

A group of five hikers is seen from behind, walking along a dirt trail in a rugged, mountainous landscape. The hiker in the foreground on the left is wearing a blue Gregory backpack and camouflage shorts. The hiker next to them is wearing a green backpack and a tan hat. The hiker in the center is wearing a black backpack and brown shorts. The hiker next to them is wearing a green backpack and tan shorts. The hiker on the far right is wearing a blue backpack and tan shorts. The background features large, dark, rocky cliffs under a clear sky.

# Wanderlust

community hiker guide

# Target users and the problem they are facing

- Hikers
  - beginners - experts
  - teenager - older people
  - so basically every kind of hiker
- absence of hiking community
- no access to information about hiking
- takes as lot of time to plan by yourself



# The key solution idea to tackle the problem

Hiking community application:

- Map with with crowdsourced information
  - Route is shown on the map
  - Extra information is shown via pins on the map
- Overview of the routes with pictures and ratings from users.
- Anybody can add routes
- Adding routes is easy due to GPS



# System Architecture



# Flutter

- Open source, cross platform [app framework](#)
- Makes UI implementations easier
- Uses Dart which is similar to Java



# Google Maps

- Free
- Unlimited amount of users
- Plugin for Flutter exists



# Database

We are using different Google Firebase products:

- Authentication for the user system
- Cloud Firestore as Database
- Storage for saving pictures



# Firebase Authentication

🔍 Nach E-Mail-Adresse, Telefonnummer oder Nutzer-UID suchen

Nutzer hinzufügen



Bezeichner	Anbieter	Erstellt	Angemeldet	Nutzer-UID ↑
testuserpinh@test.com		05.12.2019	05.12.2019	3Cqq4oO3u1hFmNpCKEhP30hYB...
di@di.se		08.12.2019	09.12.2019	9VpxLRLlJJPa0s99EariraREgWj2
test@test.test		05.12.2019	05.12.2019	DaRyTy2pDOVma3v4Tx1EKk93po73
e.johansson@zoho.com		22.11.2019	03.12.2019	SySseC1JFpeZFvGo2doT5u6kek1
test@test2.test2		05.12.2019	05.12.2019	VA1DNnkZMvaqzLo8asOfL93tC6K2
testdouble@close.com		07.12.2019	07.12.2019	bYaal01AOvUKHkdoXKYotjWSIPn2
test@test.de		05.12.2019	05.12.2019	buJBBOs5PSTFqpAfpDKQgWxecq...



# Firestore


The screenshot displays the Wanderlust application interface. At the top, a breadcrumb trail shows the navigation path: Home > hike > 2K9P3VCSTiHi... Below this, the interface is divided into three main sections. The left section, titled 'wanderlust-a2dd4', shows a list of collections: 'hike' (selected), 'pin', 'route', and 'user'. The middle section, titled 'hike', shows a list of hikes: '2K9P3VCSTiHimkWFcYwt' (selected), '3gASWgGdu5yPfG2NeKZt', '4LejSFGpYQYqSahN8pT', '8Ha4fsr6BvQzMUPw0BJP', 'AYweRQjktDN85odjYU2m', 'C6omfK2kQ0EanToKfIEG', 'EgIbbPYTSQyQELD2q0Qr', and 'GRN10UuEtkVy999E4yym'. The right section, titled '2K9P3VCSTiHimkWFcYwt', shows the details of the selected hike. It includes a 'Sammlung erstellen' button, a 'Feld hinzufügen' button, and a form with fields for 'hikeID' (set to '2K9P3VCSTiHimkWFcYwt'), 'location' (set to '0'), 'latitude' (set to '37.4219983'), and 'longitude' (set to '-122.084').

# Firebase Storage

 gs://wanderlust-a2dd4.appspot.com 

 Datei hochladen



<input type="checkbox"/>	Name	Größe	Typ	Letzte Änderung
<input type="checkbox"/>	 Hike_Pictures/	—	Ordner	—
<input type="checkbox"/>	 profile_picture/	—	Ordner	—

# Technical Challenges

- All the setting up (Google Maps API, Firebase)
- Retrieving useful data from a set of GPS points

# Project Management



# Scope

- Integrated Map to show route path and extra information ✓
- User System ( ✓ )
  - System for signing up and logging in ✓
  - Rating routes ✓
  - Commenting on routes ✗
- Database for storing route information ✓
- Possibility to use the app offline ✗



