

Un-Mute

Detailed description

A. Introduction

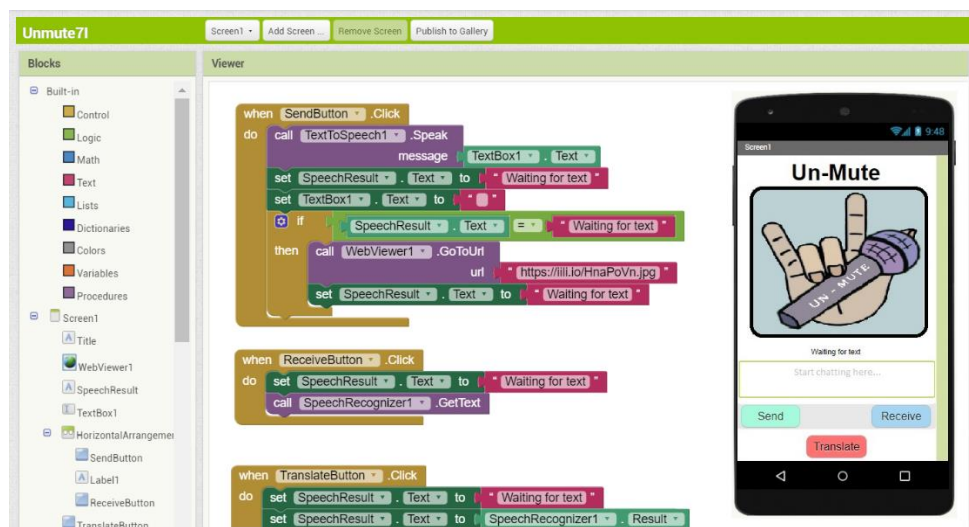
We are slowly dealing with problems that we've created, why can't we deal with our problems? Deafness is an issue that's slowly rising (more than 20% have hearing loss). Therefore, we've decided to try and solve the issue. Un-Mute is our revolutionary new app, which presents to the world a way to communicate and hear back from the hard of hearing. With a simple app interface, the world could have a new and easy way to speak to those who cannot.

B. Significance of the innovation

This application could help the hard of hearing and give them a way to tune in and be in touch with the world. With a trend in the rise of those with hearing loss, we believe it's a problem to be solved before it's too late. As the climb of loud music and booming noises from your headphones continues, it's an obvious problem that could affect us generations to come. The significance of this could be abhorrent in the decades to come - that's why our duty is to help solve it now.

C. Development of the app

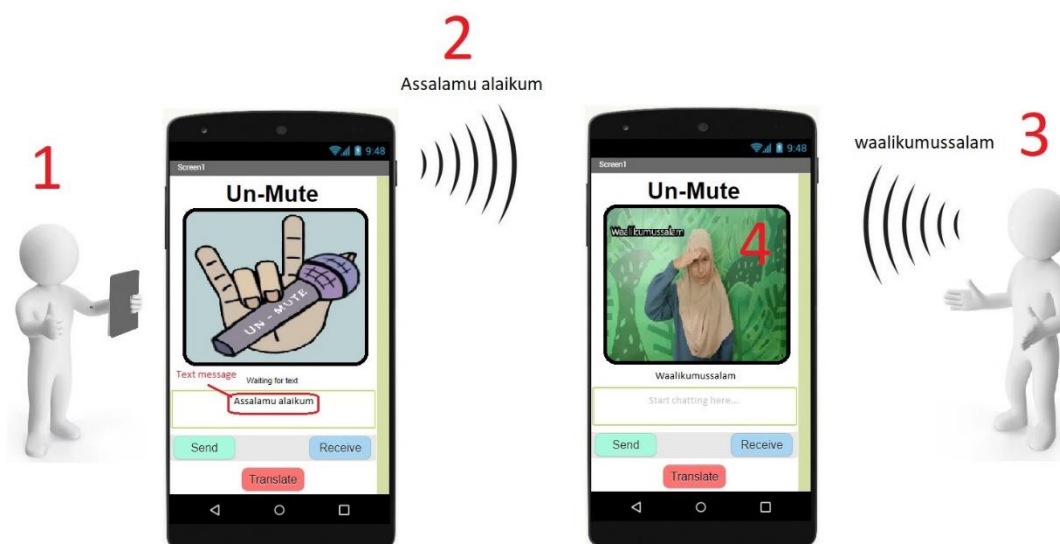
The app has been developed using MIT App Inventor as shown in Pic. 1, and the sign language scenes in the app have been recorded in our computer lab by our team members.



Picture. 1: Interface design and app coding using MIT App Inventor

D. How does it work?

As shown in Pic. 2, the app interface has a textbox, 3 buttons, and one big area for the logo. The big area is used also to display the sign language translation. The deaf/mute person will have the app installed in their phone, and they will use it as a translator to communicate with others according to the following steps.



Picture. 2: Un-Mute app working steps

First, the deaf/mute person starts by typing their message in the textbox, and then press "Send" button. Then the phone will convert this text message into a voice message (speech).

After that, the deaf/mute person presses the "Receive" button to allow the other person to talk. Once "Receive" button is clicked, the voice recognizer starts automatically and gives a sound notification (peep) so the other person can start talking.

Now, the other person responds to the voice message by talking to the phone (speech recognizer).

Once the speech is done, the speech recognizer will translate the speech into a text message, and the recognizer will automatically so the deaf/mute person knows that the other person finished talking.

Finally, the deaf/mute person presses "Translate" button, which translates the other person into a sign language that will be displayed on the phone screen.

E. Potential collaboration with industry

We would love to collaborate with some hearing loss organizations and associations such as The Malaysian National Society of Audiologists (MANSA), so they can adopt our app to improve it to suite a larger range of people who need such a tool.