

Globe Notes

Globe Notes is an app that lets users add notes based on their current location, and explore other notes added around the world either in a map or as a list.

Approach taken

The app is built using a simple MVP (model-view-presenter) architecture, where the presenter is responsible for most of the business logic as well as the navigation. To scale this app, a coordinator pattern could be introduced as further separation of concerns and easier testing.

The app is built using a protocol oriented approach.

Time allocation

The app is built part time over 6 days while also working full time as an iOS developer. The estimated time allocations for the different aspects of the app is as follows:

- Setting up Firebase as a backend: 2 hours
- Setting up and planning the architecture / design approach: 2 hours
- Setting up managers and service layer: 3 hours
- Setting up the ViewControllers: 6 hours
- Setting up the Presenters: 5 hours
- Setting up the UI: 3 hours
- Setting up Unit and UI tests: 2 hours

Total estimated time spent: 23 hours

Technologies used

- Swift (Main language used to build the app.)
- Firebase (Backend)

Known issues

- Delete button has no functionality yet
- UI feedback of bad formatting of email / password not implemented yet
- Extremely slow or disabled network is not handled
- Apple's rate on geolocate requests are time limited, meaning if a user is to navigate back and forth between the home screen and the details screen, the location of the note (city and country) might not be able to be fetched. From Apple's documentation on the subject:

Geocoding requests are rate-limited for each app, so making too many requests in a short period of time may cause some of the requests to fail. When the maximum rate is exceeded, the geocoder passes an error object with the value network to your completion handler.

<https://developer.apple.com/reference/corelocation/clgeocoder/1423621-reversegeocodelocation>

Future Improvements / Additions

- Add more unit tests
- Add end-to-end UI tests (screens are set up with UI-elements)
- Different method of injecting Presenters into ViewControllers to avoid global state
- Option to add photo to note
- Add Activity-Indicator
- Add refresh controller
- Add buttons to map to toggle between all/one note and center on location

User stories for MVP:

As a user (of the application) I can see my current location on a map

As a user I can save a short note at my current location

As a user I can see notes that I have saved at the location they were saved on the map

As a user I can see the location, text, and user-name of notes other users have saved

As a user I have the ability to search for a note based on contained text or user-name

Screenshots:

