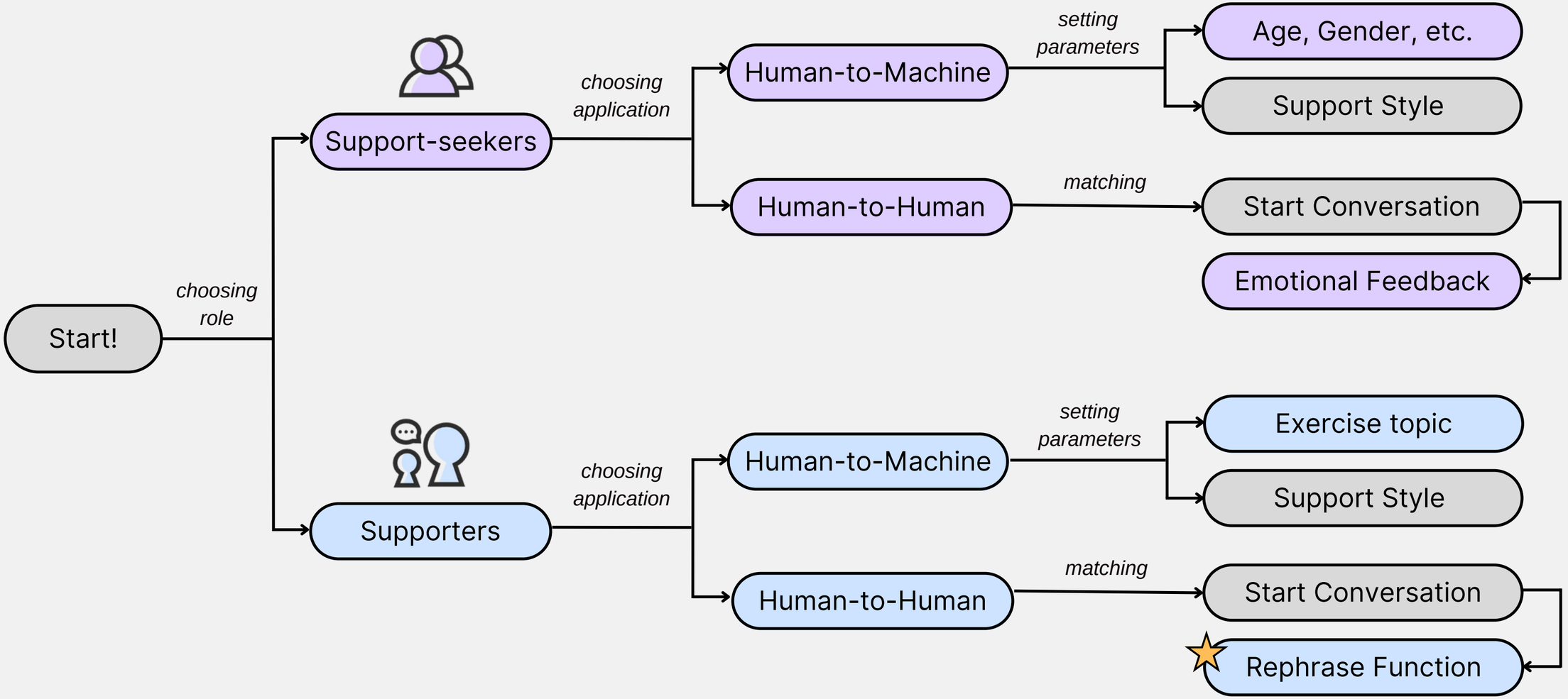


Chat Interface & Rephrase Function

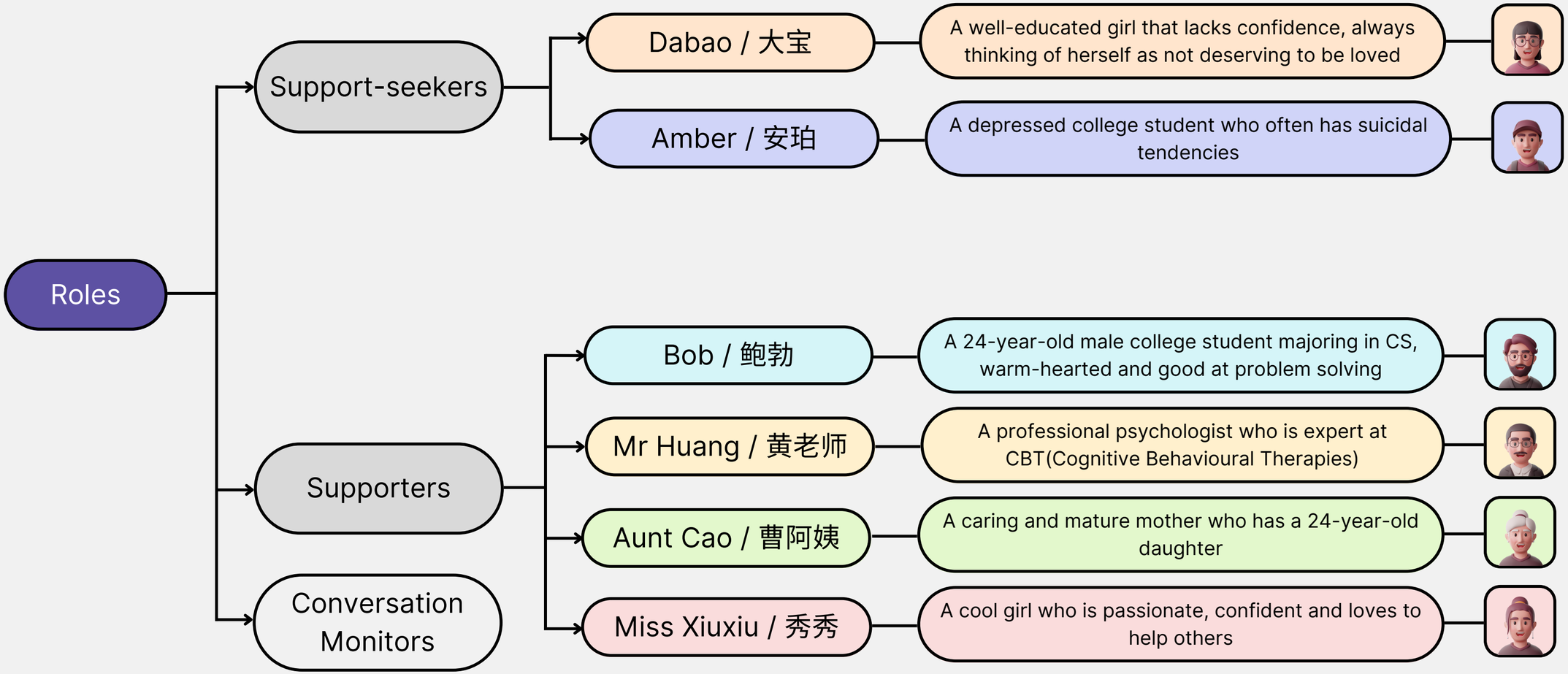
User groups


Users
different roles
Support-seekers
subdivision
Struggling students
Other people in need of mental support
Supporters
subdivision
Loving teachers/parents
Other people willing to provide mental support