# Roles

Two Teams:

UI Team:

- Andre, Dimitri

Backend Team:

- Dowon, Emil, Jonas

# Timeline

Week 1-4 (16.9-13.10): Setting up Google Maps, getting to know Flutter, first UI prototype

Week 5 (14.10-20.10) Working out Data Models

Week 6-7 (21.10-3.11) Connecting Google Firebase on different branch, first prototype of recording route with GPS

Week 8 (4.11-10.11) UI updates (image picker, hike history), merge database and UI branch

Week 9 (11.11-24.11) Added User System (UI and Database)

Week 11-12 (25.11-8.12) Major and Minor bug fixes

# What we learned

- Setting progressive goals was a good idea
- There is a lot of (mostly) free tools to help build an app



# Presentation

# What do hikers want?

Follow the route recommended by others!

Create a new route and try it!

Just start hiking without a concrete plan



# Follow others!

Discover



Filter



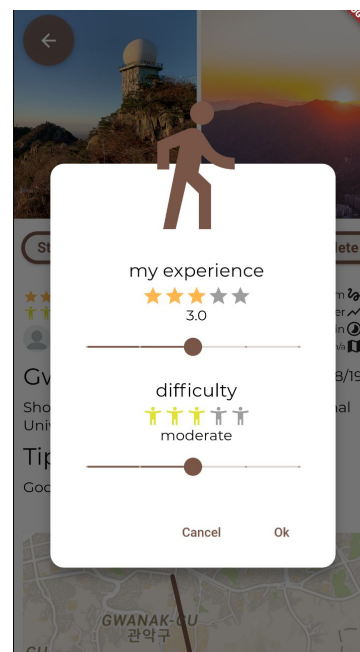
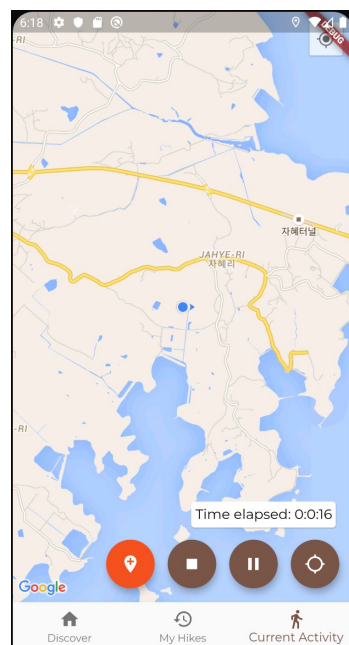
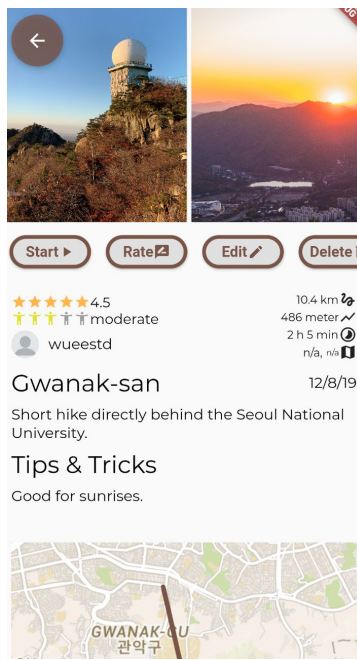
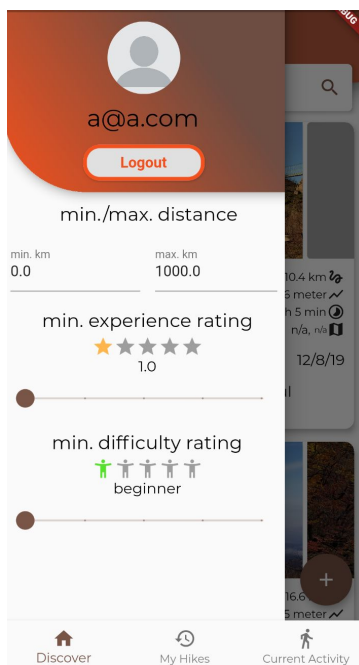
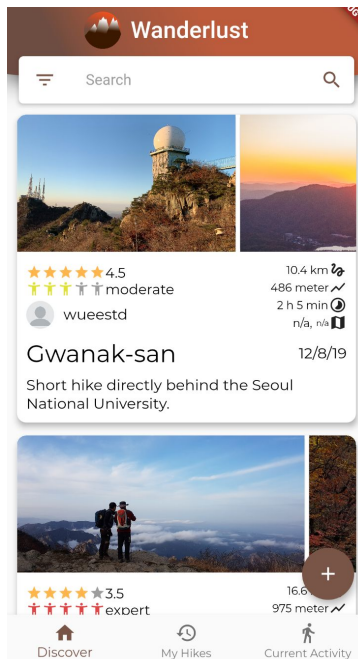
Route info



Hike!



