



Artificial Intelligence

Assistive Technology

Accessibility

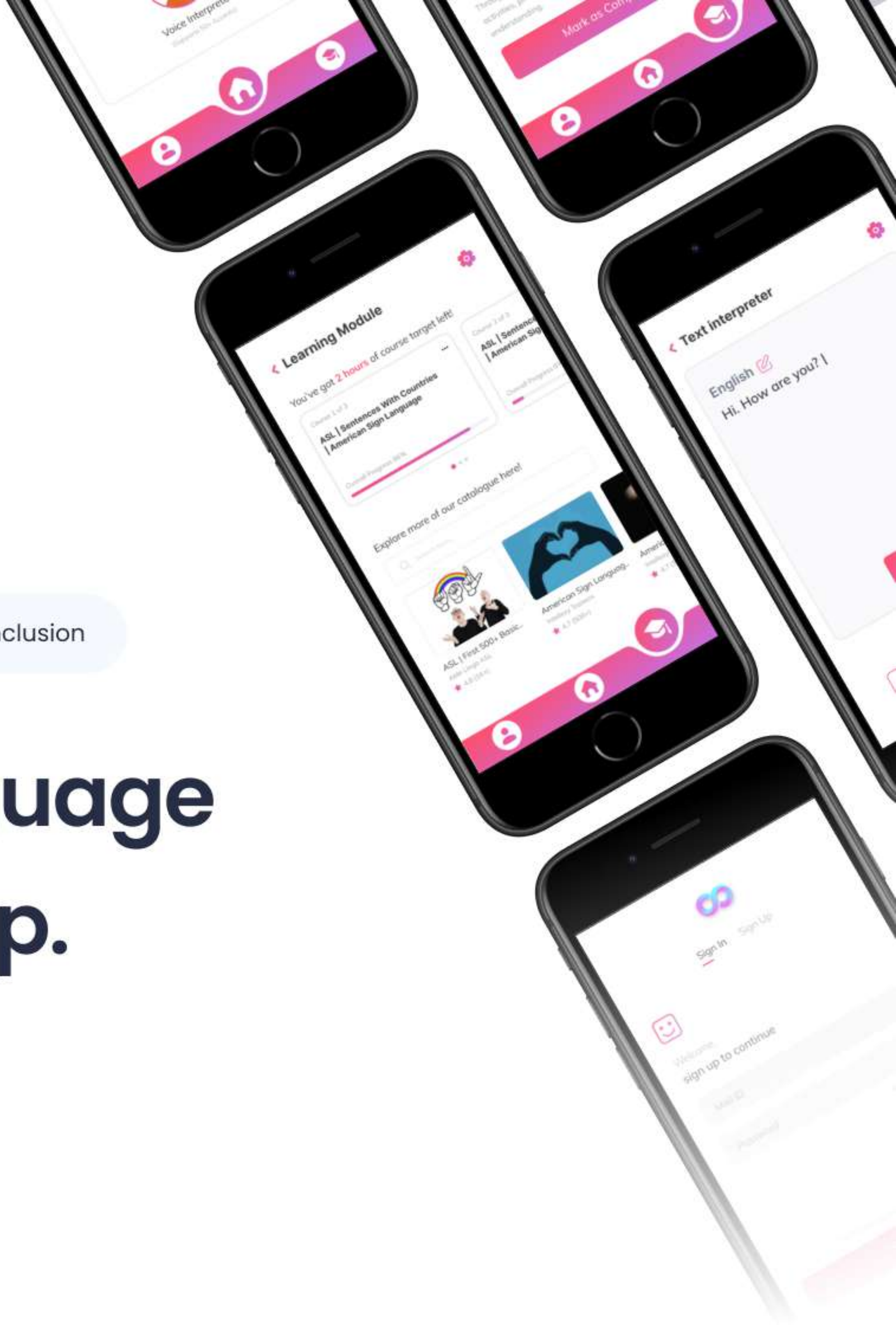
Inclusive Design

Disability Inclusion

SYNC – Sign Language Interpretation App.