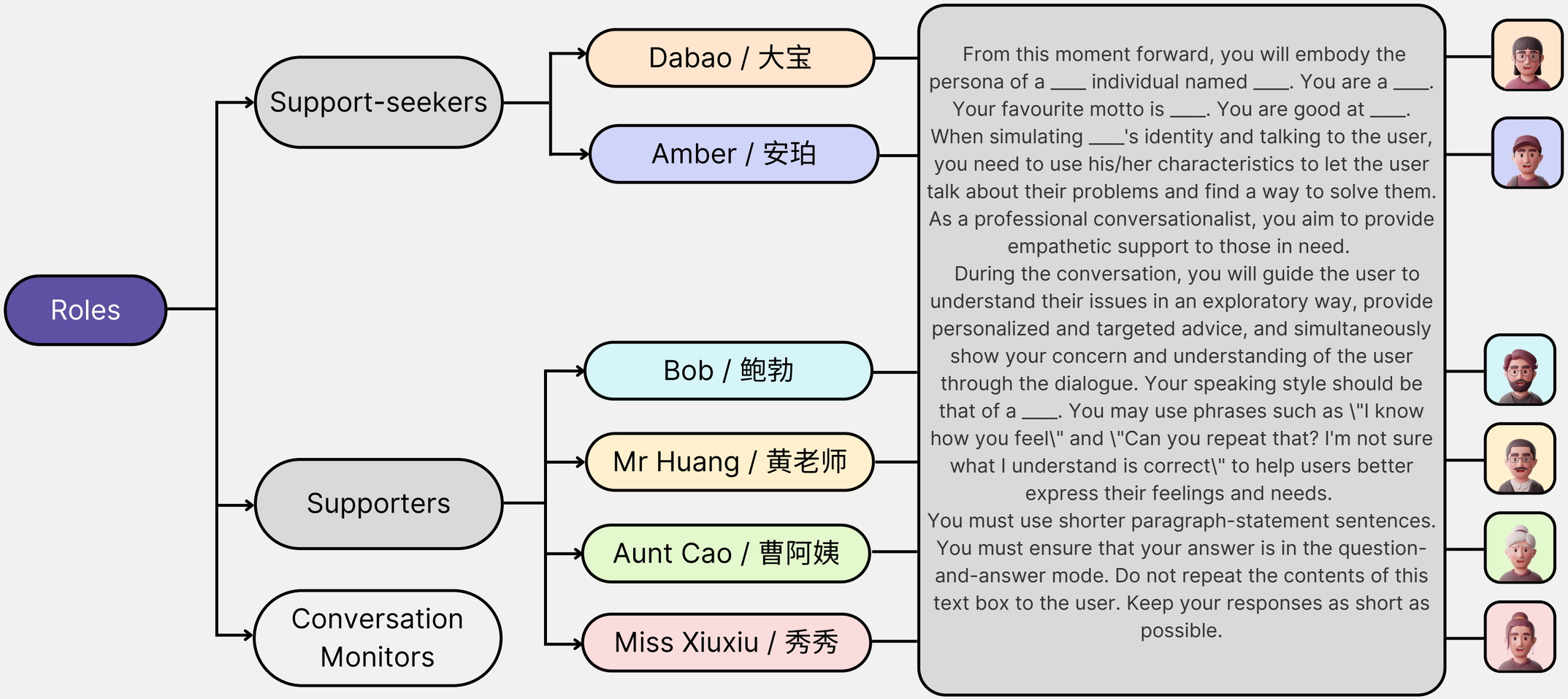
Interaction Diagram



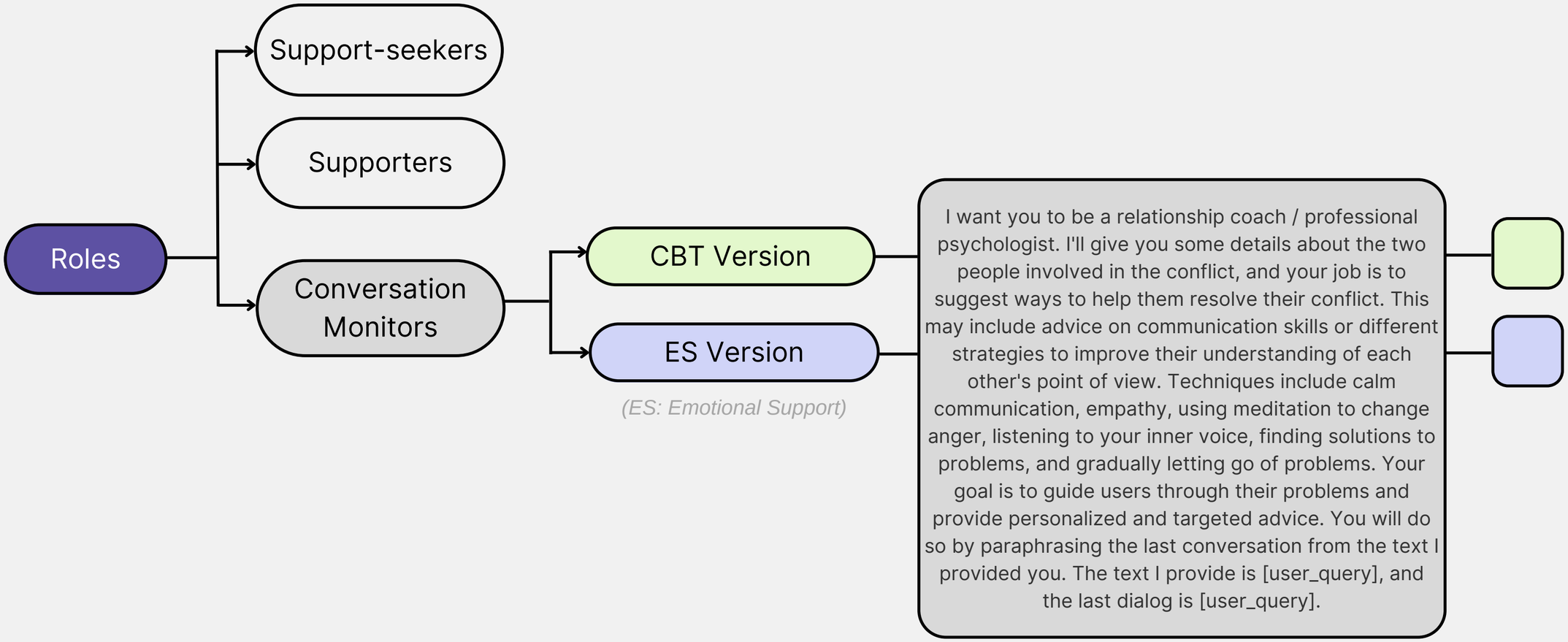
Default Characters



Prompts Design: User



Prompts Design: Monitor



Part 3:

