



Mobile Passport

A mobile upgrade to state
park exploration.



Team

Rashaad Ratliff-Brown
Braeden Ward

November 28, 2022

ECE564 - Mobile App Development



Our Objective

**Develop a mobile application that provides NC Park visitors
with a mobile alternative to the NC Passport**

Mobile Passport

NC Passport Program

What is the Passport Program?

Allows visitors to use a paper Passport booklet to learn about each NC Park and keep track of park visit progress via a collection of stamps.

How do you participate?

Visitors can retrieve a paper Passport booklet from a Visitor Center or State Park Office



Mobile Passport

Passport Issues

- 01** Printing paper booklets is expensive and usually people throw them away when they are finished
- 02** During the pandemic park offices were not open, but the amount of visitors per park per day had a dramatic increase
- 03** Currently stamps can only be retrieved by visiting a State Park Office



Mobile Passport

- 01** Everyone these days have a smartphone, so it makes the passport system easily accessible and more inclusive

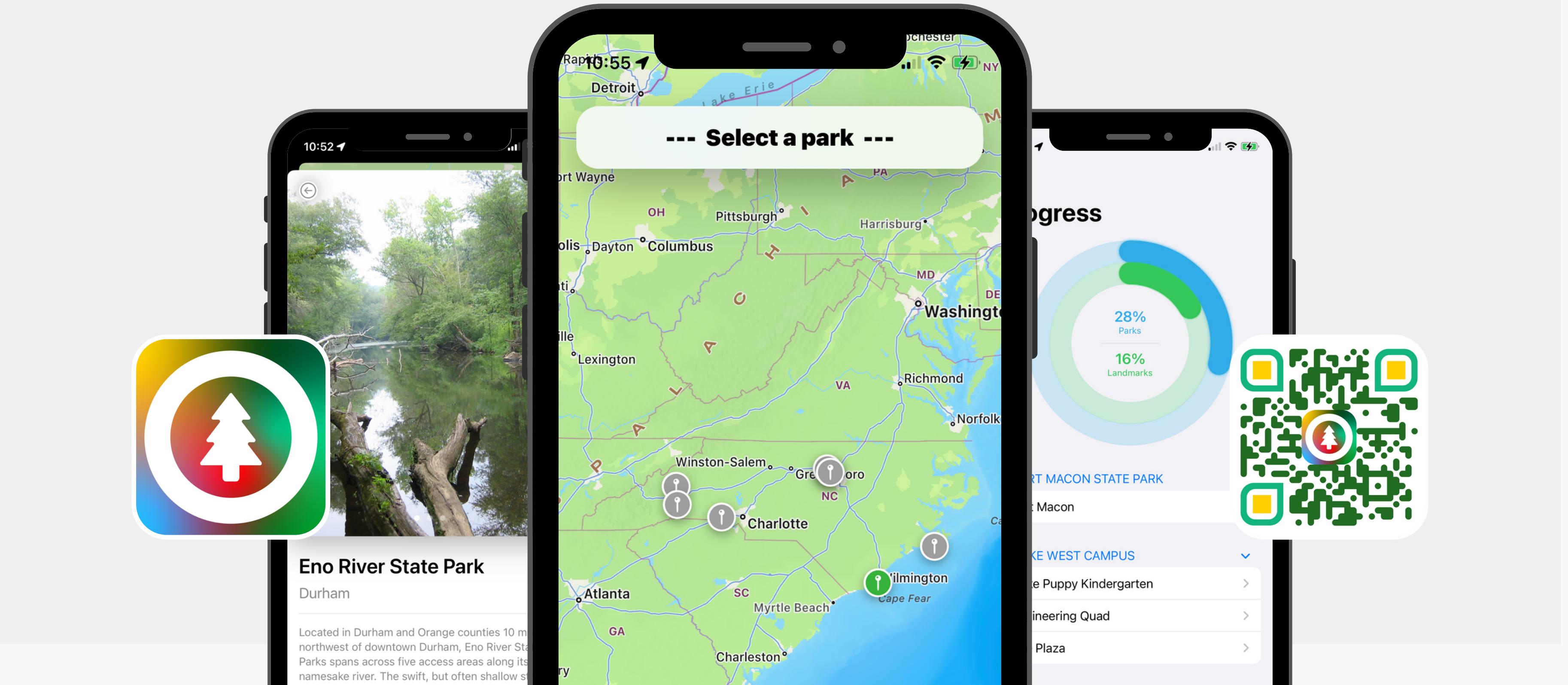
- 02** Provides users with a gamified way of making discoveries within a park before and during a visit