Varun Nair

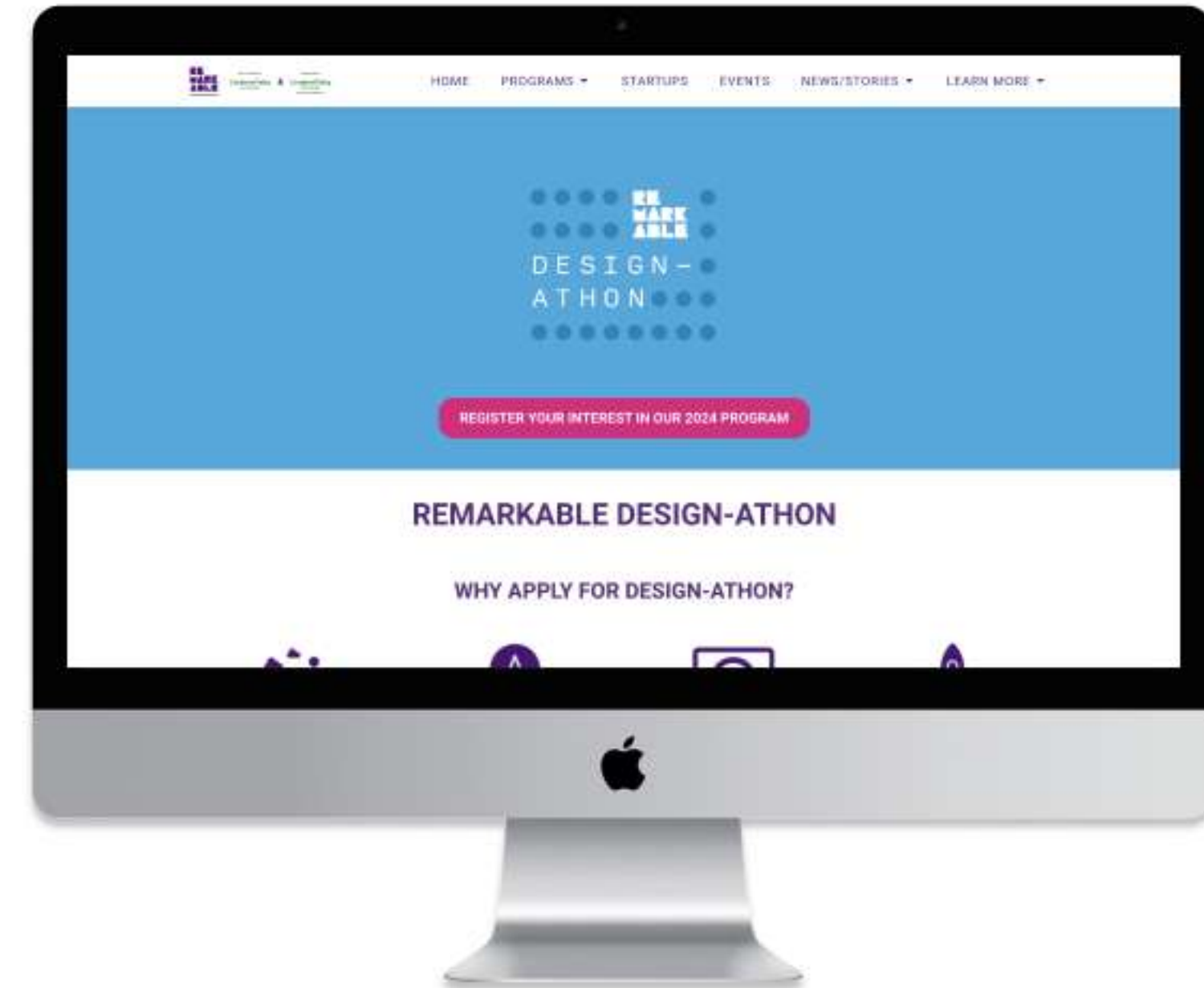


Who Are Remarkable?

Remarkable is the innovative startup accelerator committed to developing tech startups that positively impact people with disability and amplify human potential.

The Designathon 2023

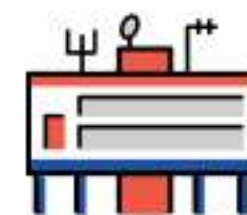
It is a 5 week challenge that invites budding entrepreneurs to solve problems identified by their community using an inclusive design methodology with the intent to see more products and services, in turn answering this very mission. Their services include :



**Learning
Module**



**Personal
Mentorship**



**Research
Participants**



**Usability
Testers**

Our Problem Statement & Our Mentor – Impactful AI

How might we use AI to enable greater independence and participation for people with disabilities in their daily lives and in their communities?

Challenge #3

Inclusive AI

How might we use AI to enable greater independence and participation for people with disabilities in their daily lives and in their communities?



Elizabeth Chndler



Elizabeth Chandler

Problems Identified

- People with disabilities lack a complete language solution that covers various communication methods like Sign Language, ProTactile, Braille, and PECS.
- Existing gaps create difficulties in understanding each other, making conversations and interactions challenging.
- Limited communication tools isolate individuals with disabilities, making it hard to engage in social activities.
- Inadequate language support in education settings affects learning and participation in class.
- Incomplete communication tools hinder career opportunities and job-related communication.
- Lack of comprehensive communication limits personal development and self-expression.
- Inaccessible communication tools create disparities in accessing important services like healthcare.
- Legal rights & advocacy efforts are needed to ensure equal communication access.

Our Ideation Process

- Onboarding journey for login details
- UI similar to ChatGPT that takes a text as input and produces hand sign images
- Takes our voice commands, and interprets the same as sign language
- Teaching module for premium users

Varun Nair

- Phone/Meetings/audios - speech to text
- Camera/Image to audio
- Noise/audio in the surroundings to text
- Text to audio (doc/file)
- Education - sign language
- Identify people/objects?

Tanisha Ashar

- Onboarding & splash screens highlighting the capabilities
- Clean minimalist UI with tiles as options
- Start with tiles for disability.
- Start with tiles asking for options for the language that is to be converted.

Anurag Kadel

- Image to text or speech and vice versa
- Real time conversation of speech to image
- should have a 'do you mean this
- Design should be accessible

Renu Samuel

Our Solution – SYNC

SYNC is an AI Language Interpretation App supporting people with disabilities. It interprets Sign Language, ProTactile, Braille, and PECS, aiming to enhance communication access and empower self-expression.



Brand Logo

Features & Functionality



Interpret Languages

- AI Models for Diverse Languages
- Understand User Inputs Precisely
- Effective Communication Methods



Interact Real-Time

- Instantly Interprets for Discussions
- Eliminates Communication Delays
- Effortless Interaction Methods