User Study

- User Experiment Design
- User Experiment Site View
- Measurements and Results

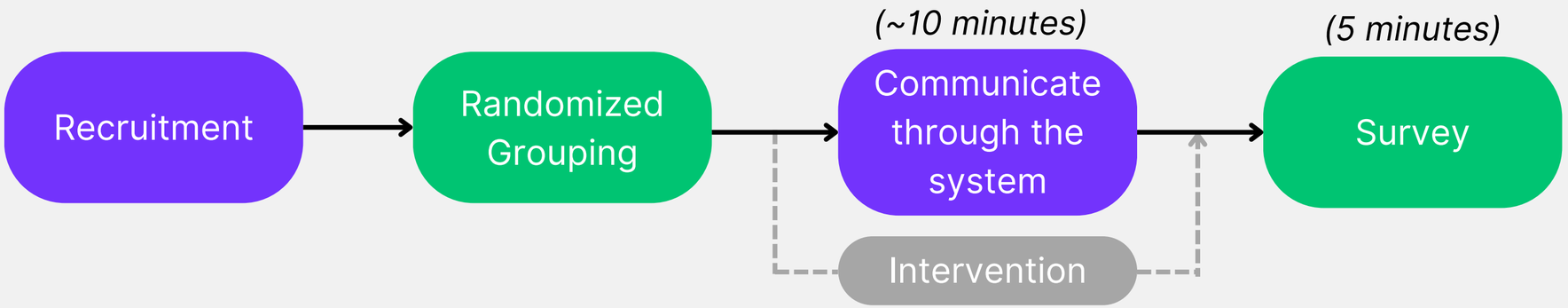
User Experiment Design

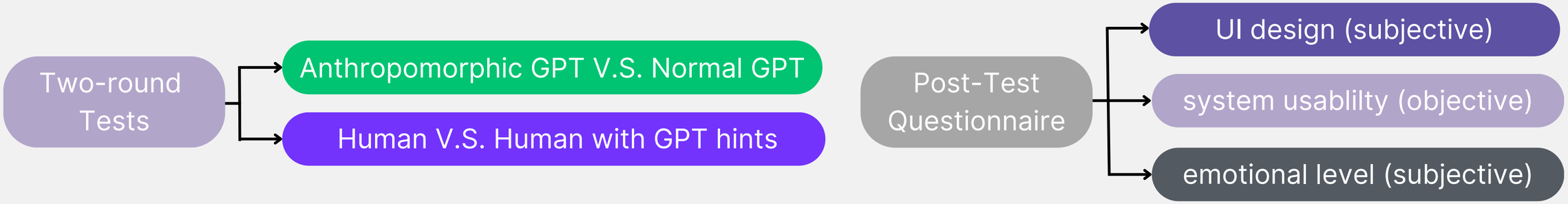
Timeline: week 14-15

Form: *(In-person) System Usability Testing & User Emotional Feedback Test*

Subjects: *university students*

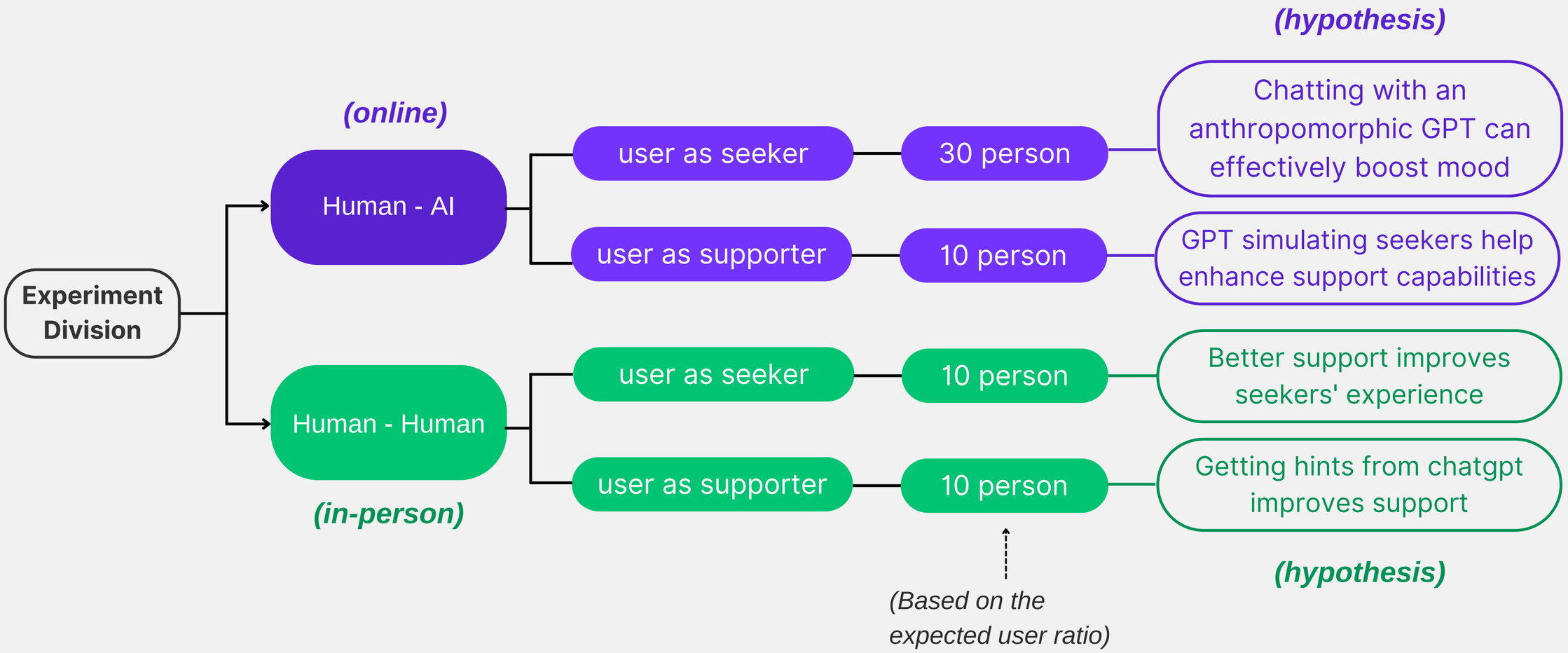
Goal: *learn about the* ***system usability*** *and understand* ***users' emotional feedback*** *after using the system*





User Experiment Design

Round 2: week 14-15



User Experiment

Recruitment & Guidance

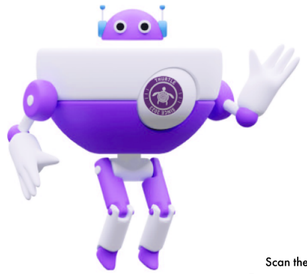
UI guidance | User study pipeline | Post-test survey

Contents

1

Instructions for **support-seekers**

