



# Clever Buddy

COMPANION ROBOT

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# Problem

Mental health problems increase the likelihood of illnesses and situations that put the person at risk. Currently, depression and anxiety in young people have reached the top positions in mental health problems according to the WHO. Mental health is all about the perception of your life and your way of thinking. The person should be able to manage stress and make decisions. Mental health is no less important than physical health at any age.







# Context

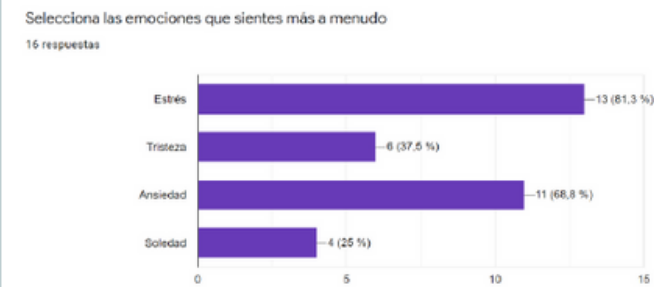
- Due to covid 19, a lot of people felt loneliness and depression because nobody could go out and hang with freinds or with anybody.
- There are many persons that fight every day dealing with their inner emotions.
- Lots of people are victims of depression and anxiety .
- There are many kids that can't express themselves or have trouble around their media.
- There are many adults that can't enjoy a free time - break because of their thoughts. (Anxiety and Stress.)
- Change in the perception of social robots as a result of the reported change in people's lives due to COVID-19.



# Investigation



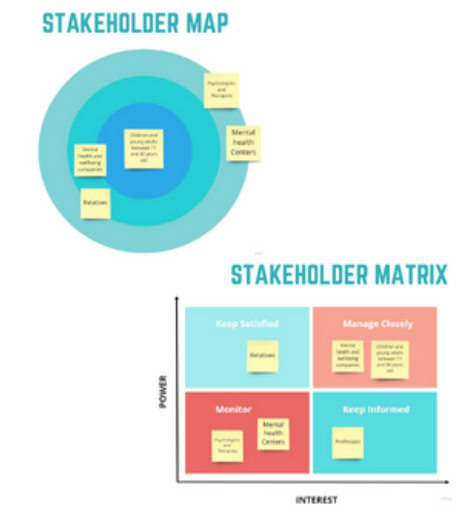
SET



Opinion Polls



Persona Map



Stakeholder Map



Customer Journey

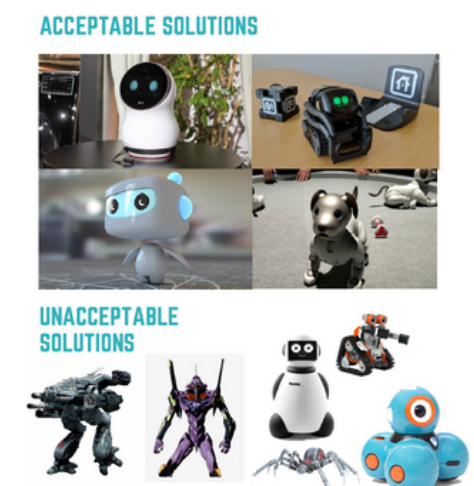
We use two tools to get the insights, a survey and card sorting. Thanks to this we collected the following insights.

1. The user preferred robots that had a friendlier and more tender appearance.
2. The user chooses the robot according to the one that transmits the most kindness and trust.
3. The user does not like that the robot has either very realistic shape or too simple that it seems without having utility. In the same way he does not like those who have very big eyes because it gives them the feeling that it really observes them at all times, something that does not give them confidence if it's going to be their companion.
4. The user would prefer it to have a small size so that they can take it everywhere without problem.
5. Students are the ones who are more likely to present stress, depression, sadness, loneliness and anxiety.
6. Stress and anxiety are the emotions that predominate in students due to school load and pressure.
7. Negative emotions usually occur 1 to 4 days a week.
8. Most users tend to look for some distraction to eliminate negative emotions.

Insights



Requirements



Design Criteria





# User Profile

Nombre: Javier López

Age: 18

Occupation: Student

Frustration

He doesn't have time to take care of a pet.

Objective

Find a solution so that Javier does not feel the emptiness of his apartment, and has company that encourages him in his moments of stress and loneliness.

Behavior:

In his city he used to be very social but now in a new city he has become a little shy, he is having a hard time adapting to his new living place and sometimes he feels alone.



