

Unity

1. Overview

We created an app that tracks a person's steps and gives them something to work towards as they go about their day. Our app, named Unity, seeks to unite you, the user, with the environment around you. Going outside, exploring, and getting exercise are the core pillars of what our app and our team stands for. An avatar store allows you to purchase little customisations for your profile. In the future we may seek to implement a way for users to look back on previous days and reminisce on simpler times via a camera feature.

2. Goals

- a. Implement a map based on geolocations and movement. As our app is based around self-discovery and external stimulation, an integral part of that is understanding the environment around us.
 - i. Steps counter that updates in real time
- b. Healthkit integration allows us to track a user's progress in a concrete way. As human beings we cannot solely be driven by our feelings and spirit. Our world is governed by logic and numbers and these steps allow us to understand and relate how much we have explored outside. The steps allow us to assign points to our users so that they can spend them on avatars and customizations for their profile.
 - i. Steps are used as currency for purchasing. It is a 1:1 conversion.
- c. Notifications have been added to remind you to get up and move.
- d. Achievements are added to allow for concrete tracking and extra motivation to use our app and continue to get outside.

- i. They will show up in the profile
- e. Dark mode allows us to make our application more bearable to look at during low light situations.

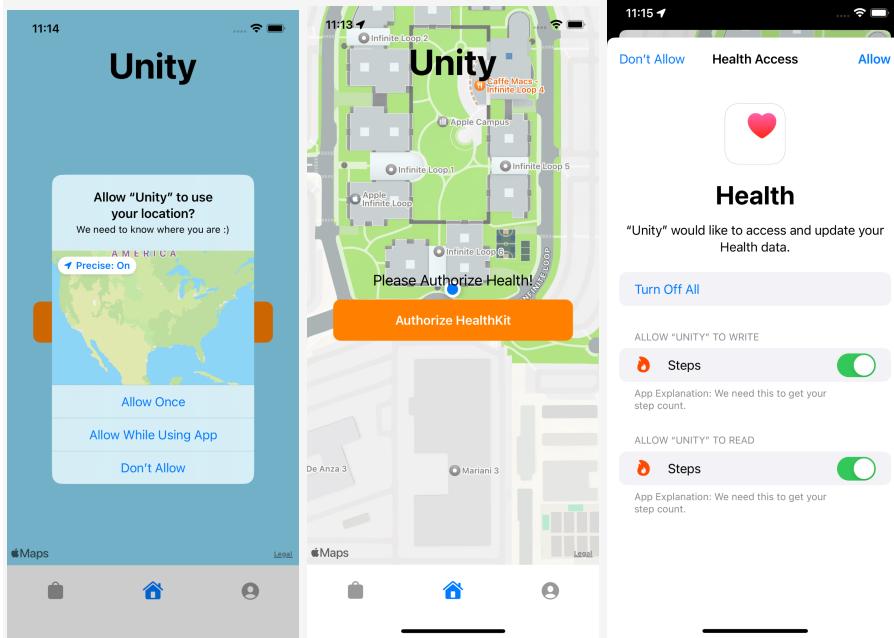
How did we collaborate and distribute the work?

- For the UI we did a lot of pair programming in person. Sam and Isaac implemented most of the base UI for the application. For the design we all got together in person and played around with the app and figma designs till we liked it.
- Sam added the map, store, and profile screen. Isaac did some of the achievement coding.
- Mathew worked on styling and implementing some of the buttons and screens of the app. In addition, he integrated the healthkit into the app.
- Nathan worked on implementing the Notifications and finding UI for the store.

Challenges we faced:

- Figuring out how to use the camera proved too challenging so we had to scale down and simplify our original plan to just track our location and count steps.
- At first it was difficult to do realtime tracking, but we fixed this by tying our step count to location change as well as healthkit input.
- Art for the avatar store was difficult to create so we opted for just placeholders from SF symbols.
- A social network aspect with friends, posts, etc was way too ambitious but could be a direction for this app in the future.