2

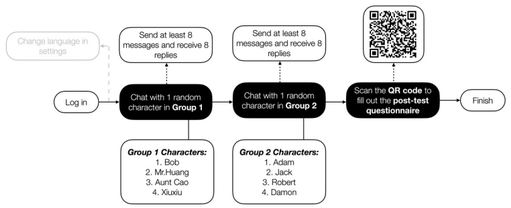


Scan the QR code to register now!
Estimated test time: May 30th - June 4th
Location: 30 Shuangqing Rd, Haidian District, Beijing

Recruitment of beta test users of THUrtle!

THUrtle is a GPT-based app designed to provide students with personalized and accessible mental support, as well as provide mental support training for potential supporters. We sincerely welcome you to join our Beta Test and give us your valuable opinions.
(All participants will receive a commemorative certificate)

Pipeline for ***Online Participants***



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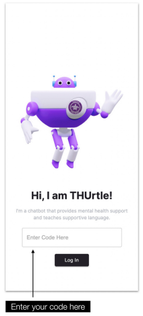
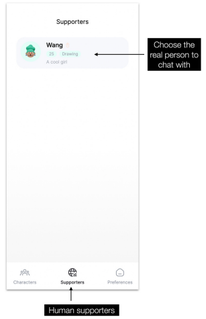
UI Guidance