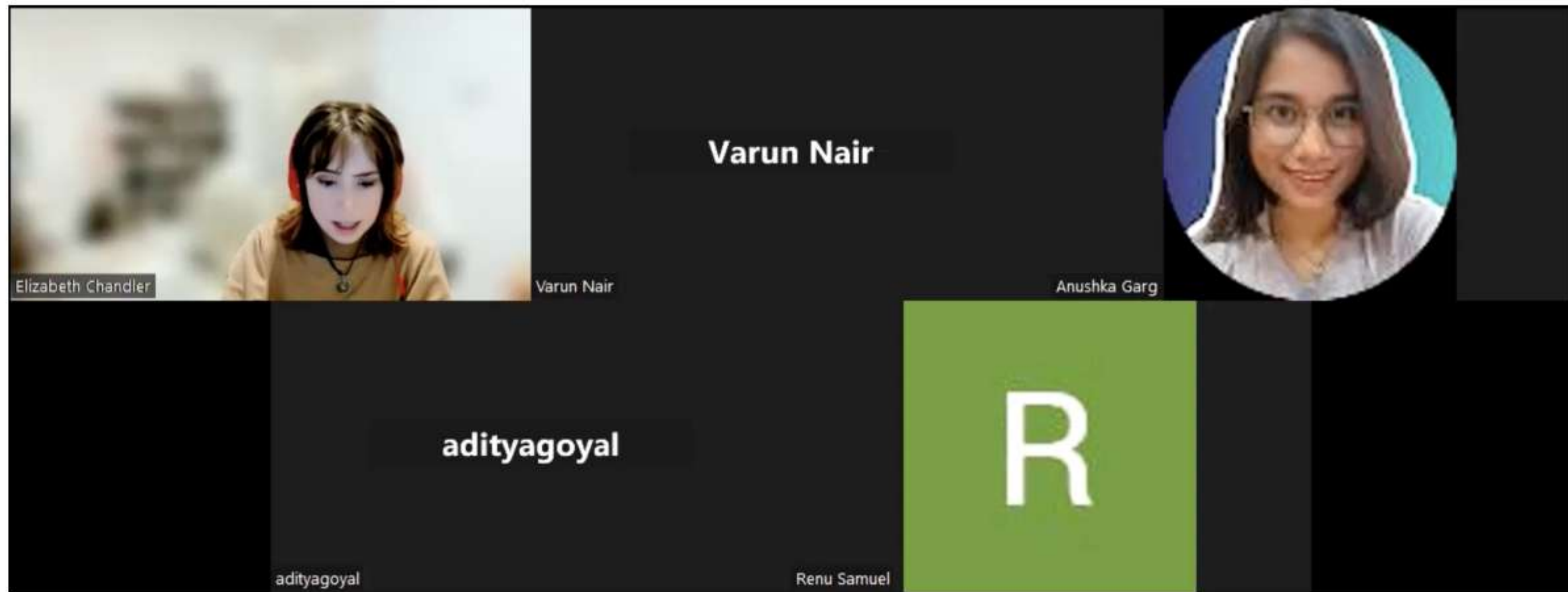
Enhance Accessibility

- Image Recognition for PECS
- Gesture Recognition for Hand-Signs
- Hands-Free Voice Control

Primary Research – Mentor Interview

In a recent collaboration with our AI Mentor, Elizabeth Chandler, we embarked on primary research that yielded profound insights. Here's a summary of the interview :

1. Explored intricate challenge with Elizabeth's guidance.
2. Identified potential of a user-friendly mobile app.
3. App envisioned to empower specially-abled communication.
4. Emphasis on seamless integration into diverse lifestyles.



Interview with Elizabeth Chandler

Competitor Analysis

Be My Eyes

Be My Eyes is an app that connects blind and visually impaired users with sighted volunteers for assistance through live video calls.



Features :

- **Live Video Assistance:** It allows visually impaired users to connect with volunteers who can describe the user's surroundings or helping with specific tasks.
- **Global Volunteer Community:** The app's unique aspect lies in its network of volunteers, offering support to visually impaired individuals across various situations.

India Factoring

TouchChat is an AAC app that enables individuals with communication challenges to express themselves using symbols, text, and voice output.



Features :

- **Vocabulary Organization:** TouchChat provides a range of vocabulary layouts and organization options to suit different communication needs and abilities.
- **Word Prediction:** The app offers word prediction and phrase completion features to facilitate faster and more efficient communication.

User Persona



Alex Johnson
Senior Underwriter

About

- 28
- Chicago, USA
- Bachelor's
- Employee



I believe everyone deserves a chance to communicate and learn.

Description

Alex is a passionate educator who assists students with diverse learning abilities in a high school setting.

Goals & Objectives

1. Improve the learning experience and engagement of specially-abled students.
2. Enhance communication accessibility in the classroom for all students.

Pain points

- Limited resources and tools to effectively cater to different communication methods.
- Struggling to ensure every student's voice is heard and understood.



Maya Patel
Graphic Designer

About

- 35
- Mumbai, India
- Bachelor's
- Employee



Art is my language; I want to share it with the world.

Description

Maya is determined to express herself and communicate her thoughts, ideas, and emotions through her art.

Goals & Objectives

1. Connect with a broader audience by sharing her artwork and vision.
2. Collaborate with other artists and professionals to expand her creative network.