Rate



# Create a new route!

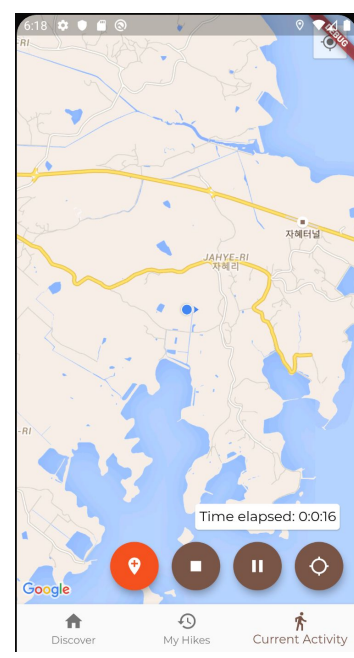
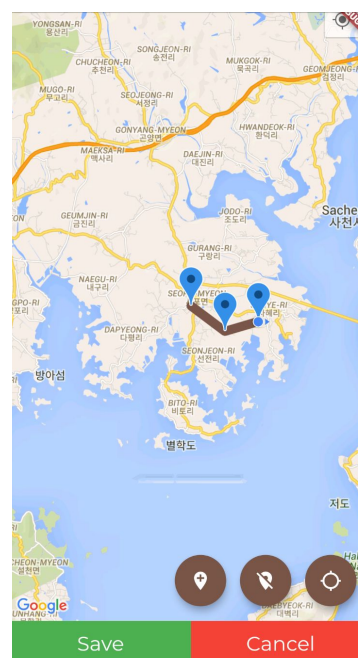
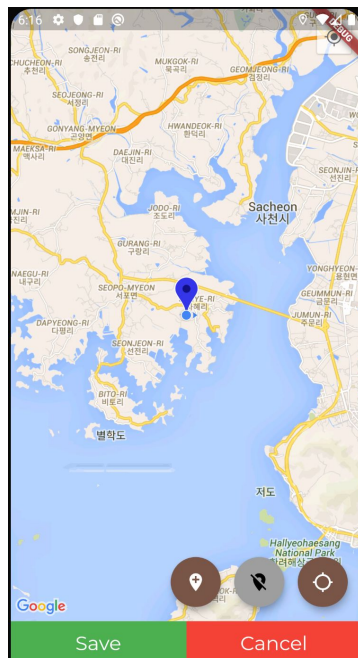
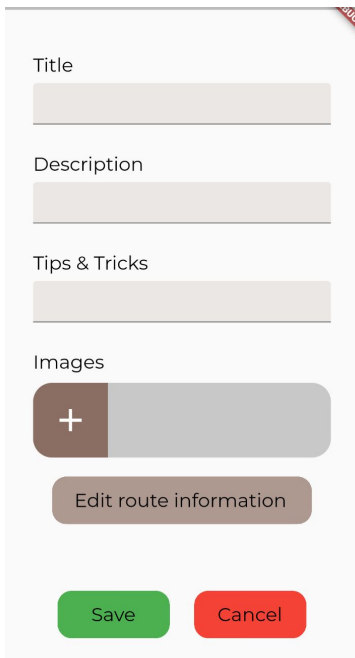
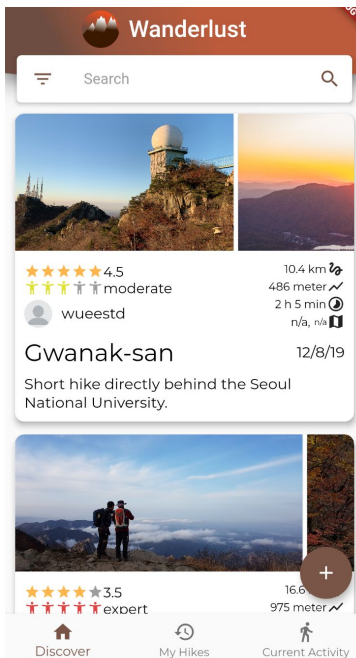
Discover



Create a new route



Hike!



