

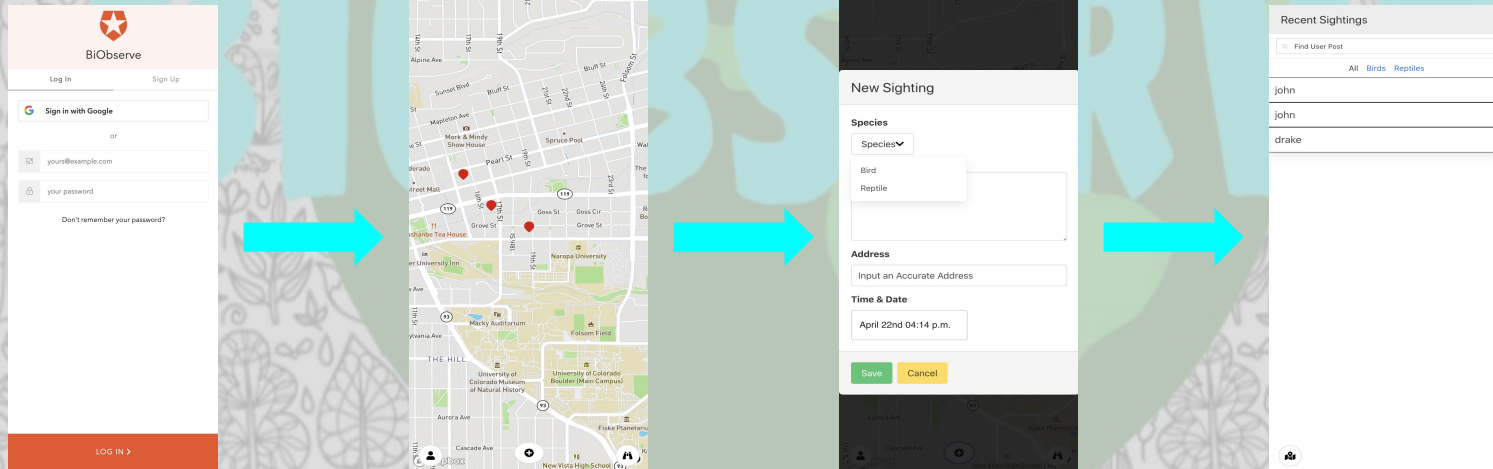


BIOBSERVE

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Project Overview

BiObserve is a web-based application used to connect outdoor enthusiasts by providing a platform to share sightings of plants and wildlife.



Logo

- Logo went through several iterations before arriving at a final design
- Transitioned from a text based design to a more icon based design to allow for more versatility within the application

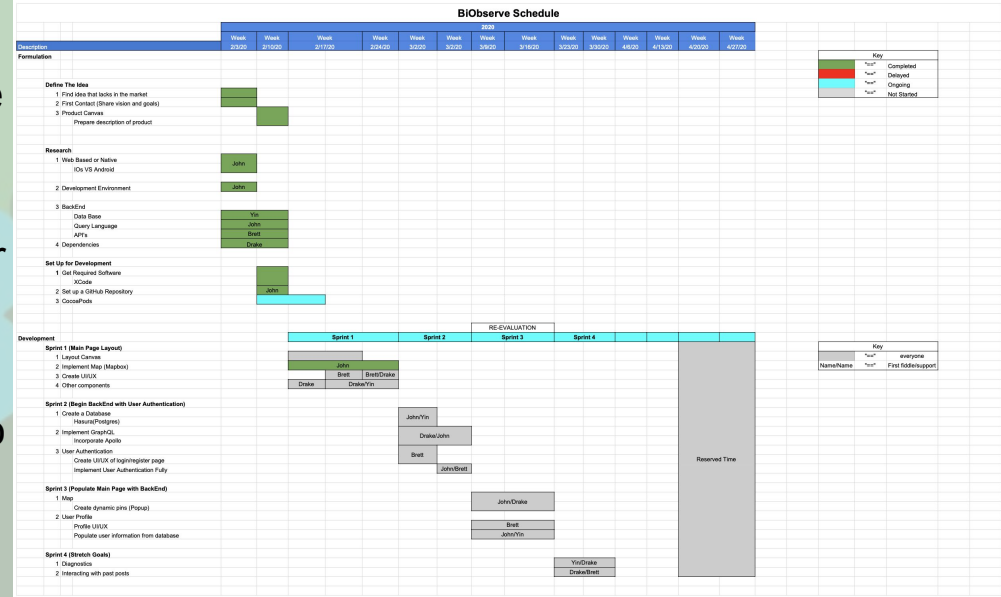
- Emphasises the crossover between “Bio” and “Observe” and reflects the overall purpose of the app
- Features the globe to represent its usage in documenting the outdoors
- Pin placed in Boulder to represent where the app was created