# Needs and Requirements

- A companion for mental health that decreases depresión and feelings of loneliness.
- Help in times of stress and anxiety by transmitting peace.
- Share meaningful moments with someone.
- It should be small and light in weight so users can have the possibility to carry around everywhere.
- Easily to transport and with a good quality to prevent any damage caused by the environment during the transportation.
- Adorable and friendly appearance design



# Opportunity

**Designed for wellbeing  
(Trend 2021)**



## Generated Values

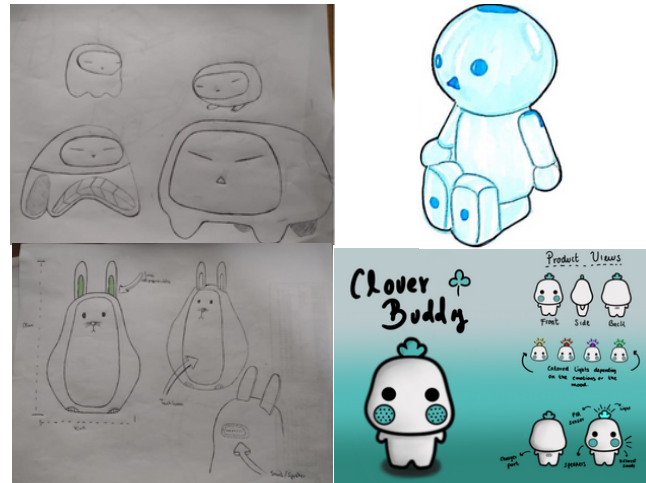
- Wellness
- Reduces anxiety
- Motivation
- Provides hope

## Technologies

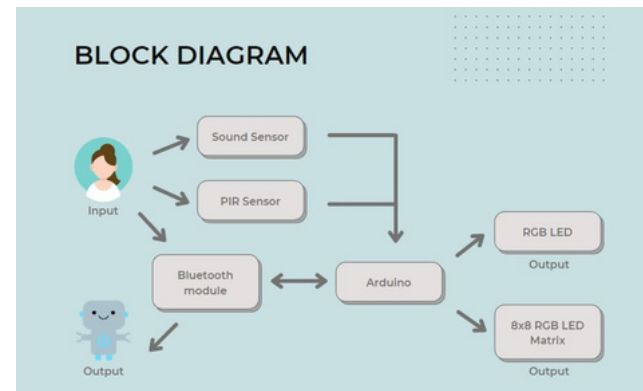
- Bluetooth
- Sound Sensor
- PIR Sensor
- RGB LEDS
- 8X8 RGB LED Matrix



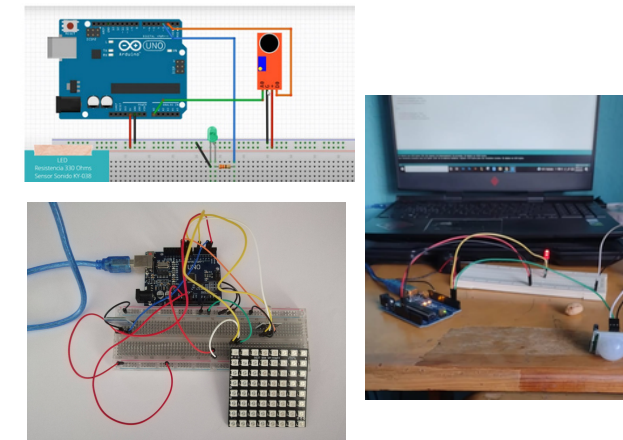
# Development Process



## Ideation



## Block Diagram



## Individual Prototypes

```
# Encomores/Final Arduino-18:15 Hourly Build 2021/09/11 12:23
Archivo Editor Programa Herramientas Ayuda

Encomores_FTW
Encomores_FTW
Encomores_FTW

#include <SoftwareSerial.h>
#define "PASTED.A"
#define "DATA.XML"
#define WEM_2021 64
#define PIN_RX 6
#define B 9
#define G 10
#define B 11
#define WEM_A0
#define FIR 4
#define SoftwareSerial Oficial(2,3);

unsigned long currentTime;
unsigned long pastTime=0;
String s;

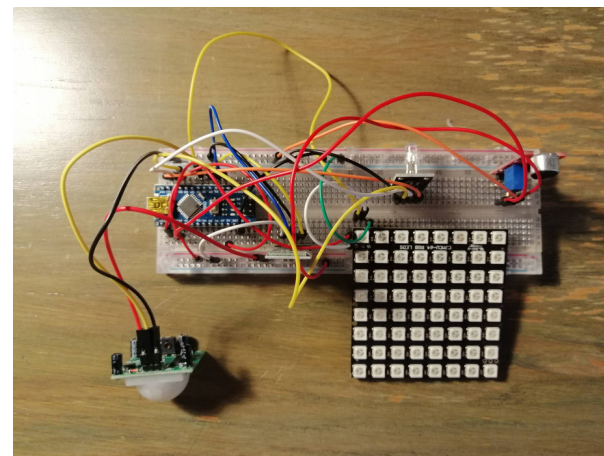
CHMPlatformat currentPlatform;
TlibidType currentLibidling;

const char namew_0[] PROGMEM="FIRMS: Eno no es un argumento válido.";
const char namew_1[] PROGMEM="FIRMS: Razón, la vida es mejor así.";
const char namew_2[] PROGMEM="FIRMS: ¿Ental, me da gusto que se aliente así.";
const char namew_3[] PROGMEM="FIRMS: ¡Guay, qué bueno que uno de los dos se aliente así.";
const char namew_4[] PROGMEM="FIRMS: Guay, ahora yo también.";
const char namew_5[] PROGMEM="FIRMS: ¡Guay! La felicidad es contagiosa.";
const char namew_6[] PROGMEM="FIRMS: ¡Guay! El otro día lei que las sonrisas curan el alma.";
const char namew_7[] PROGMEM="FIRMS: ¡Guay! No mira, no tengo cara de serado, pero está.";
const char namew_8[] PROGMEM="FIRMS: Te mandó?";
const char namew_9[] PROGMEM="FIRMS: ¡Guay que calabraron y reconocen esta emoción.";
const char namew_10[] PROGMEM="FIRMS: Te mandó te desprecio una pandemia de tu vida social!...";
const char namew_11[] PROGMEM="FIRMS: A quién tengo que acusar con su mamá?...";
const char namew_12[] PROGMEM="FIRMS: ¡Un bumbo hablo con tu red de apoyo de esto, por el momento.";
const char namew_13[] PROGMEM="FIRMS: ¡Fatecuerdo cuando me cambiaron por una Raspberry pi...";
```