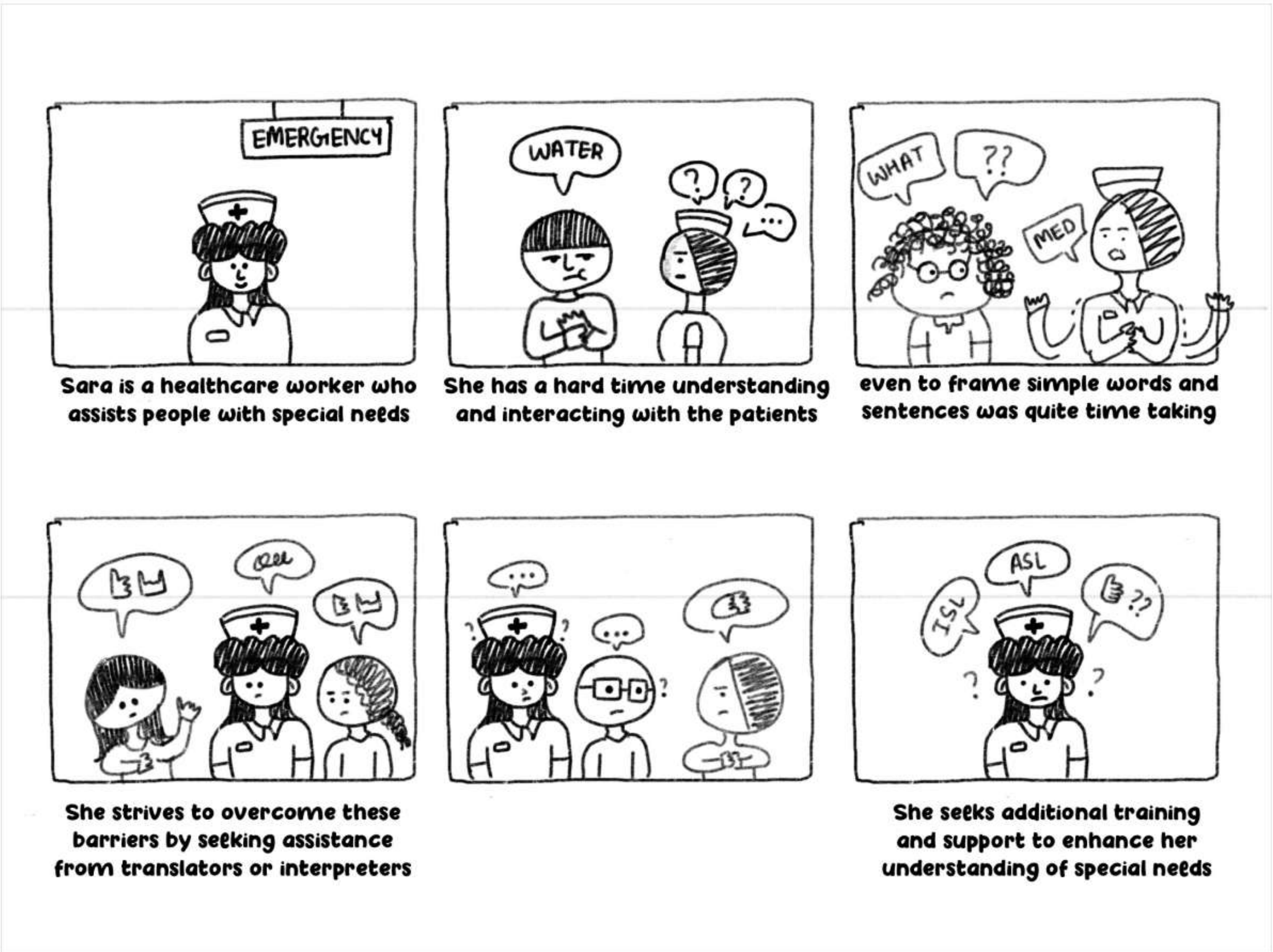
Pain points

- Struggling to communicate her artistic concepts and ideas effectively.
- Feeling isolated from the art community due to communication barriers.

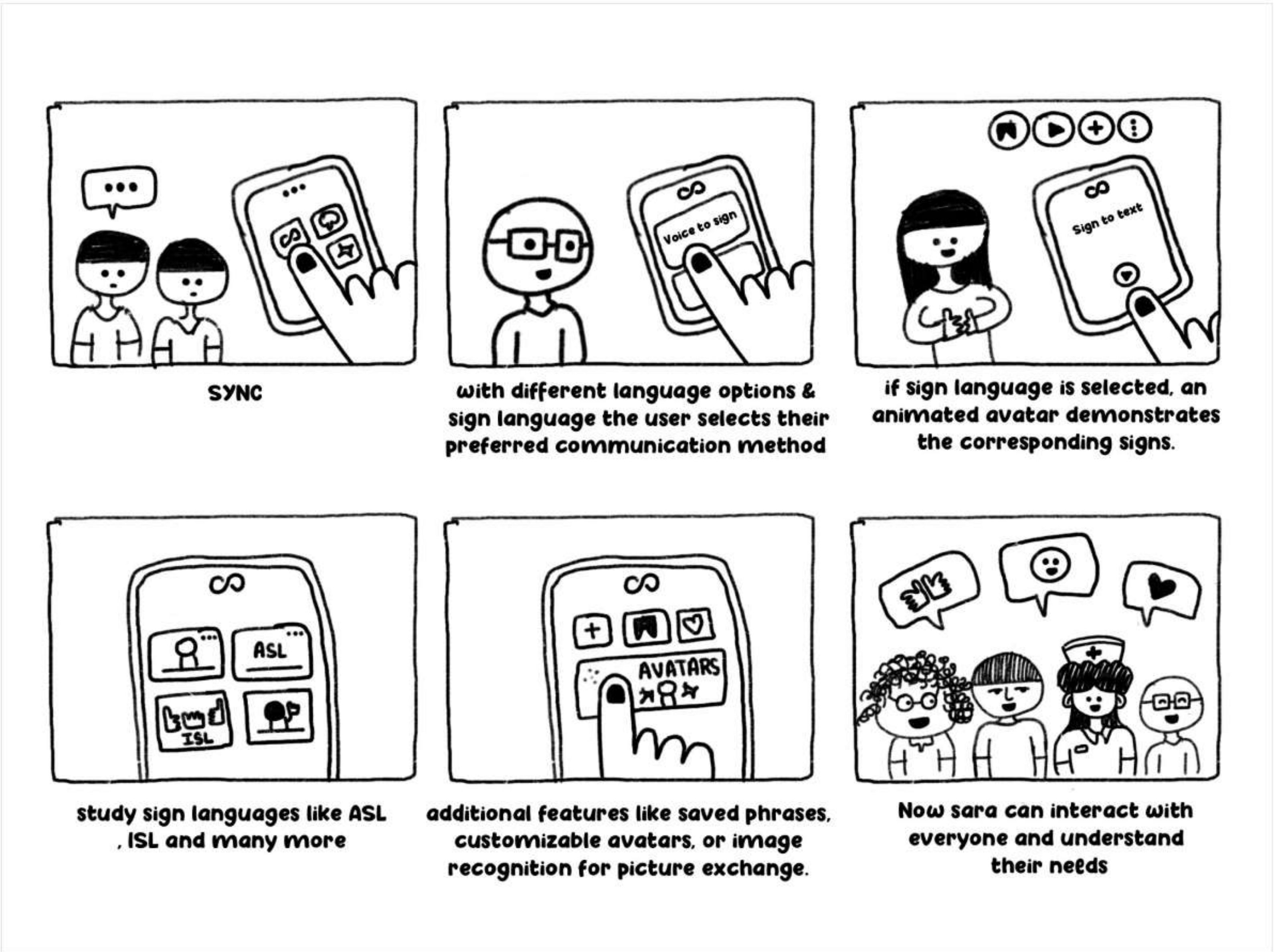
Storyboard Sketches

In the case study's Storyboard section, we use two types of storyboards to showcase SYNC's user experience. The "User Journey Storyboard" presents real-world scenarios, capturing user actions and emotions.

The "App Interaction Storyboard" zooms into SYNC's interface, detailing user interactions step by step. These storyboards provide a comprehensive view of SYNC's impact and usability across various contexts.



