

# Mellow Fellows - An Interactive Pet Caretaking App

Mark Griffin, Laila Hardisty, Parsa Hassani, Sadie Jones, & Alex Vallone

## Abstract

Our project, Mellow Fellows, began with the goal of tackling the challenge of mental health issues. We concentrated specifically on Major Depressive Disorder (MDD) because of the prevalence and severity of the illness in society today. By creating a relaxing, fun, and simple pet care video game, we hoped to use the positive effects of pet ownership as a way to provide stress-relief and support to those experiencing MDD. This video game was built in the Unity game engine and coded in C#, while custom art was created in Photoshop. Background research was conducted to figure out how to craft the game mechanics, aesthetics, and mood in such a way that they would reinforce our main goal. At the conclusion of our project, we had completed the basic framework and functionality of the game; we were also able to make a limited number of custom pixel art assets to be featured in the game. The project provides a solid foundation for further research into managing MDD as well as mental health problems as a whole, and it provides society with an easily accessible and usable method to help relieve their depressive symptoms.

## Methods

To create a solution for people suffering from MDD, we decided to first take a look at what elements were needed in the game to help target depression specifically. The results we came up with is that the game:

- Must be relaxing as to not induce more stress to the user
- Create relief from causes of stress around the users daily life
- Find specific game mechanics that would help with stress and depression

From these criteria, we decided that a game where the user would take care of a virtual pet would be best to meet all the points and help with stress and depression. A virtual pet would help alleviate anxiety and stress, while not having any specific goals or point system would help the user go at their own pace in how they wanted to take care of their pet. Including real-life animals instead of imaginary pets also helped ground them and help them interact with something familiar.