## Individual Code



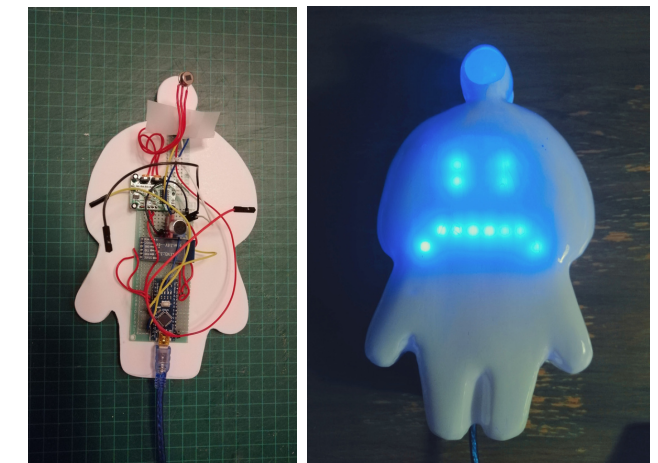
## 3D Model



## Final Circuits



## Prototype

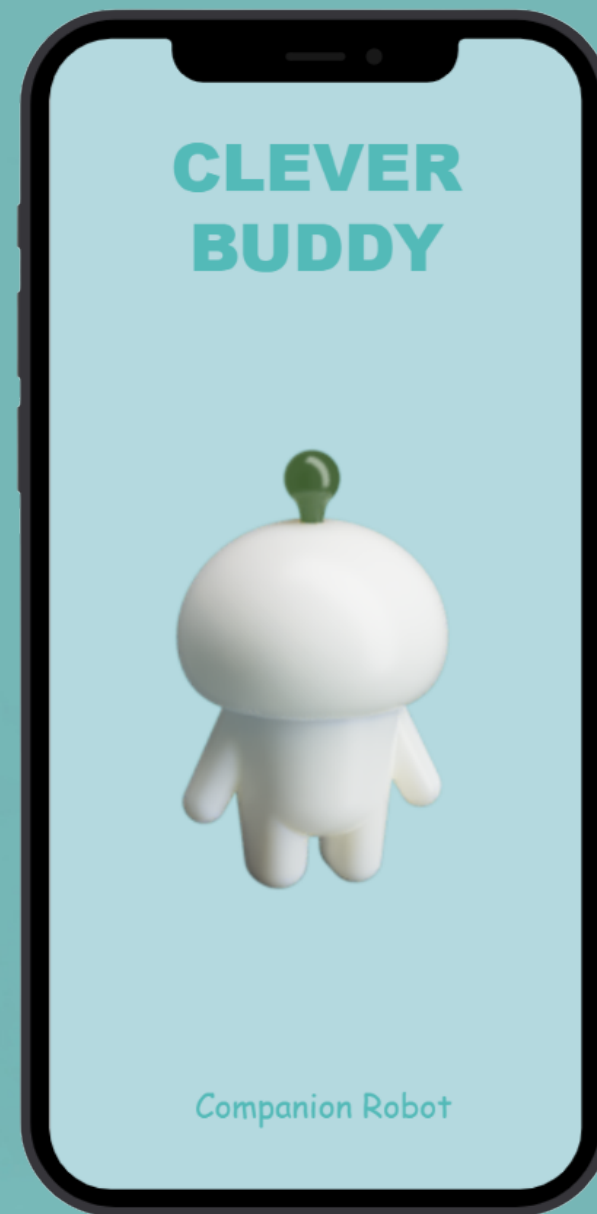


## Integration

# Final Solution



Companion Robot