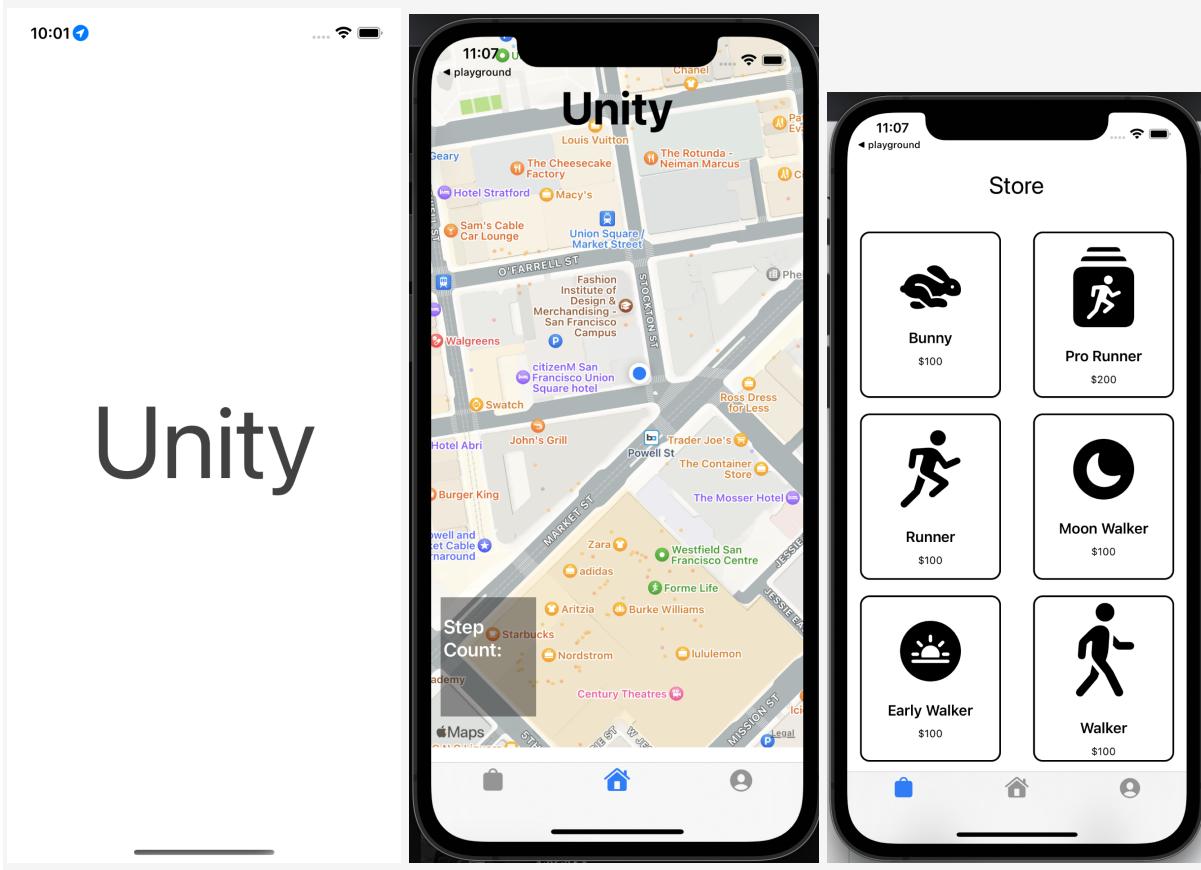
Walkthrough



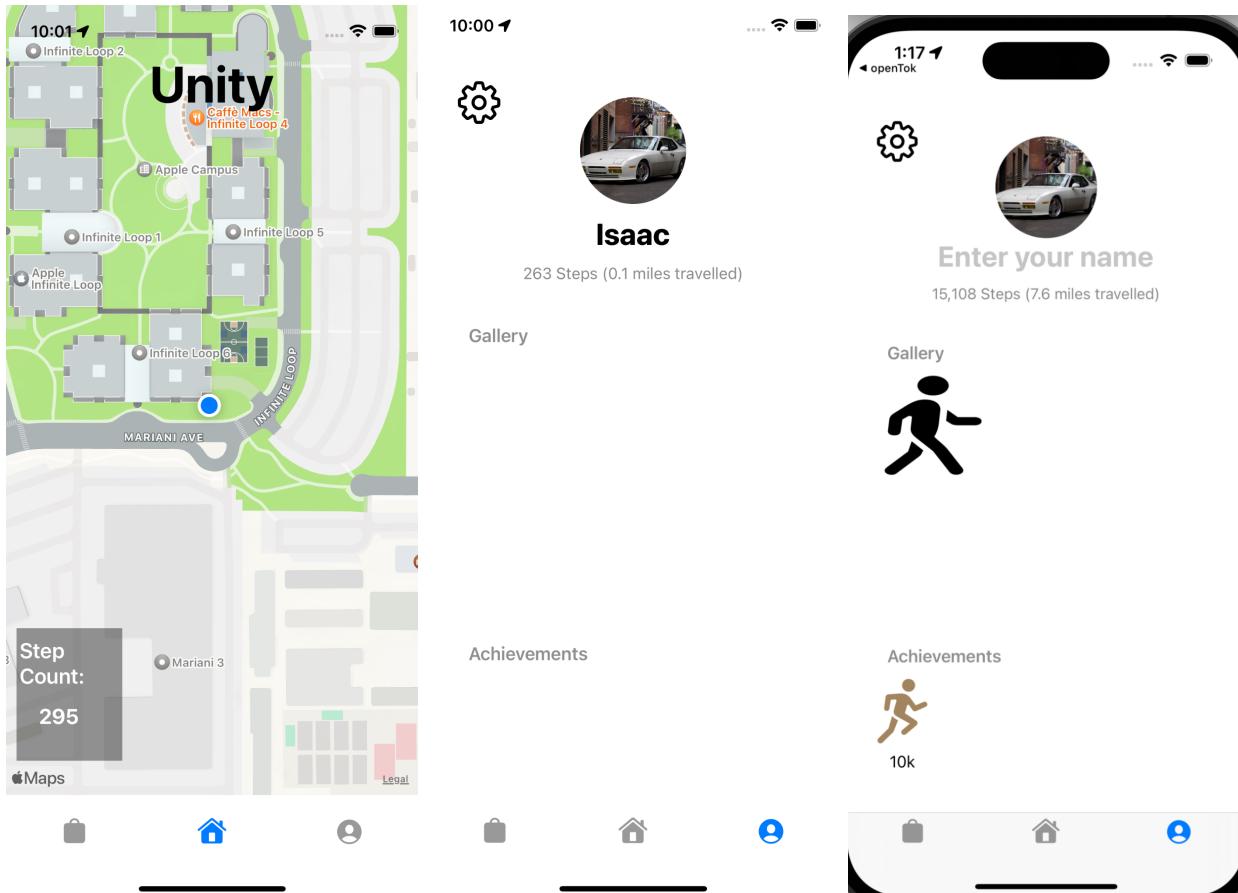
Splash Screen

Map Screen

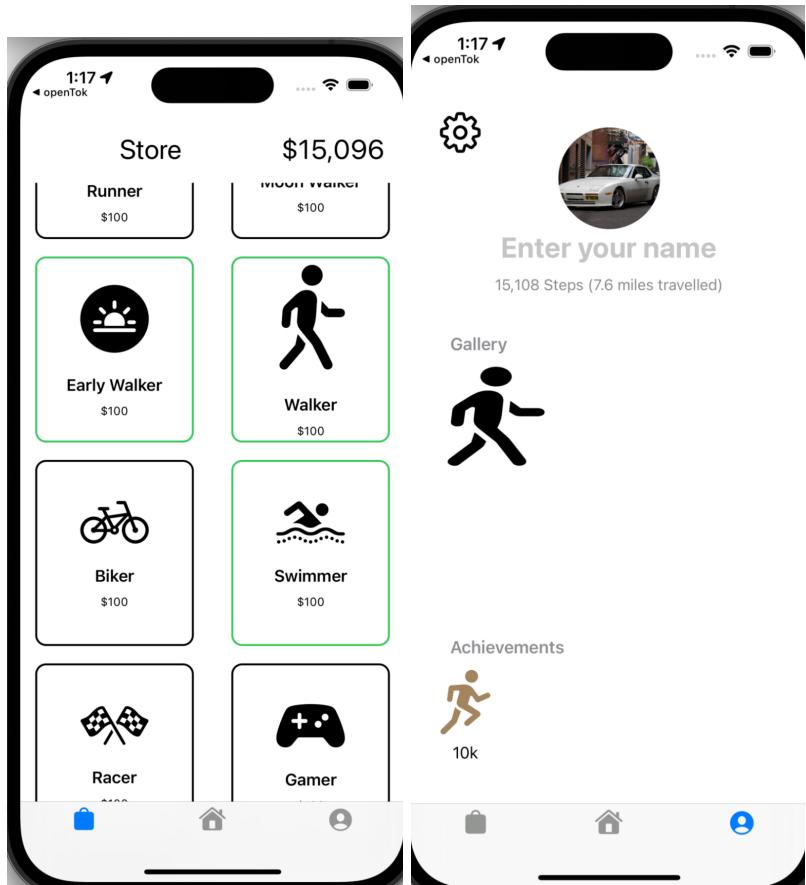
Store Screen



- Upon first starting the app, You will be greeted with three popups. One to enable location services, two to create notifications that are defaulted to show up in the morning, and three one to help you authorize healthkit to allow our app to track your current progress to get you off on the right foot!