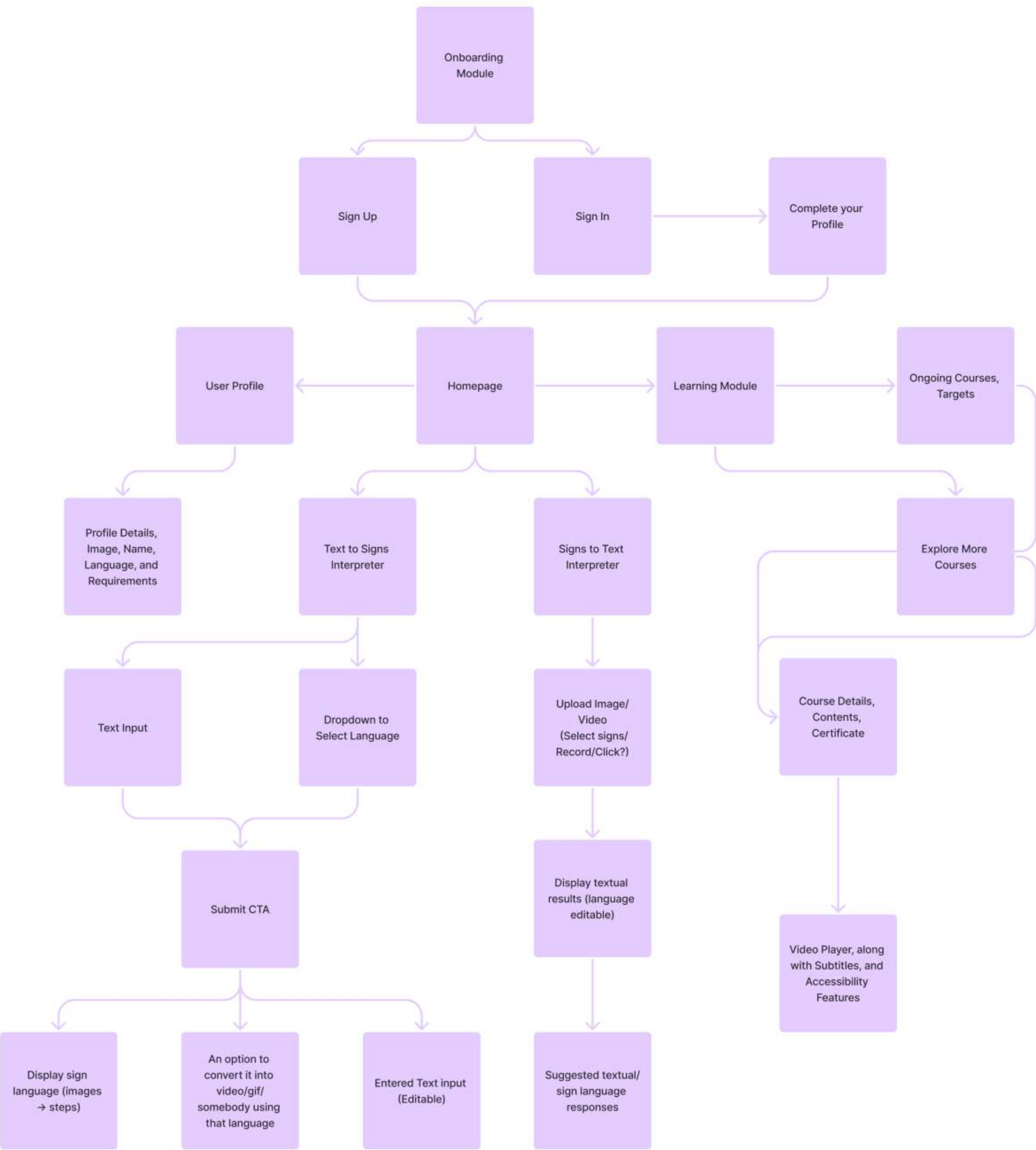
User Journey Storyboard



User Journey Storyboard

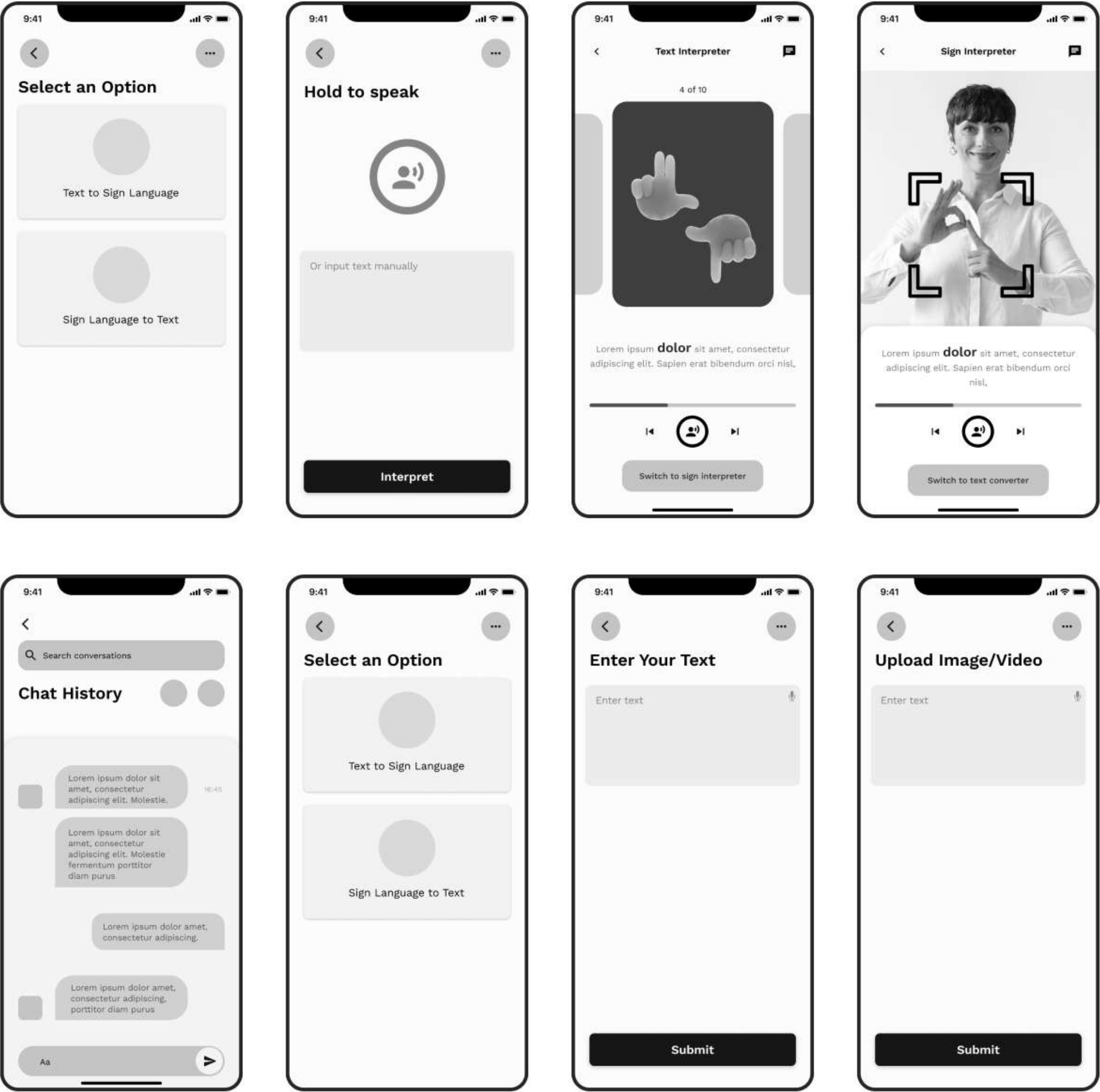
User Journey Mapping

In the case study's User Flow section, we showcase how SYNC's design and features are strategically organized to align with user needs. Through intuitive navigation paths and hierarchies, users can seamlessly explore SYNC's capabilities. This user-centric approach ensures