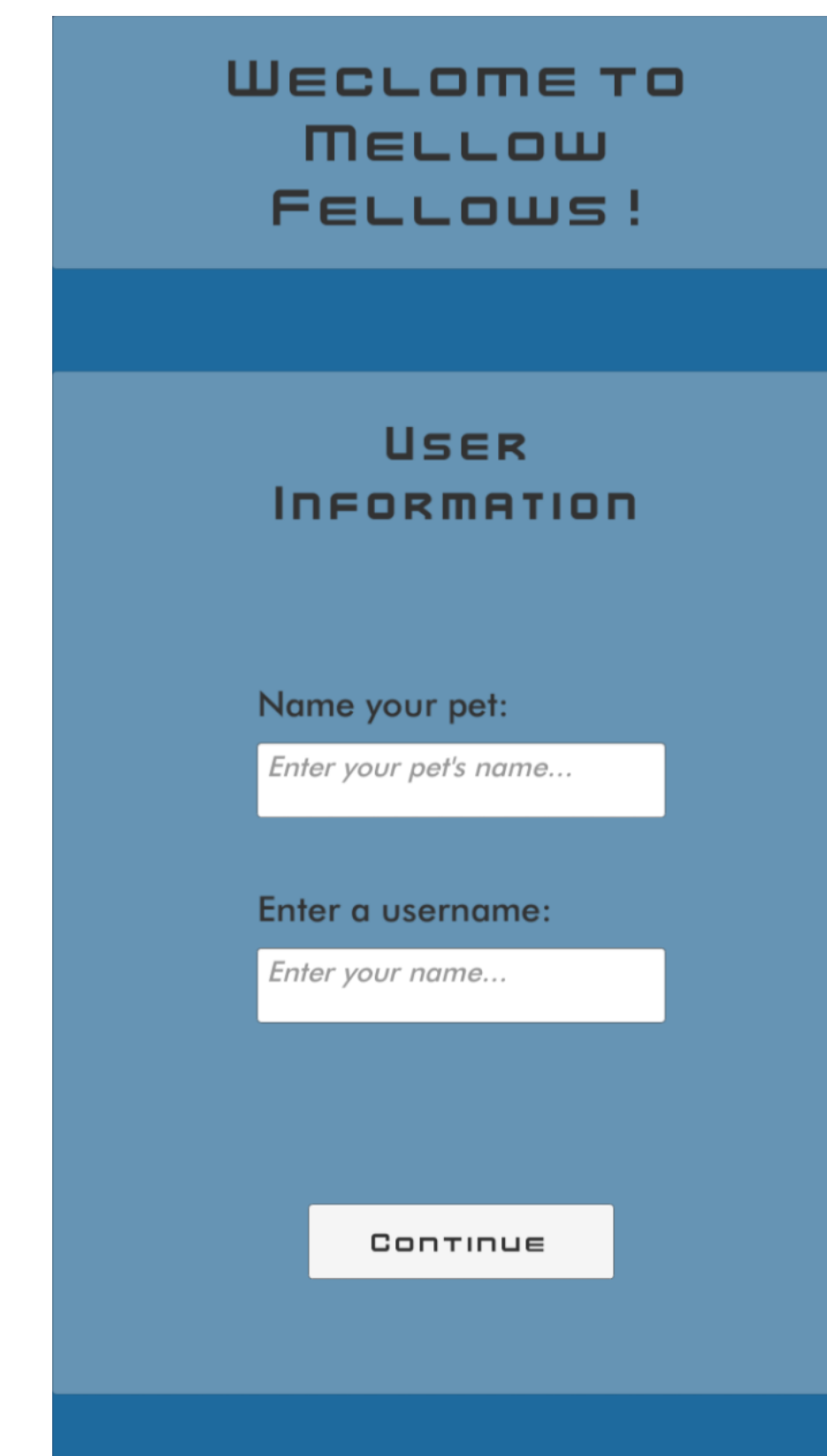
## Acknowledgements

We would like to thank Dr. Thammavongsy for guiding us through this process and helping us discover how we would contribute to solving Major Depressive Disorder.