BIOBSERVE

BIO Sphere → **Biobserve**

Methodology

- Our team utilized an agile methodology throughout the course of the development process
- Using the agile method allowed us to go through many iterations of our product as opposed to not having a deliverable until the very end.
- Because of sprints, we were able to continually edit and change our deliverable as we adjusted to issues we faced.

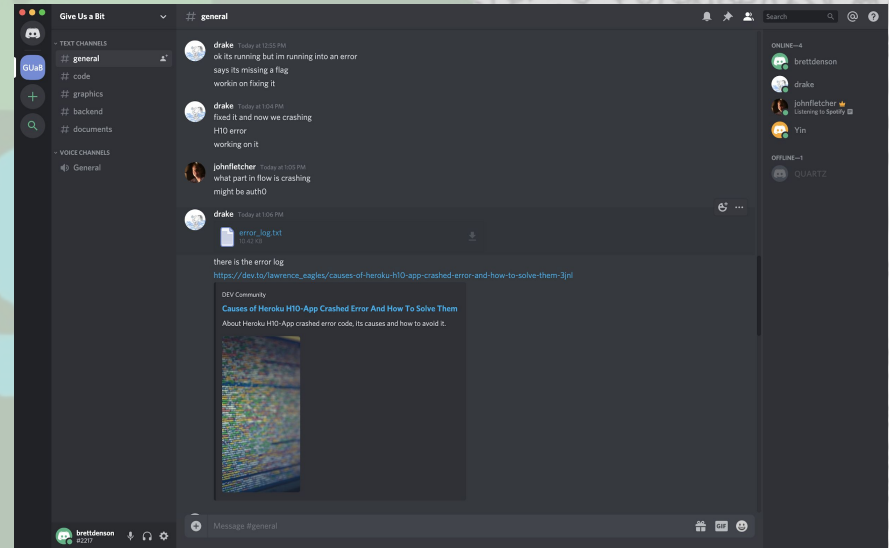


Usefulness Rating:



Project Tracker

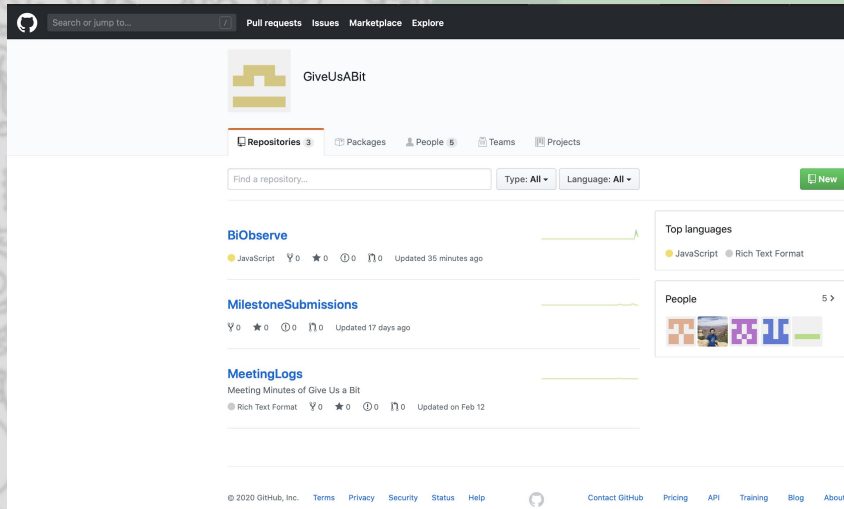
- Discord proved to be an invaluable resource to our team in the creation of our application
- To keep track of different aspects of the development process, we utilized different channels for the varying aspects, such as graphics, backend, etc.
- Constant communication was key throughout the process



Usefulness Rating:



VCS Repository



- GitHub acted as our VCS repository and allowed us a seamless way to share and organize our code
- Using GitHub, we were all able to access the code on our local machine, allowing us to test, view, and write into it