# Just start hiking!

Current Activity



Hike!



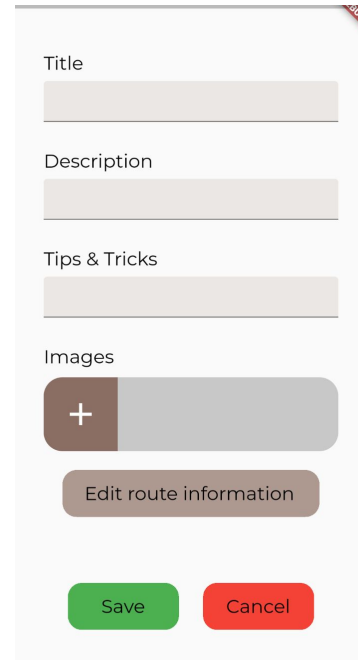
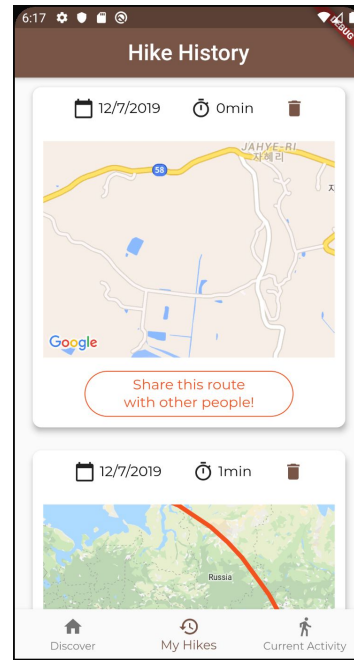
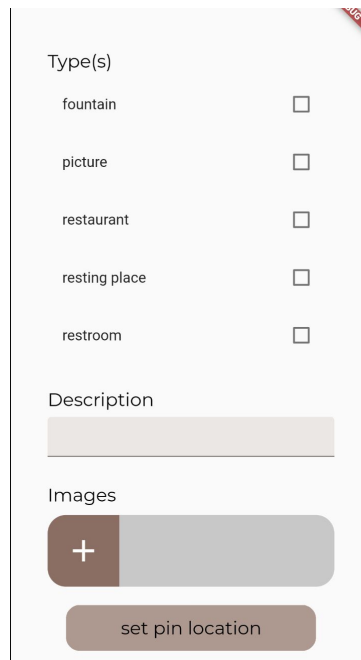
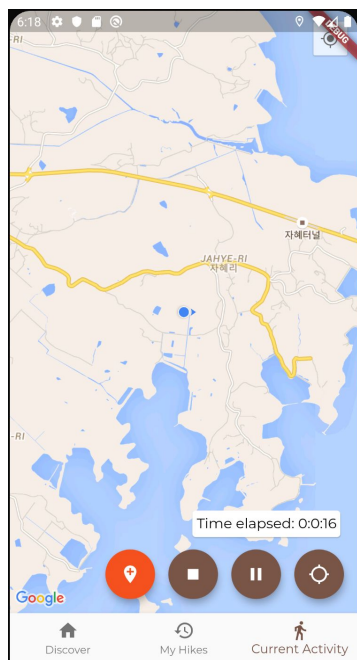
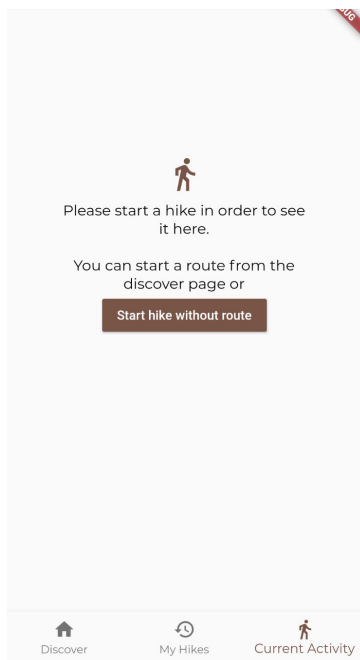
Add pins



Hike history



Share!



A pair of brown leather boots with laces is placed on a weathered log in the foreground. In the background, a waterfall cascades over mossy rocks in a lush, green forest. The scene is dimly lit, with sunlight filtering through the trees, creating a serene and natural atmosphere.

# Q&A

Thank you for listening!