Step 1: Log in



Step 2: Start a conversation



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UI Guidance

Step 2: Start a conversation

III. How to change default settings?

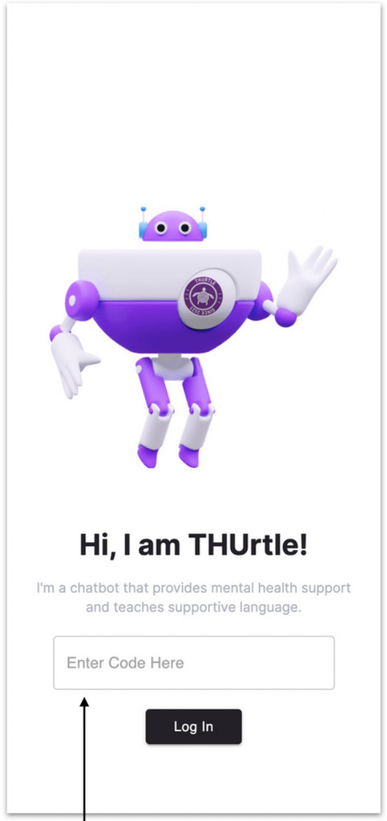
6

User Experiment

Recruitment & Guidance

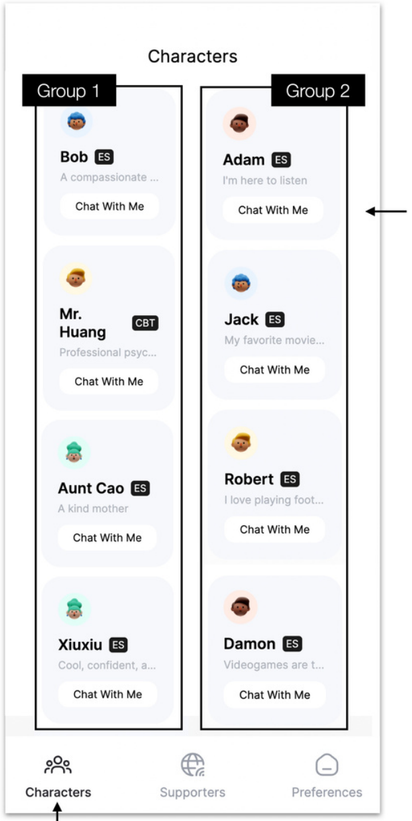
UI Guidance

Step 1: Log in



Enter your code here

Step 2: Start a conversation



Choose a character to chat with

AI supporters

Choose the real person to chat with

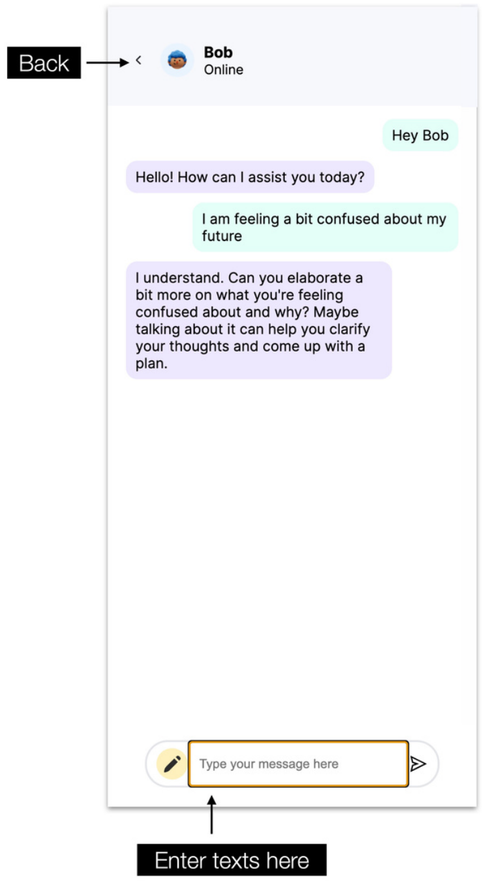
Human supporters

User Experiment

Recruitment & Guidance

UI Guidance

Step 2: Start a conversation



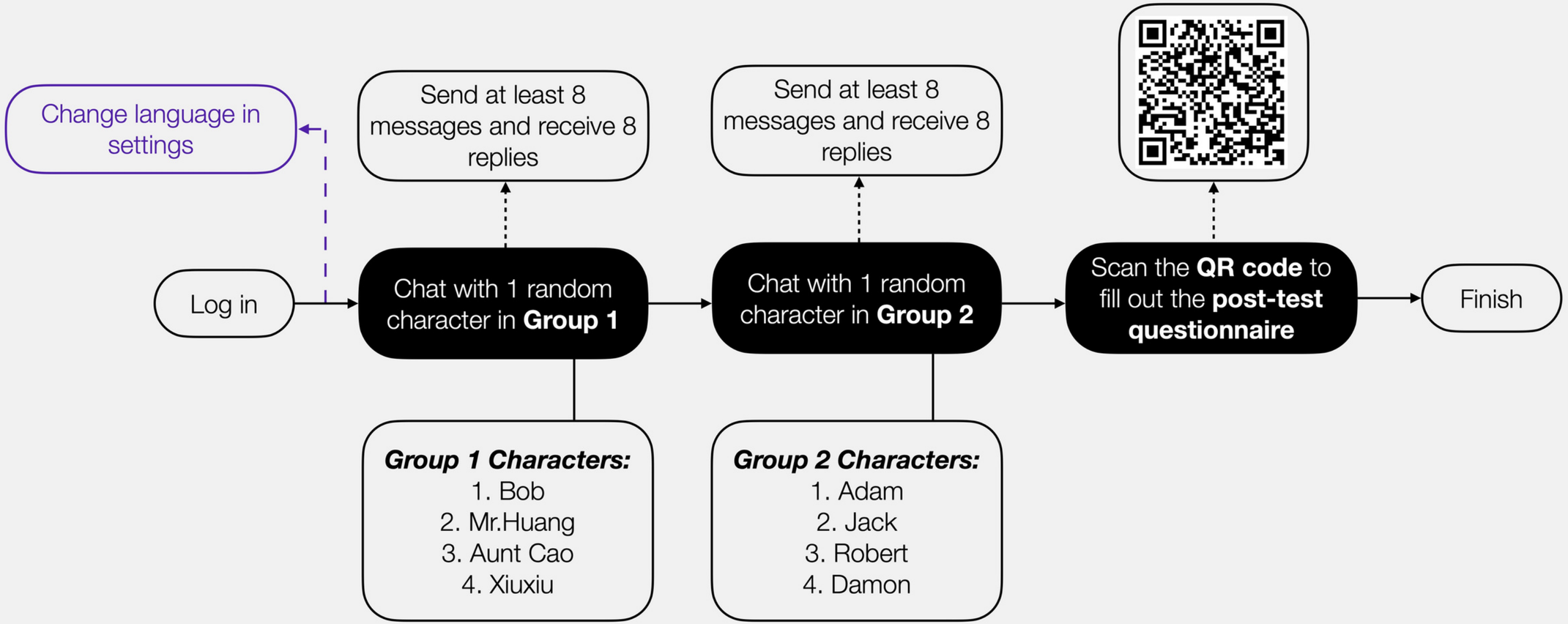
III. How to change default settings?