- Upon opening the app, you are greeted with a splash screen that says the title of our app which gradually fades into the map screen.
- This Map screen tracks your steps and allows you to see your progress as you move about your daily life. Once milestones are reached, a badge is rewarded.
(In the simulator, please set location to use city bike ride to see the steps)
- There is also the profile on the bottom right which displays achievements and bought items from the store. Users can also customize their name here.

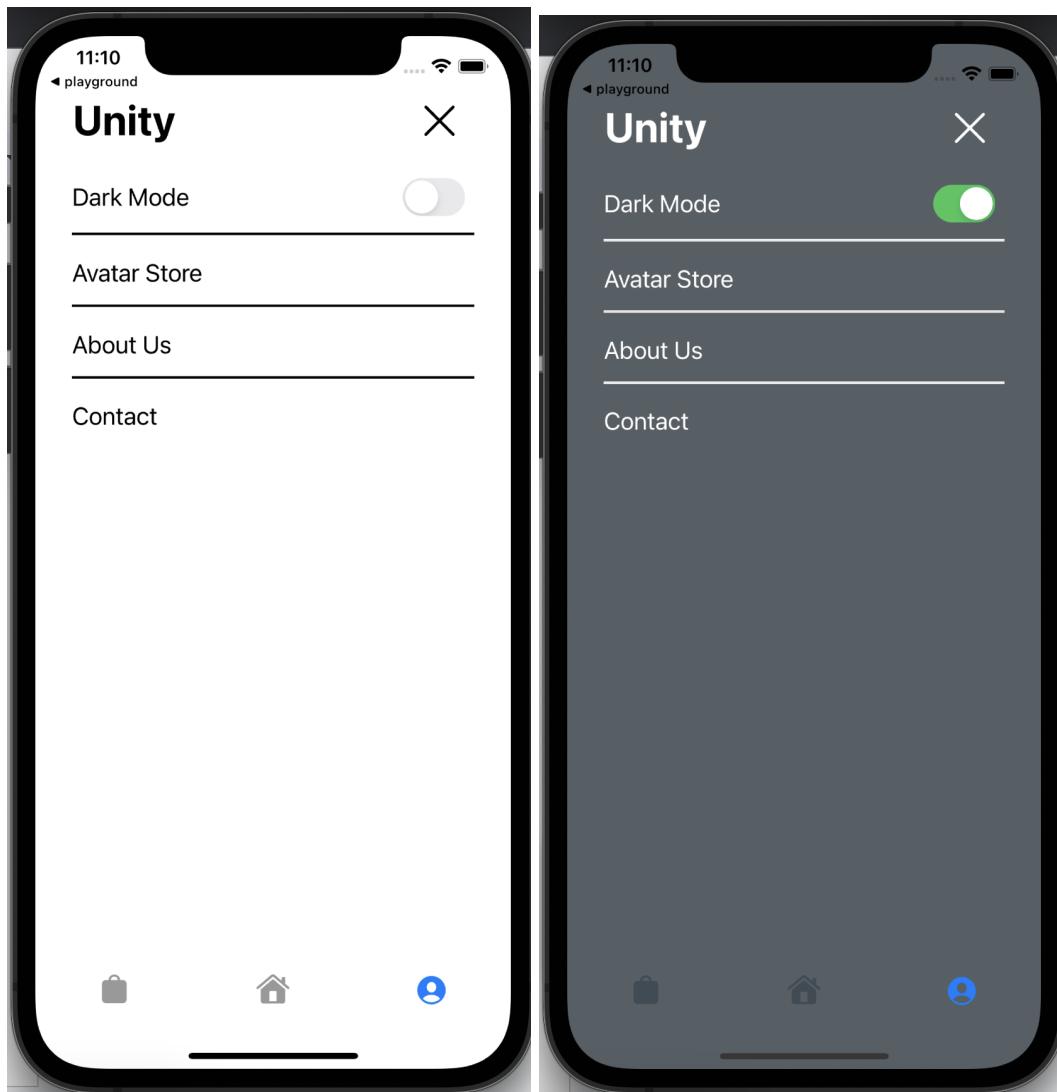


5. Our store view provides a cool little store that allows you to buy little icons for your gallery in your profile. A purchased item becomes green and a non-purchased item stays black. Once the item is purchased, it will show up in the gallery.