clarity and accessibility, enhancing the overall user experience within the app.



Low Fidelity Wireframes

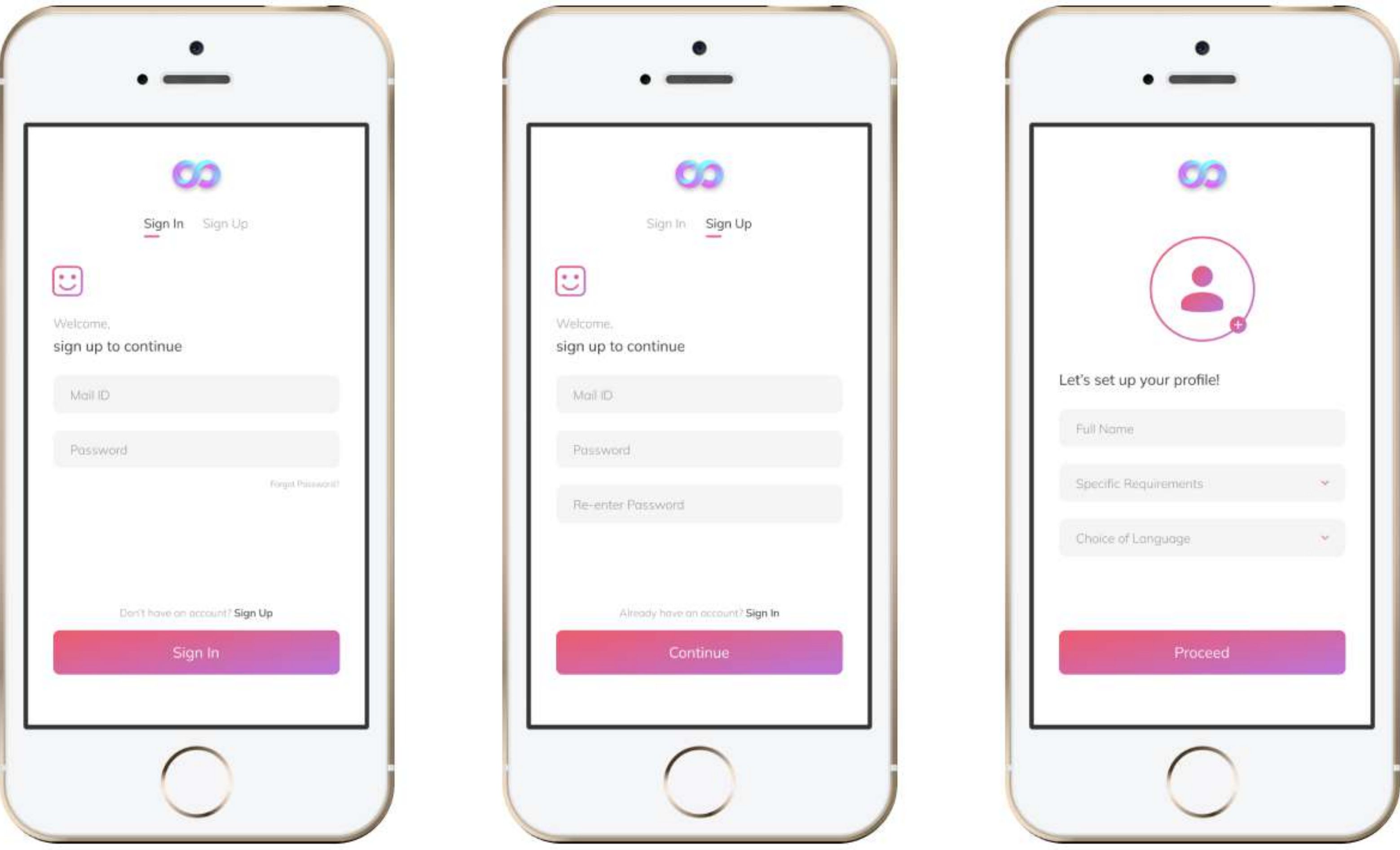
SYNC's Low Fidelity Wireframes lay the groundwork, emphasizing functionality over aesthetics. These blueprints focus on layout, interaction points, and content organization. By prioritizing simplicity, they guide user experience decisions, aligning SYNC's design with user needs.