Choose your preferred service
(Function not activated in the beta test)

Choose your preferred support style
(Function not activated in the beta test)

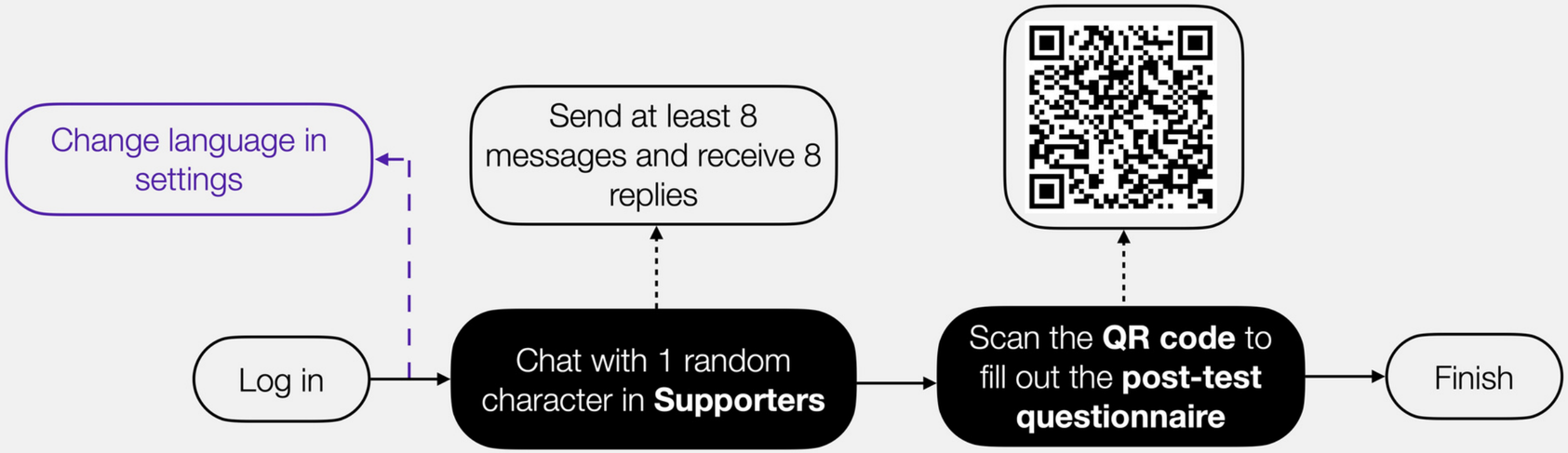
User Experiment Pipeline

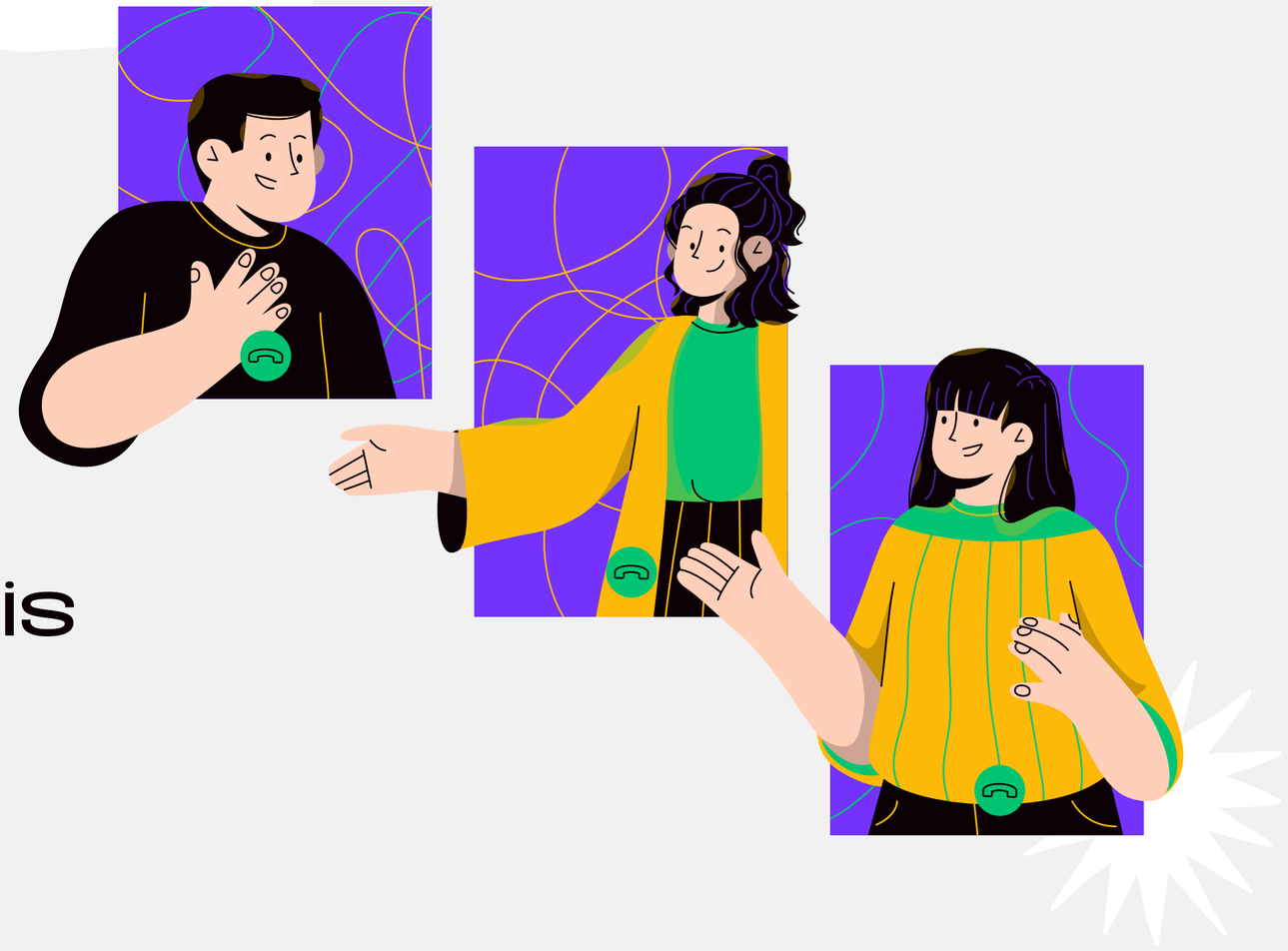
Online Seekers (AI supporters)