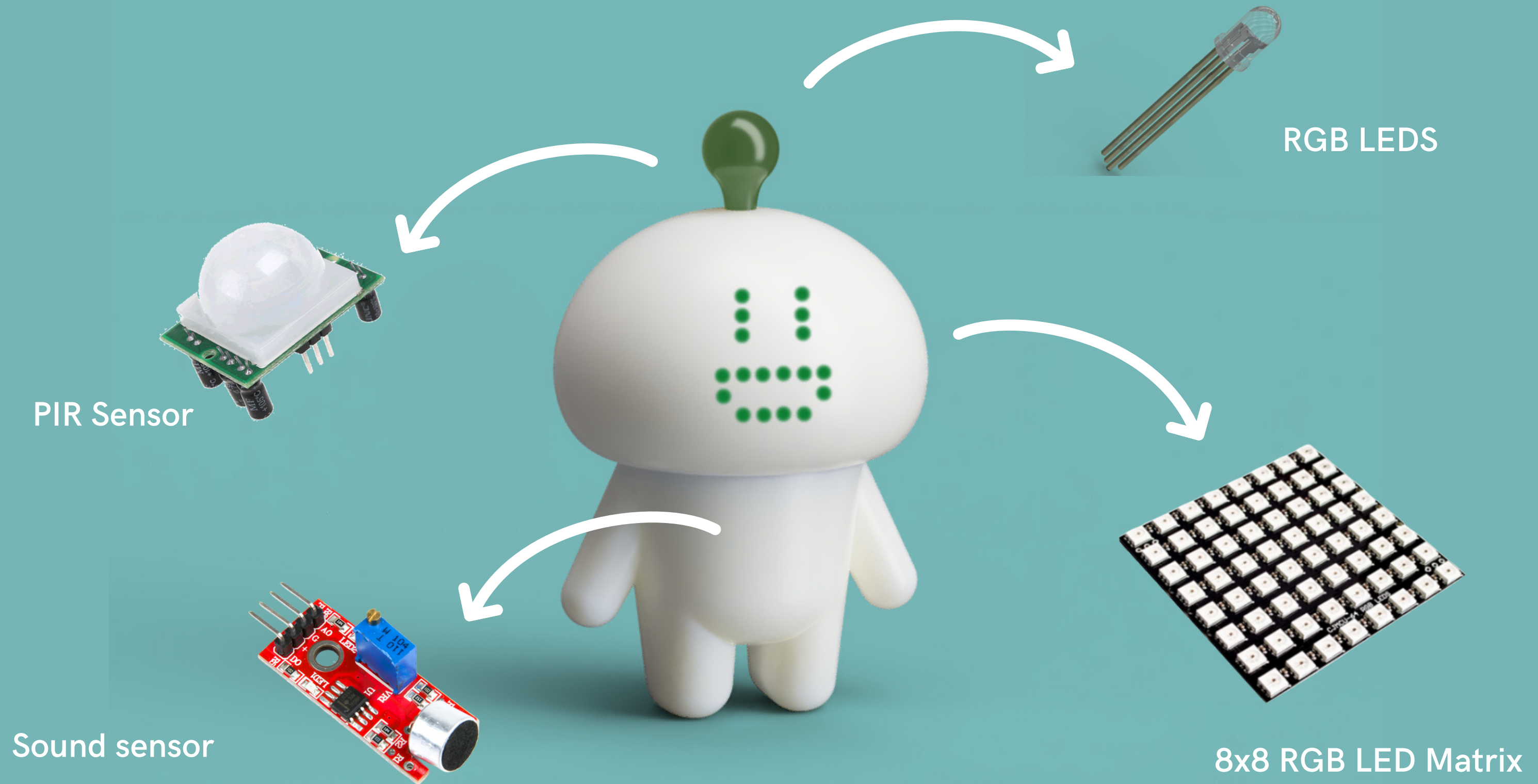
App

## Clever Buddy

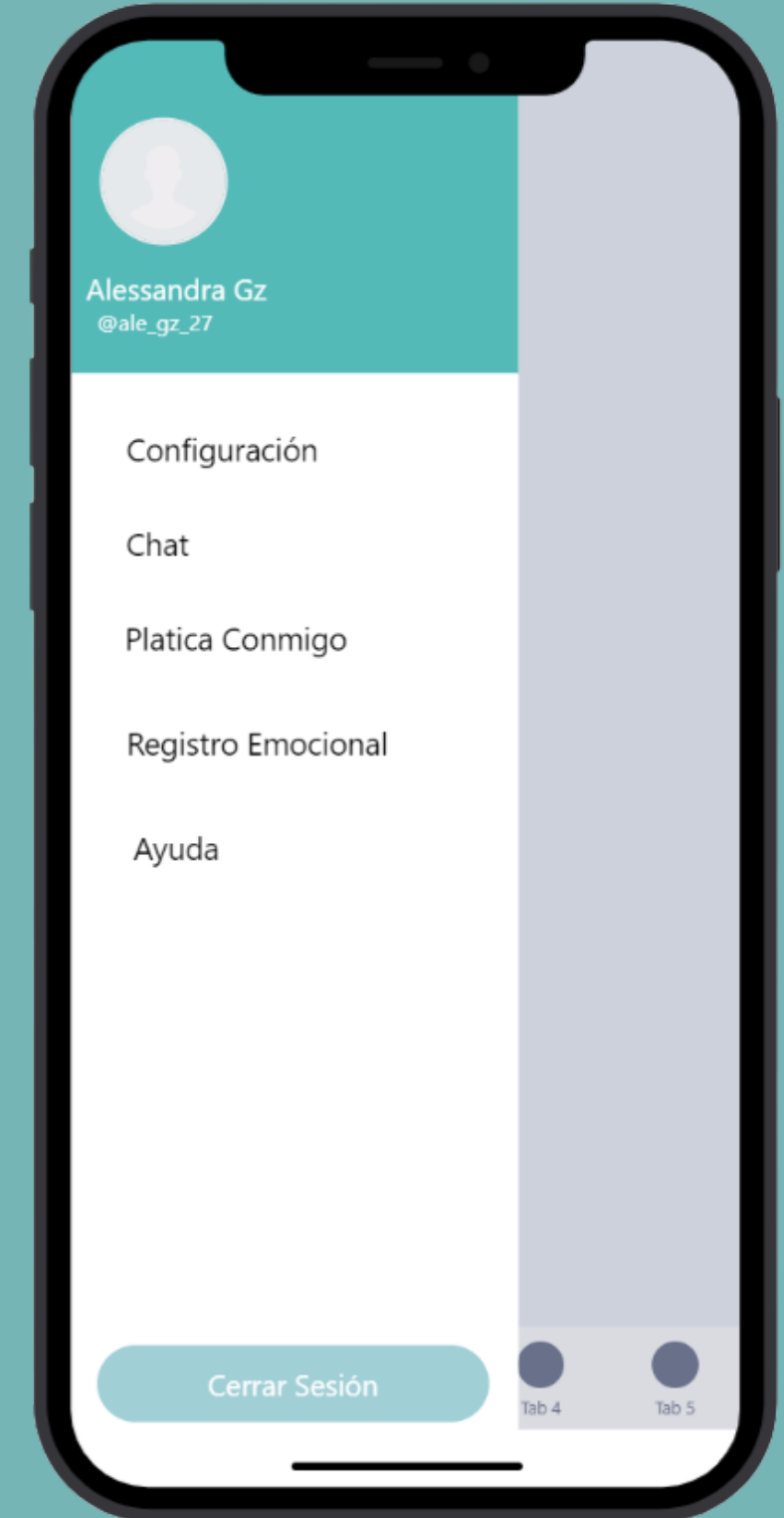
A Robot that will help you reduce your negative emotions and accompany in every situation.