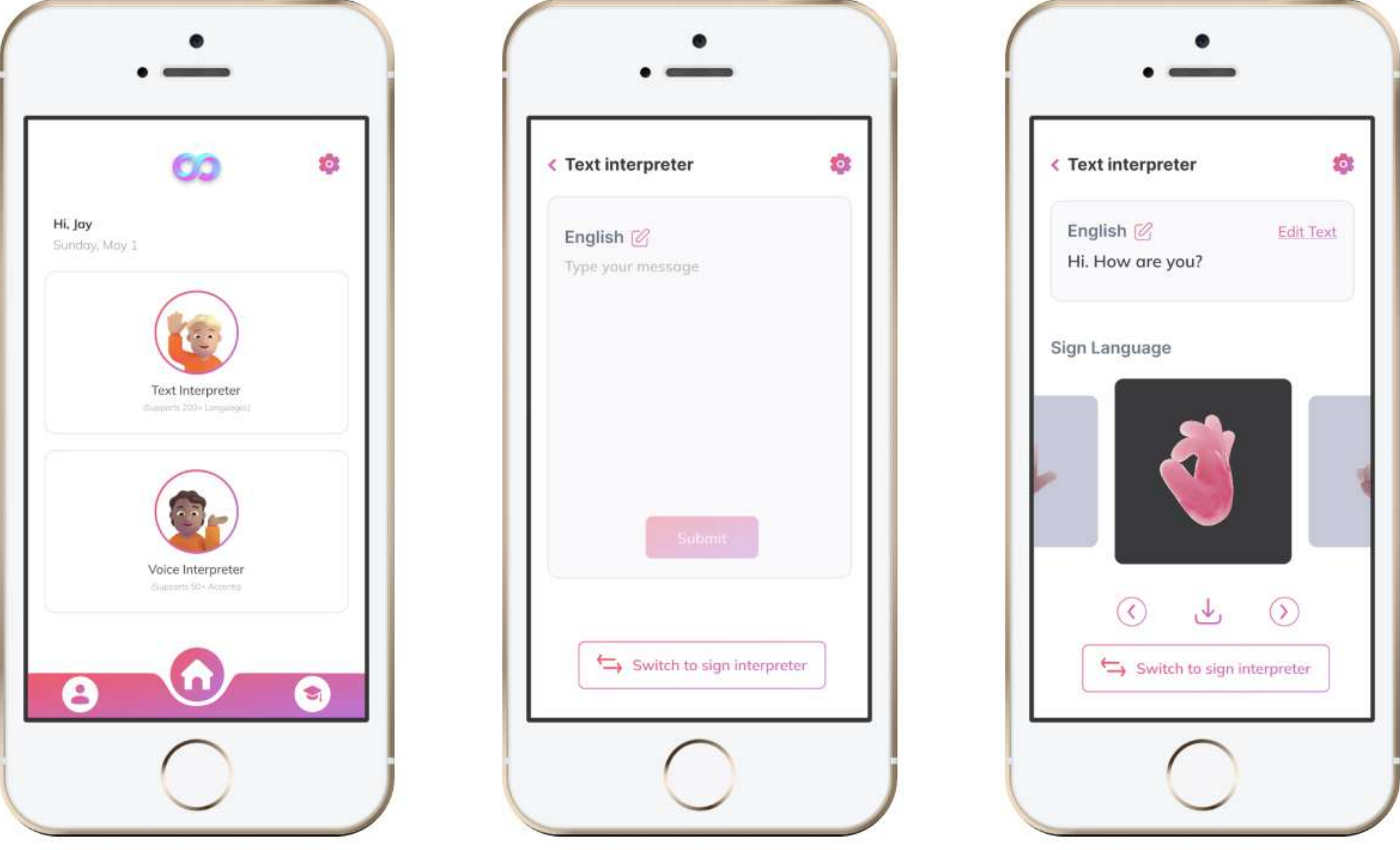
High Fidelity Screens

In SYNC's UI Design and Prototype phase, the app's visual and interactive elements converge for a seamless user experience. The Interpretation Flow ensures smooth communication, covering Sign Language, ProTactile, and PECS. A Learning Module enhances sign language skills, while Profile and Onboarding Pages personalize the experience. This phase transforms SYNC into a dynamic application, set to empower diverse users in their communication journey.