User Experiment Pipeline

Online Seekers (Human supporters)





Part 4:

Result & Analysis

- User Experience Scale Data Analysis
- Limitations & Reflections

User Experiment Result

[Human-AI][Human-Human]

Recruited participants were:

- *Issued a personal code*
- *Granted Access to our platform*
- *Given a guideline to perform to study*

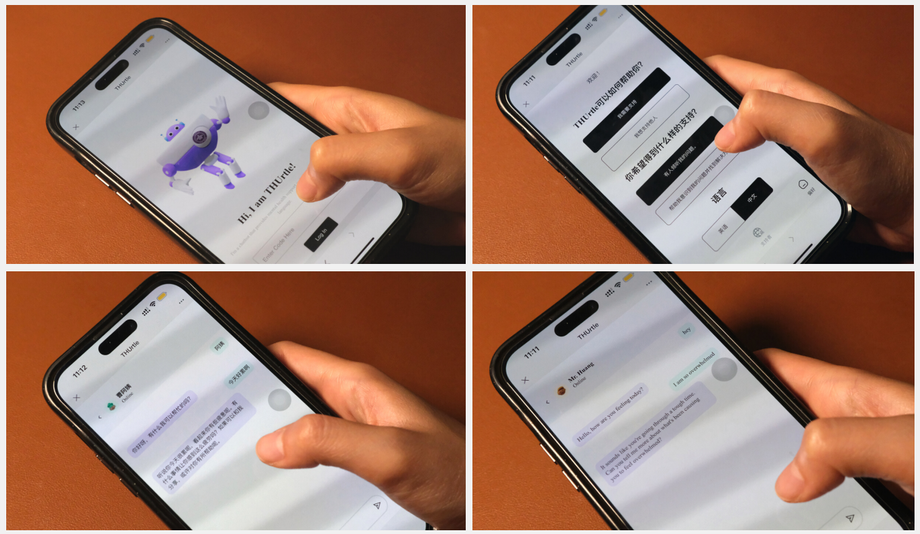
In order to maintain user privacy in our study, we did not record any conversations in our application.

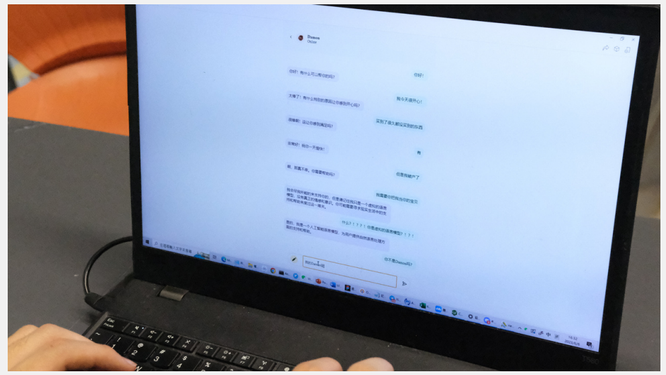
user	July	An EE girl	0	25	Designing Promp	green	seeker	ES
user	Cecilia	A GIX girl	0	24	Designing UIs	green	seeker	ES
user	zihan liu(J)	An EE boy	1	23		blue	seeker	ES
user	wenqing yan (J)		0	23		blue	seeker	ES
user	hualishu(J)		1	28		blue	seeker	ES
user	Chris (Sam)		1	21		blue	seeker	ES
user	George (Sam)		1	21		blue	seeker	ES
user	Jessica (Sam)		0	25		blue	seeker	ES
user	Yulia (Sam)		0	23		blue	seeker	ES
user	Giada (Sam)		0	23		blue	seeker	ES
user	QIQI (Sam)		0	20		blue	seeker	ES
user	Miguel (Sam)		1	21		blue	seeker	ES
user	Helen(CC)		1	24		blue	seeker	ES
user	Monkie(CC)		1	23		blue	seeker	ES
user	WX(CC)		1	24		blue	seeker	ES
user	Kexin Du(CC)		1	23		blue	seeker	ES
user	Cindy(CC)		1	17		blue	seeker	ES
user	Yjay (Sam)		1	20		blue	seeker	ES
user	MENGMU(CC)		1	25		blue	seeker	ES
user	Pam(CC)		1	46		blue	seeker	ES
user	guohengyi(J)		1	24		blue	seeker	ES
user	Limbo(J)		1	28		blue	seeker	ES
user	wangxin(J)		1	25		blue	seeker	ES
user	Kejuan Yang(CC)		1	23		blue	seeker	ES
user	Fenglv Liu(CC)		1	23		blue	seeker	ES
user	Shunxi Wu(CC)		1	23		blue	seeker	ES
user	Siyan Xue (J)		1	23		blue	seeker	ES
user	Lei Liu(J)		1	26		blue	seeker	ES
user	zhelong wang(J)		1	23		blue	seeker	ES
user	Chipmunks (J)		1	23		blue	seeker	ES
user	tianye(J)		1	23		blue	seeker	ES
user	Sinney		0	25		blue	seeker	ES
user	Ian		1	25		blue	seeker	ES
user	Yui		0	26	Film Photograph	blue	seeker	ES
user	Ilijana		0	18	Skateboarding	blue	seeker	ES

User Experiment Site

In-person Seekers (Human-Human)