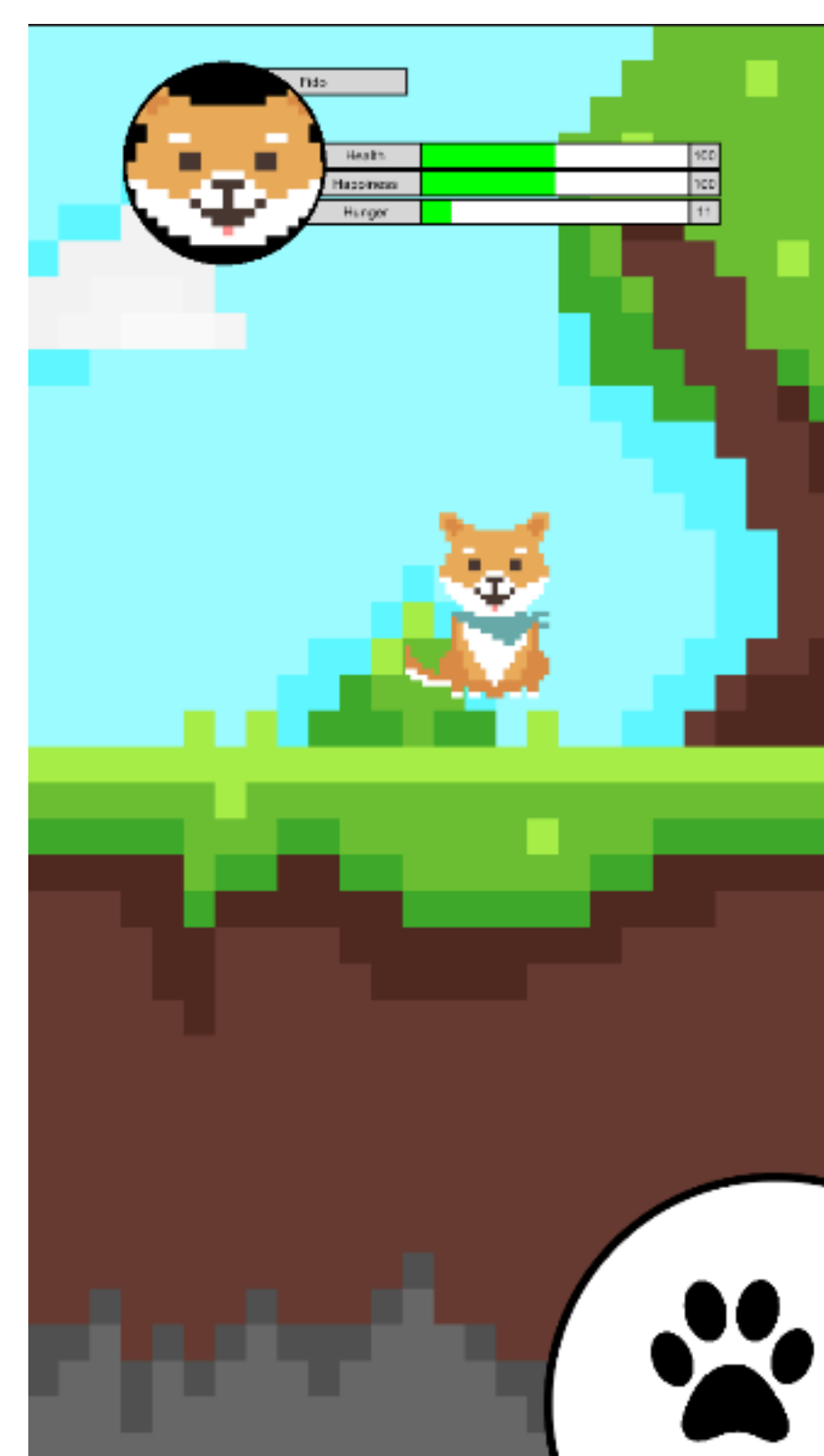
## Results



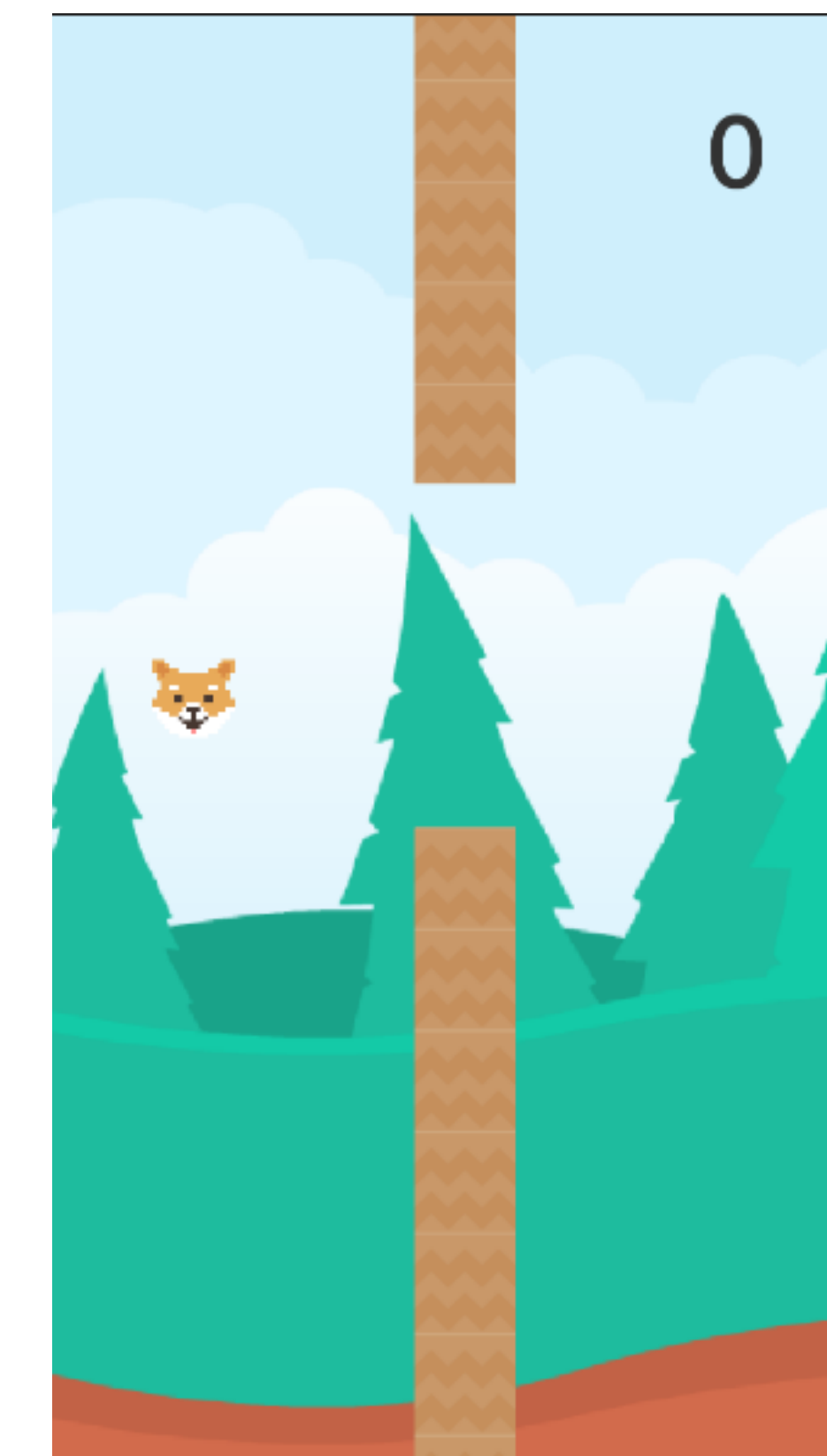
The character creation screen launched on first startup