- 6.

6. From the settings gear cog on our profile view, we can change to Dark Mode which changes the look of all our other screens, visit the avatar store from before, learn more about us, or contact us.



How our Project Changed As We Worked And Going Forward...

Our initial concept was an active lifestyle social networking app that would connect users and allow users to share custom avatars, posts and their achievements. A map was supposed to be incorporated to allow for people to track their locations, see their friends, visit landmarks, and take pictures to post about those locations. Our initial vision had users make posts and take steps to earn a set number of currency which they could redeem to give new outfits, hats, and accessories to their profile's custom avatar. From their profile, people can view their friends' posts and interact with people. This was supposed to be something like snapchat but with an emphasis on snapchat's location-based stories.

Of course, plans change and there are features we figured out were too hard to implement. Early on, we realize that none of us really have much artistic talent. We opted to use the SF symbols as a placeholder for our graphics. We turned our custom avatar system into a symbols collection 'minigame'. This change allowed us to focus more on the basic functionality of our application and its features that we wanted to showcase in our final submission.

Early on, Nathan suggested that we incorporate notifications to our app to remind users to log in and interact with the app. We threw that into our project and had the notification pop up at 8:30am everyday. This became a minimal goal for us. Another goal we figured out early on was location tracking. Just like in bikeride, we needed a way to find the user's location and act accordingly. Isaac implemented some functionalities of the map and its inner workings to track the user. Because of the simulator environment, the location had some weird functionalities and was a little awkward to use to track location. We figured out how to test our functionality by setting the location to run a bike ride or a city run to help us track our location.

A stretch goal we had was the integration of HealthKit. It seemed like a fitting concept to use since it was not discussed in class but is quite necessary for a healthy lifestyle centered application. Sam implemented the HealthKit stuff and got it to read and write steps to our health app. Of course, with the simulator, we ran into a couple hiccups such as the app not reading correctly, or the app not tracking steps in realtime, but we solved this by setting our app to read our daily step value, add to it from the app, and track within the app to get us steps to see in real time based on location.

At this point, Matthew started to work on the profile and implemented a settings page that utilized dark mode and various tabs to switch between different views. In addition, the profile contained a username that could be edited, a gallery of posts, and a list of achievements. This was the beginning of the user profile, the part of our project that changed the most significantly.

While working on the profiles and the camera for picture functionality, we realized that this might be too much to put into our app in so little time so we scrapped the camera, posts, and social media functionality. We opted for a simple app that is meant to be isolated and focused on simply personal goals and motivators. We kept the avatar store and the initial idea, but we changed the gallery to display items you've purchased. Around this same time, we implemented achievement earning based on the number of steps taken. This was about all we could do with the time we had here in this class.

Even though we had to change a lot of our project, I feel our app is adequate in showcasing direction and promise going forward. Our app has the basic functionalities down and has a lot that can be built upon. One big thing we would like to implement in the future is the ability to integrate with firebase to save photos, interact with other profiles, and upload to the database. Within that social media space, adding friends making posts and creating location stories is a major direction that our app could take in

the future. Our avatar store is just a collection of little placeholder symbols right now, but we foresaw a proper avatar system with fully customizable characters for people to express themselves. This concept was inspired by bitmoji and would allow users to be motivated by cool skins, themes, and outfits they can put on their profile. This avatar system could also be implemented into the map allowing users to see their avatar walking on a 3D style map. An overall app theme is something that could be implemented too. A really nice way to personalize this app could be a good motivator to use the app everyday. These would also be purchased from the store. Currently, we only have 3 achievements, 10k, 20k, and 30k steps. We would like to add other achievements that are location based, weather based, and easter egg style achievements for doing a special action (such as hitting the settings 5 times).

Our project changed a lot as we worked on it, but our core fundamental ideas for our app never changed. Our vision for our app was to create a motivator for people to get out there and move. Even though we had to cut a couple of cool features out, we are all still proud of what we've learned and what we've built together. Just as we seek to unite users to their environments, we sought to unite ourselves together through the bonds of friendship and passion to create a neat little app that represents a labor of teamwork. That is our app, that is Unity.