# Parts of the Robot

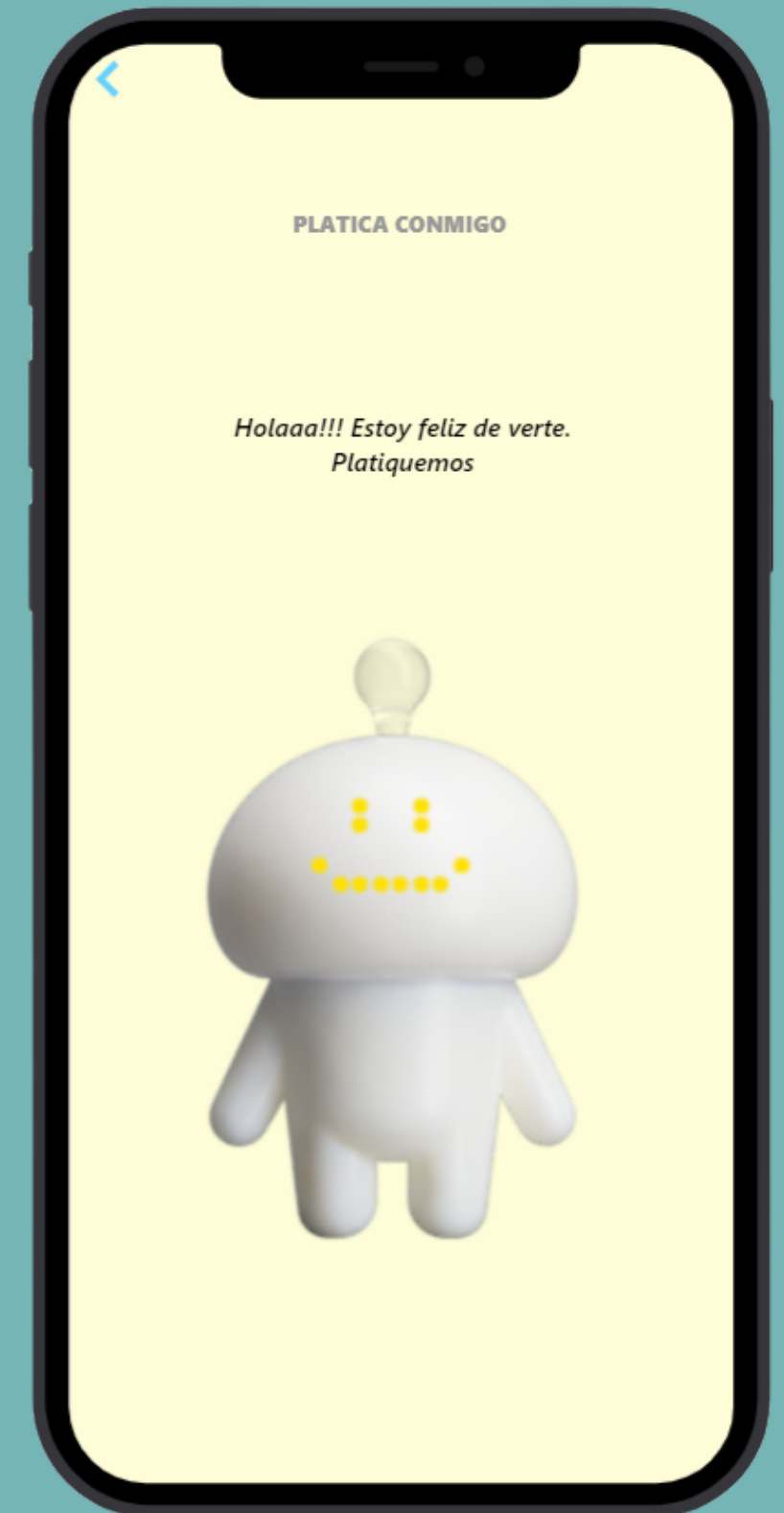