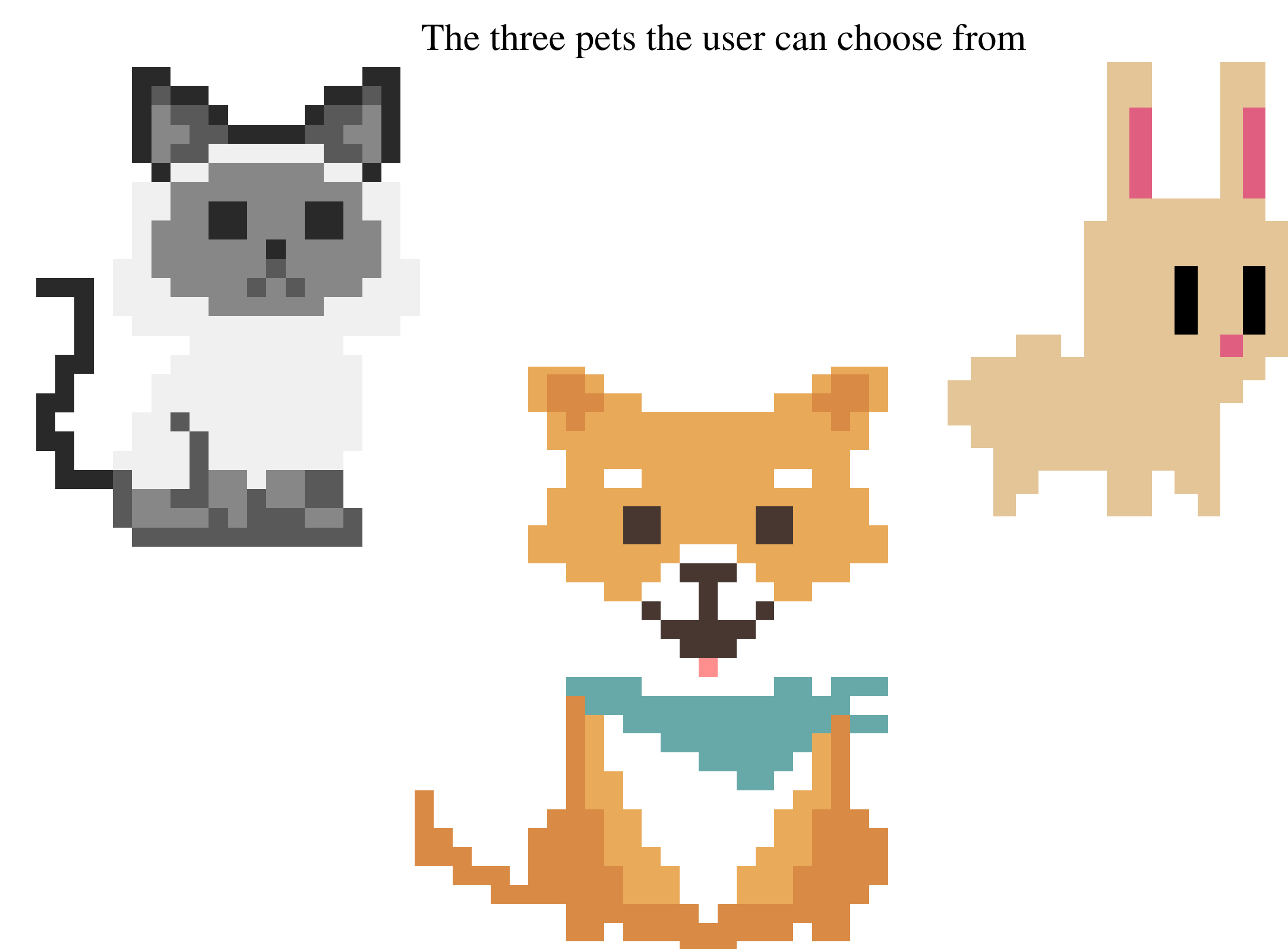
Second page of character creation where the user name's their pet



The playground where the user can select many options



A minigame where the user can play with their pet



The three pets the user can choose from

## Introduction

Through our research, we have realized that there are many barriers to receiving treatment for depression, and those who can receive treatment may not engage with it or drop out. We created a casual video game to help alleviate some of the symptoms that are caused by depression. It has been found that playing casual video games can reduce depressive symptoms and create significant improvements in mood (Pine et al. 2020). Our game is centered around a pet, as studies have shown that pet ownership helps increase people's well-being (Kamimura et al. 2020). This game will positively affect a person's day-to-day life by boosting their mood and providing additional support to those suffering from depression.

## Conclusion

Our group has run through many different ideas concerning our approach to the grand challenge of MDD, including diagnosing MDD through AI, and tracking symptoms through an app. What finally brought us to the project we are at now is our motivation to take a more lighthearted approach, using a platform that our entire group is experienced at using. Given the difficult situation that students have been put in during COVID-19, our group struggled with achieving the necessary results and completing our game to the extent of which we originally planned. However, we believe that we've created a great foundation of grounded research, ideas, and a project that can be further implemented by a GCI group in the future that desires to take a similar approach to helping anxiety and stress to how we have.

## Literature Cited

Kamimura, et al. 2020. "Dog and Cat Ownership Predicts Adolescents' Mental Well-Being: A Population-Based Longitudinal Study." *International Journal of Environmental Research and Public Health* 17 (3): 884. <https://doi.org/10.3390/ijerph17030884>.

Pine R, Fleming T, McCallum S, Sutcliffe K. 2020. The Effects of Casual Videogames on Anxiety, Depression, Stress, and Low Mood: A Systematic Review. *Games for Health Journal*. 9(4):255–264. doi:10.1089/g4h.2019.0132.