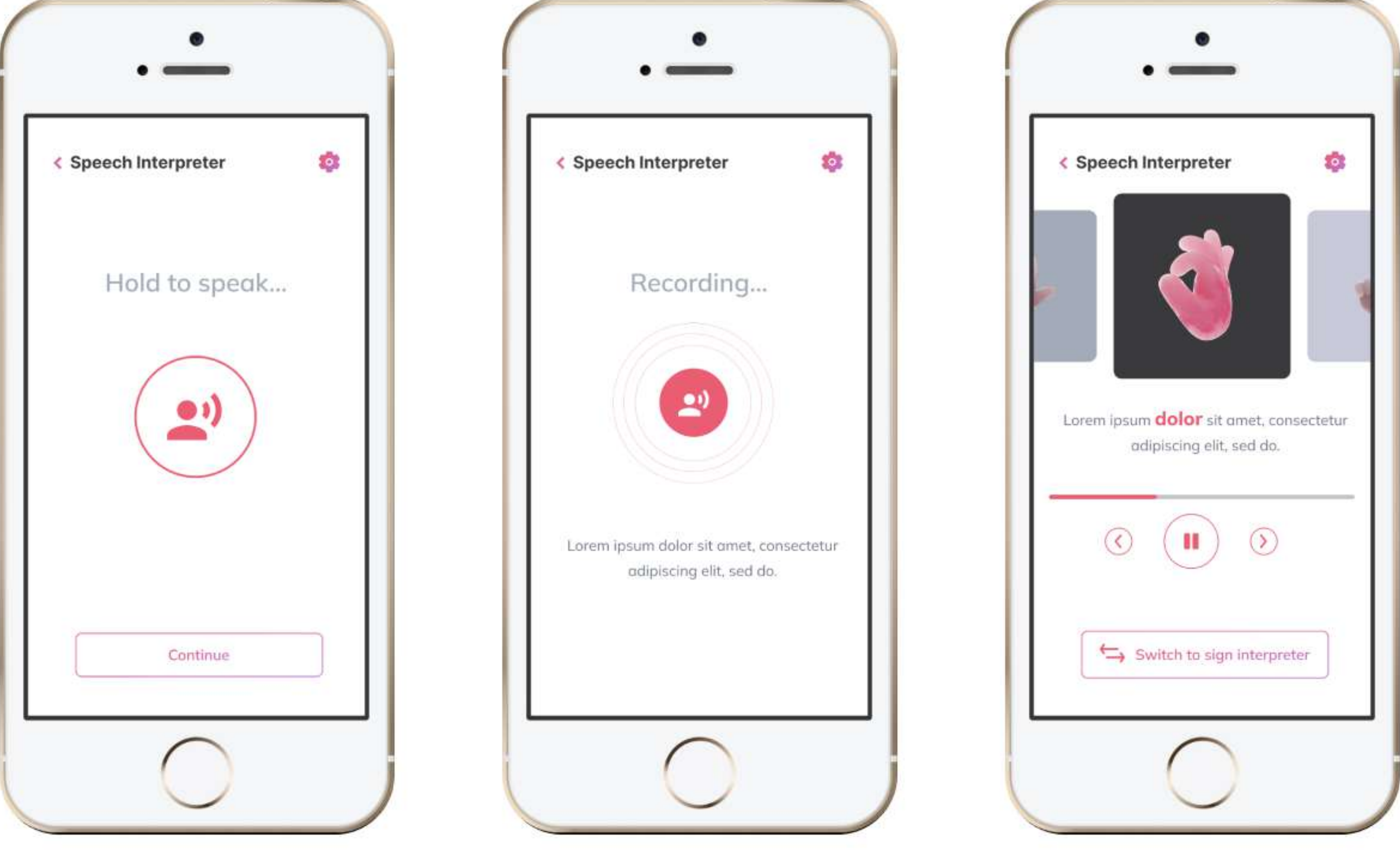
Onboarding Module



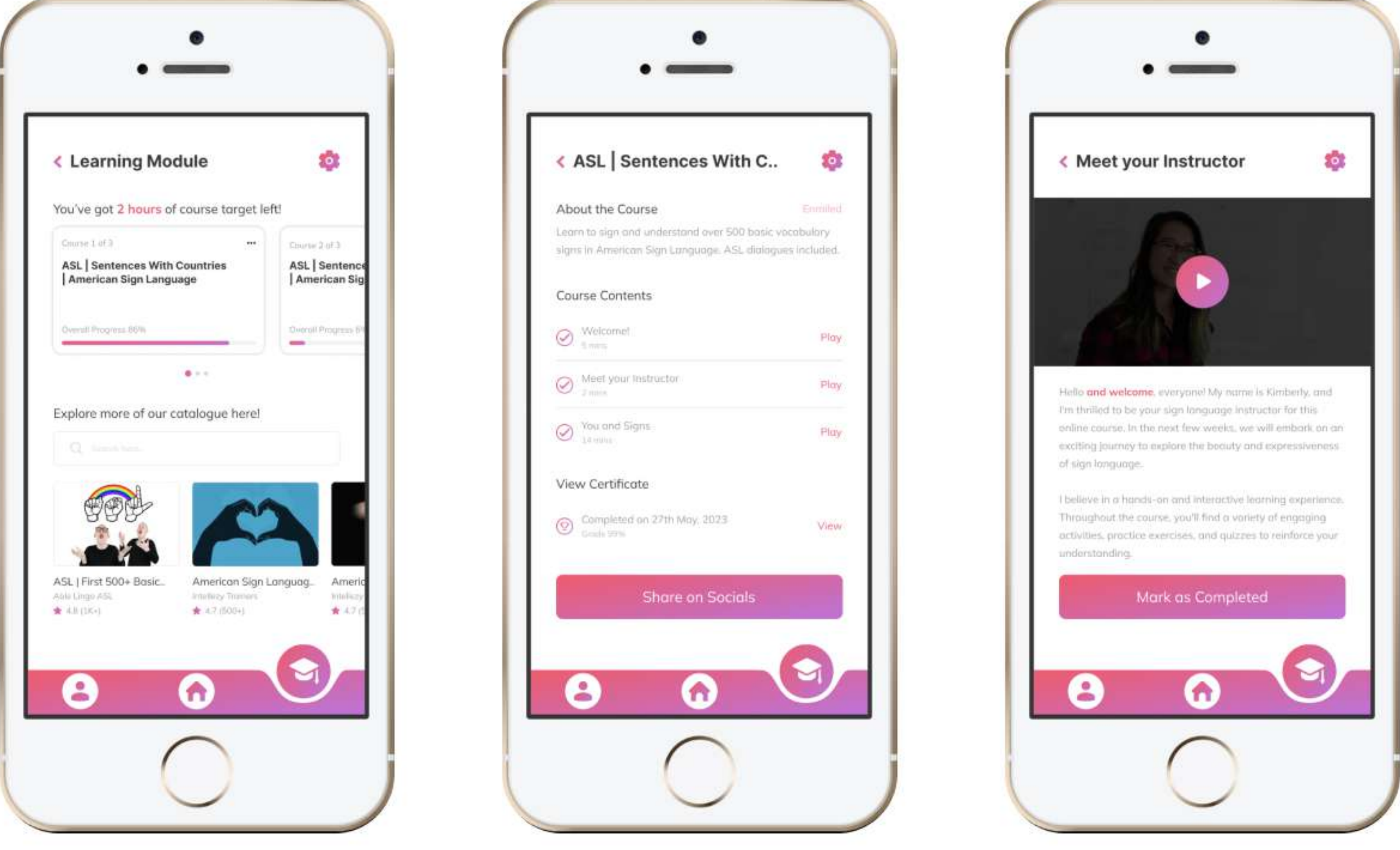
Text Interpreter



Speech Interpreter



Learning Module





**Thank You
For Watching**