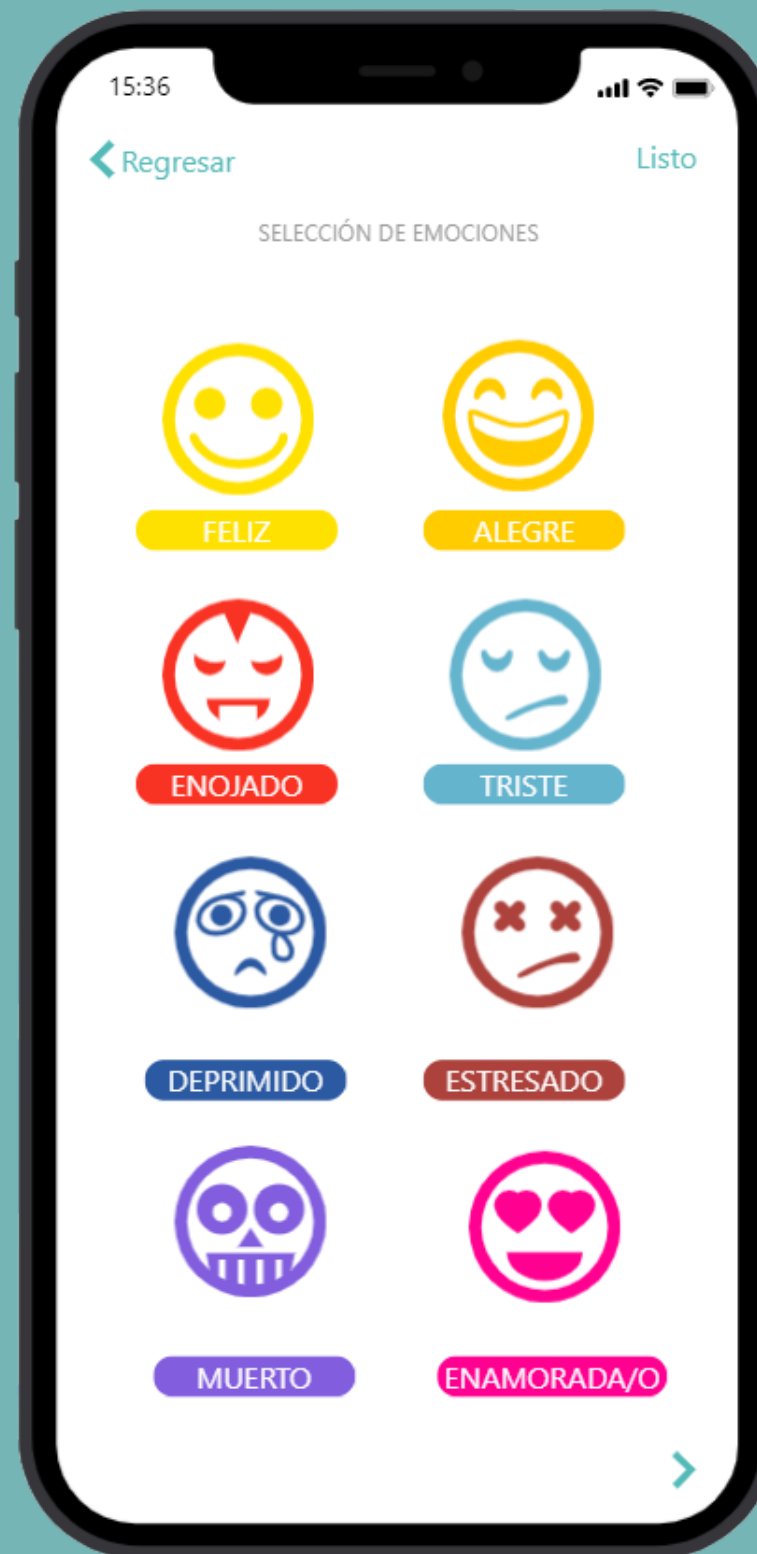