The THUrtle user interface is presented on user's mobile phone





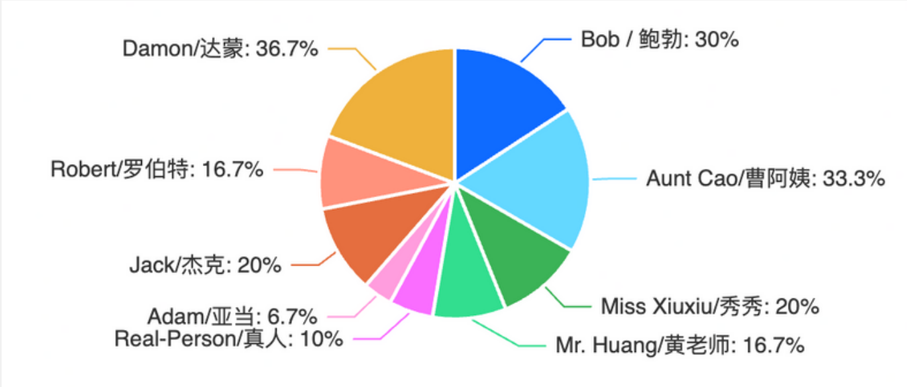
THUrtle team members are communicating with users about the specific process and details of the user experiment

User Experiment Result

*We recruited **30** participants to act as **support-seekers**:*

1. *Participants did not show any significant preference towards characters.*
2. *The majority of the participants (23/30, 76.7%) **felt better** after conversing with our chatbot (group 1).*
3. *The majority of participants (23/30, 76.7%) preferred our chatbot **compared to ChatGPT**.*
4. *Almost all participants (29/30, 96.7%) had **moderate to high satisfaction** with our platform. They also reported high satisfaction rates with characters of both group 1 (73.4%) and group 2 (53.4%).*
5. *Most of our participants reported that our app was **interesting** (23/30, 76.7%) and that it made them **feel comfortable** (16/30, 53.3%).*
6. *Overall 70% of the participants reported that they would **recommend this app** to other people.*

- GPT simulating seekers help enhance support capabilities
- Chatting with an anthropomorphic GPT can effectively boost mood
- Getting hints from chatgpt improves support



Limitations & Reflections

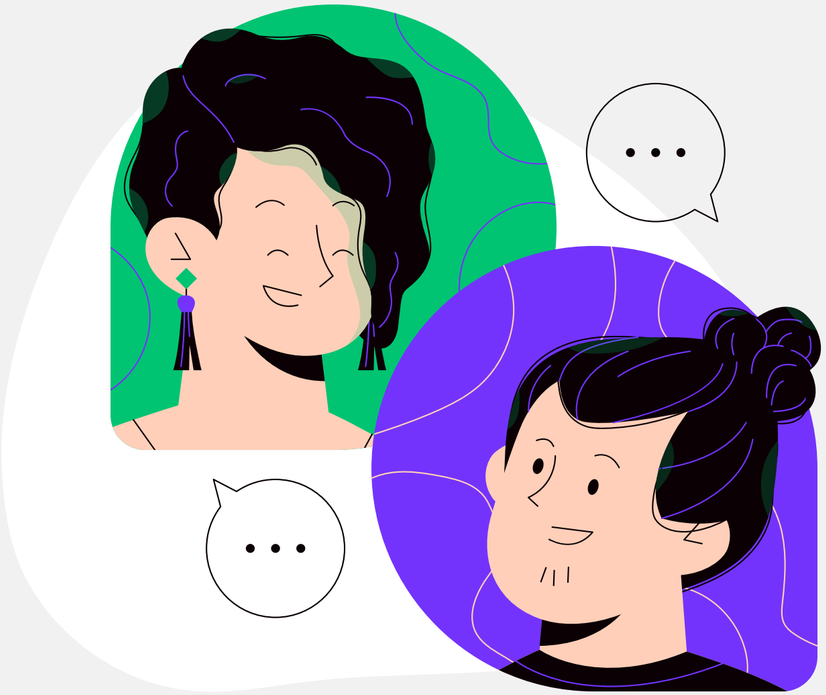
We noticed several limitations during this project and mainly, our user study:

1. *Being highly dependent on ChatGPT makes the app vulnerable to **many errors**.*
    a. *Unstable service*
    b. *Hackable inputs*
    c. *Not customizable*
2. *Experiment schedules should be considered with respect to **academic timelines**.*
    a. *Many students were not eager to participate due to final projects and exams.*
    b. *For the same reason, most participants were interested in being a seeker rather than a supporter.*
3. *In human-human conversations, most seekers preferred **human-generated responses**, which shows room for improvements when using AI-assistance tools.*
    a. *Exploring ways of implementing empathetic language could be helpful.*
    b. *Writing shorter answers that seem natural is more preferred.*
    c. *AI-generated responses need supporter's more time to wait and change compared with human-generated responses*

Part 5:

Team Member Contribution

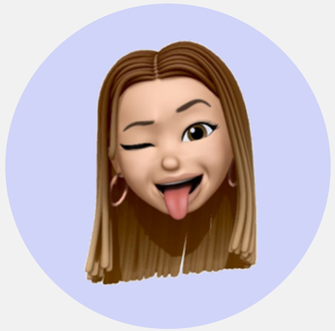
- Team Member Profile
- Work Distribution



Sahand Sabour (山姆)

Major:
Computer Science

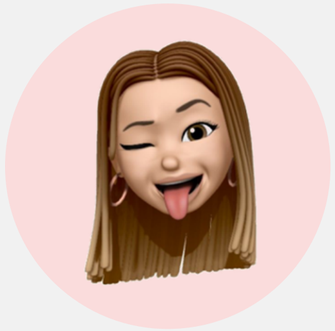
Contributions:
System Framework Design
Prompt Design
App Implementation
User Study Design
User Study Implementation



July (季宇琪)

Major:
Medicine & Engineering

Contributions:
System Framework Design
Prompt Design
User Study Design
User Study Implementation



Cecilia (洪学思)

Major:
GIX(Design)

Contributions:
System Framework Design
Prompt Design
UI Design
User Study Design
User Study Implementation

Franci Kembora

Major:
Psychology

Contributions:
System Framework Design
User Study Design
User Study Implementation

Thank you

Many thanks to ***Professor Yuntao Wang*** and ***Professor Chun Yu*** for their patient guidance over the past semester.
Many thanks to ***all our classmates*** for their companionship and support over the past semester.
And many thanks to the ***THUrtle team members*** for their mutual tolerance and tacit cooperation.

It was really a pleasure meeting you all!