Usefulness Rating:



Database

Hasura

- Engine that connects to databases & microservices
- Auto-Generates production ready GraphQL backend

Heroku

- Two tables:
 - Users: Columns are name, email, id, and auth0 id
 - Posts: Columns are id, user_id, description, latitude, longitude, time, species, address
- One-Many relationship
 - A user can have multiple posts, but a post can only have one user

id	name	email	auth0_id	updated_at	posts
86	brde9893	brde9893@colorado.edu	google-oauth2 107256604576095247390	2020-04-22T22:20:01.284633+00:00	View
103	drmo7941	drmo7941@colorado.edu	auth0 5ea1f6339a730c8a4c10d1	2020-04-23T20:49:40.659967+00:00	View
50	drake	drake@test.com	auth0 5e978a7673dee0be87a9fb	2020-04-23T22:38:50.458641+00:00	View
26	john	john@test.com	auth0 5e9651ed5d513a0bfa9e9ac9	2020-04-15T22:39:37.001201+00:00	View

id	user_id	description	latitude	longitude	time	species	address	user
6	26	I saw a rose	-40.0163	-105.2732	2020-04-15T00:16:49.210732+00:00	Flora	Boulder, CO	View
43	50	This is a test descriptio	-40.0182	-105.2752	2020-04-23T03:00:22.76+00:00	Fauna	Updated Address part 2	View
5	26	I found a dinosaur	-40.015	-105.2705	2020-04-15T00:15:59.087295+00:00	Fauna	Boulder, CO	View

Usefulness Rating:

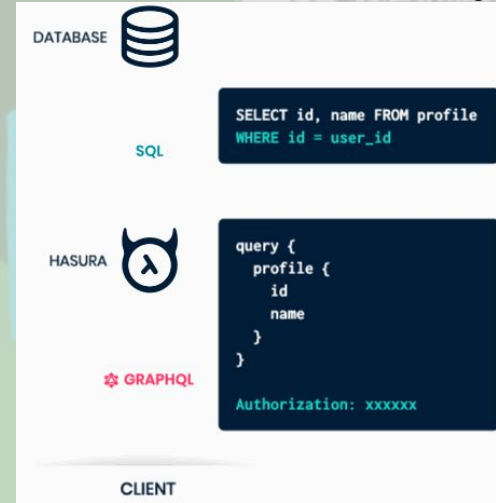


Testing Tool

Create-React-App allows us to test on local machines by taking advantage of Node.js (npm)

GraphiQL:

- Test queries outside of our app
- Directly affect the database



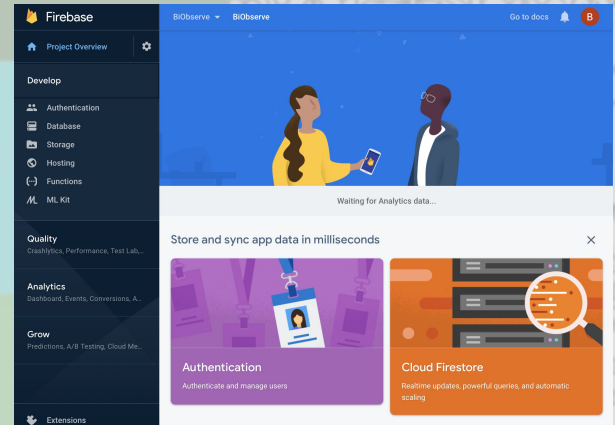
Usefulness Rating:



Deployment Environment

📍 Firebase

- To deploy our web-based application, we used Google's Firebase development environment
- Aids in user authentication and registration



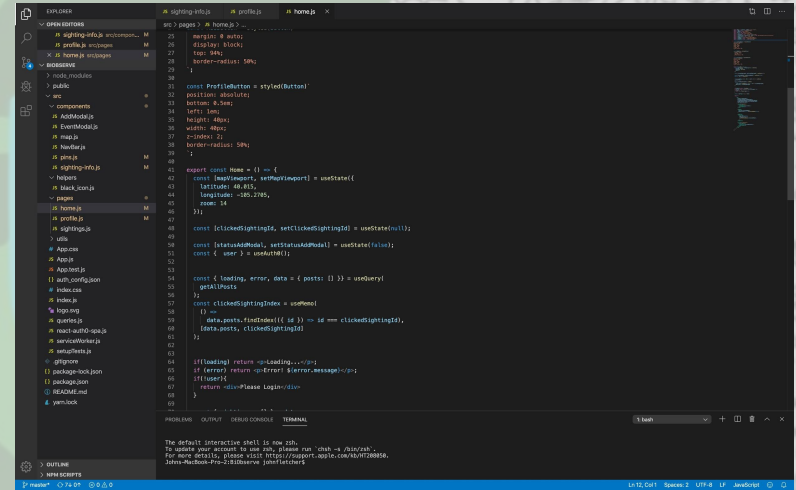
Usefulness Rating:



IDE

VSCode

- Used as an editing platform for the JavaScript used to code our web-based application



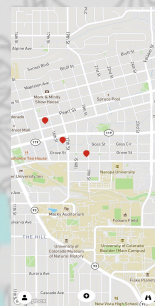
Usefulness Rating:



Frameworks

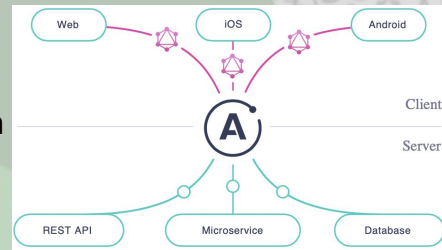
Mapbox:

- Allows to populate a map with pins and annotations



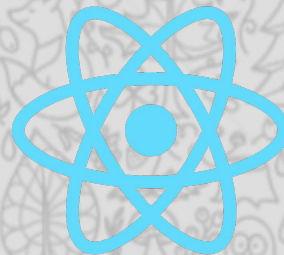
Apollo:

- Combines APIs, databases, and microservices into a single data graph
- Easier Querying



React:

- Allows to create interactive UIs
- Efficiently update and render the right components when data changes



Usefulness Rating:



Frameworks

Auth0:

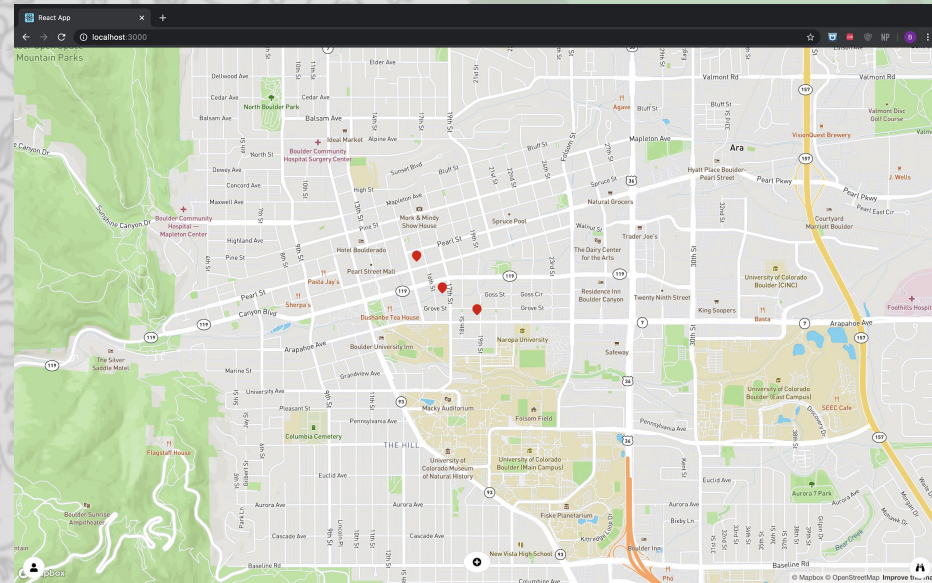
- User Authentication
- Communicated with Hasura



Usefulness Rating:



Hardware



Because of the fact BiObserve is a web-based application, the only hardware needed for it to run and to be used is a web enabled machine.

Usefulness Rating:



Challenges

- Our biggest challenge as a team turned out to be our ultimate need to switch our app from being iOS-based to being web-based.
- As a result of our limited knowledge of Swift, along with the logistical struggle COVID-19 has caused in being able to meet in person with each other and with individuals who could help us, we made the decision to switch to a web-based platform because of the fact we as a team were much more comfortable and knowledgeable with web-based development and wanted to be able to have a deliverable which worked and we were proud of.