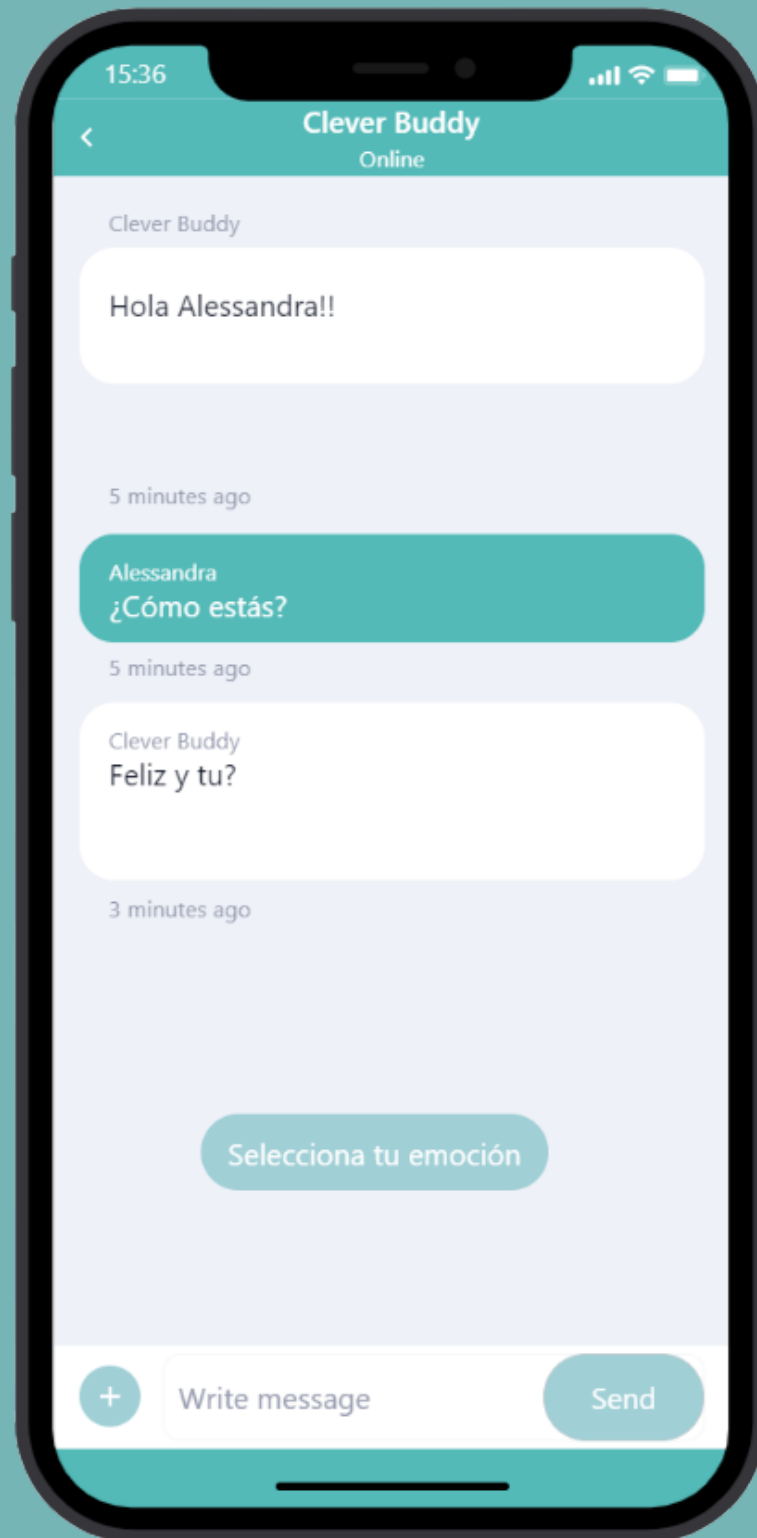


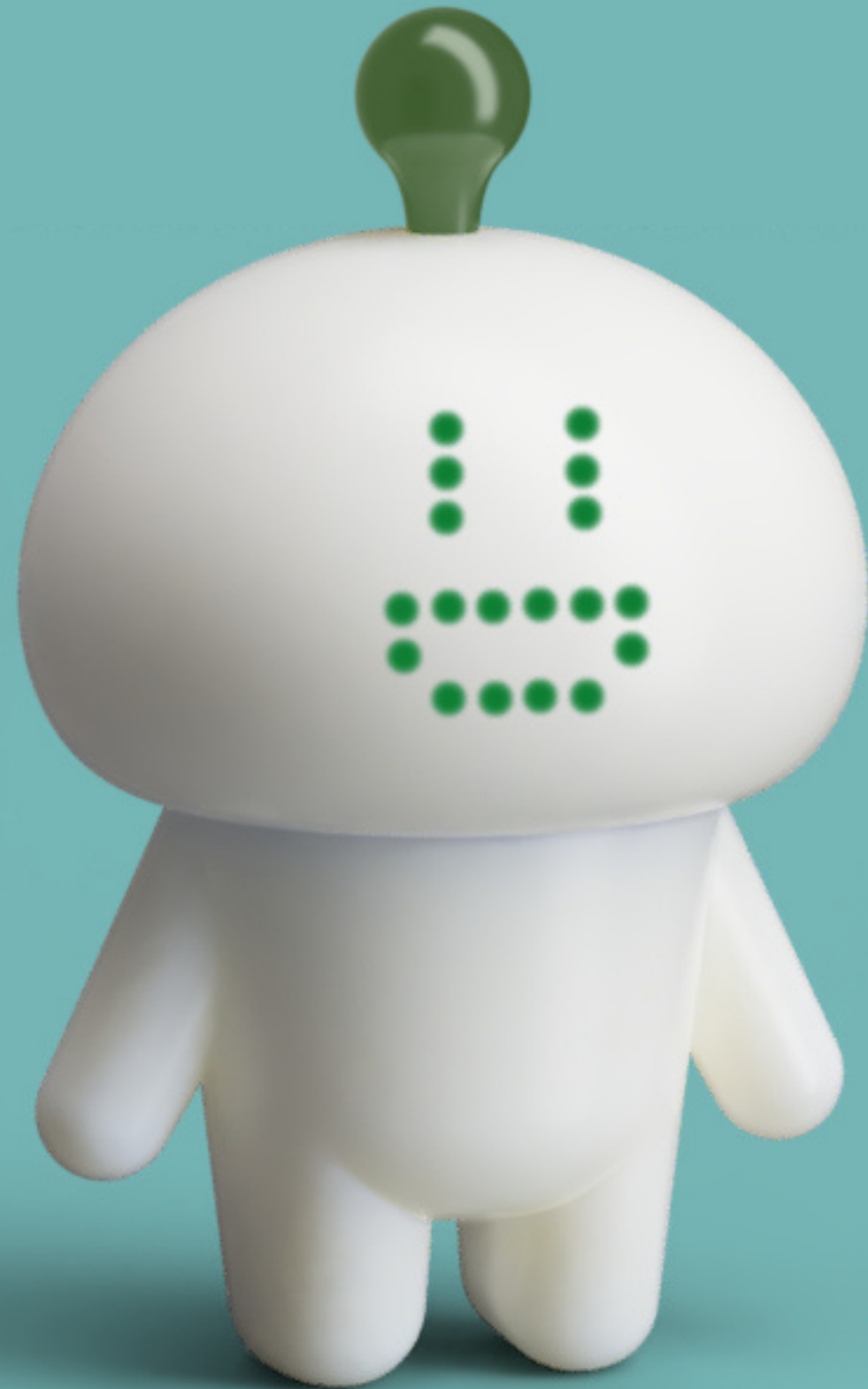
# Clever Buddy - App





# Clever Buddy - App





# Thanks!

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