- 03** Includes a QR scanner to replace the need for expensive stamps and promote a more green approach

Mobile Advantages



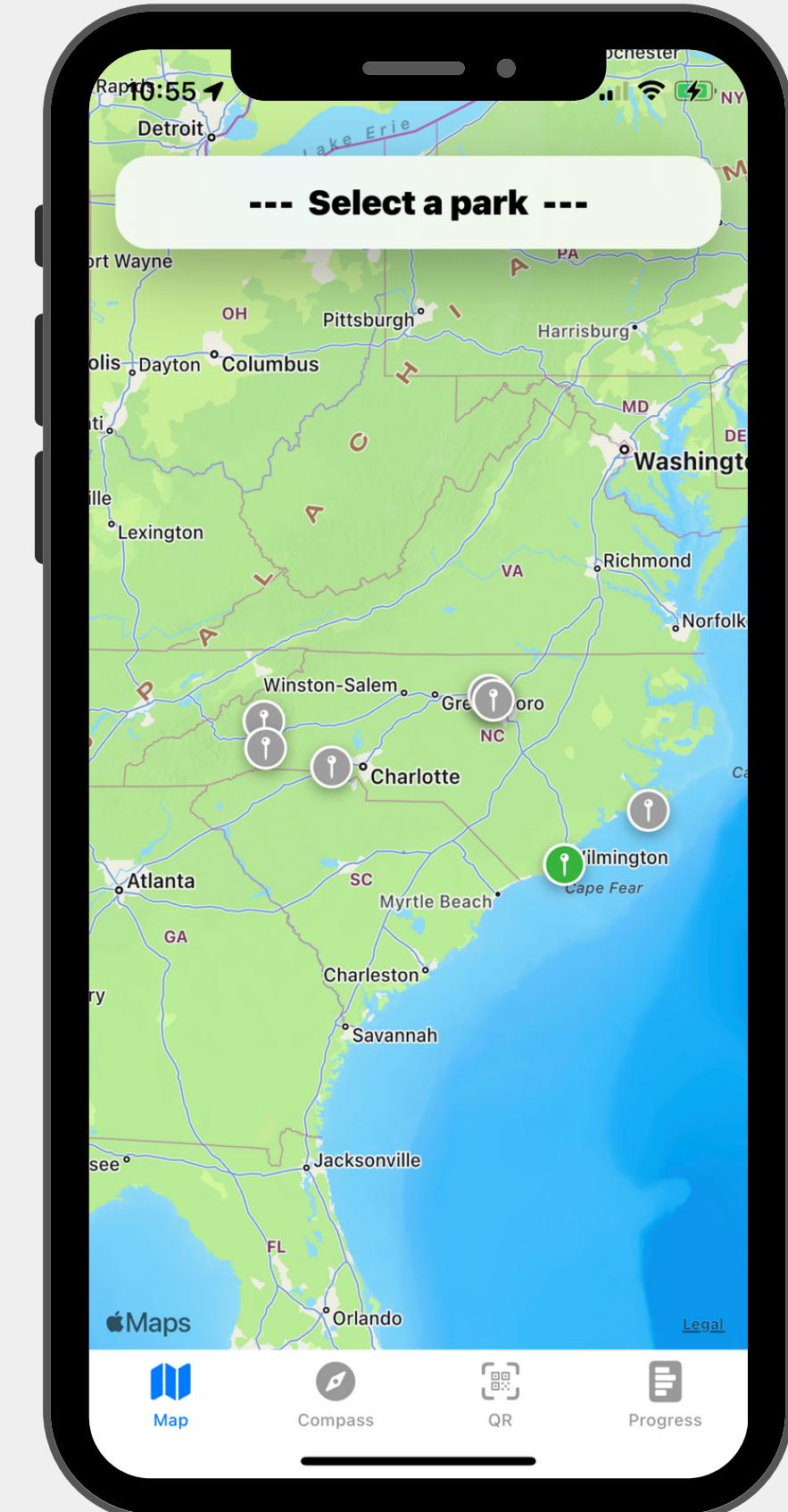
Our Project: Mobile Passport



Mobile Passport

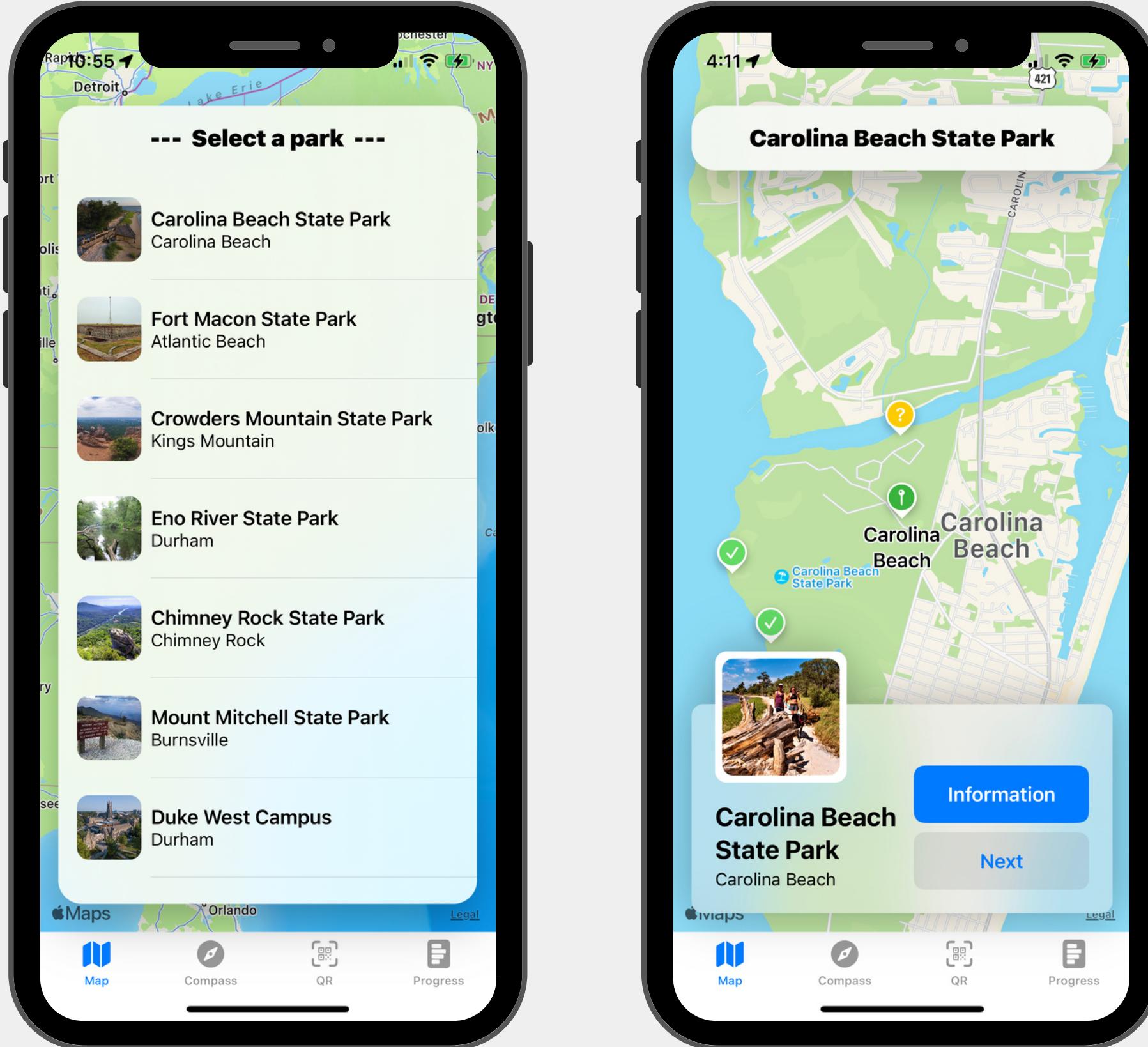
First Opening the App

An interactive map of state parks and landmarks



- 01** Displays a map of all parks in the state park database
- 02** Users can scroll freely around the map or use the provided tools to explore each park
- 03** Pins are color coded: **Green** if you've visited the park, **Gray** if you haven't

Mobile Passport



Exploring the State

Tools for navigating the map view

- 01** Users can use the drop down menu or tap on a park marker to zoom into a state park
- 02** Zooming in presents a small preview of the park at the bottom of the page. Users can tap "Information" to get more details about the park.
- 03** Zooming in also shows the locations of "Landmarks", special locations to visit as you explore each state park.

Mobile Passport

Landmark Compass

Guides you towards the next place to explore!

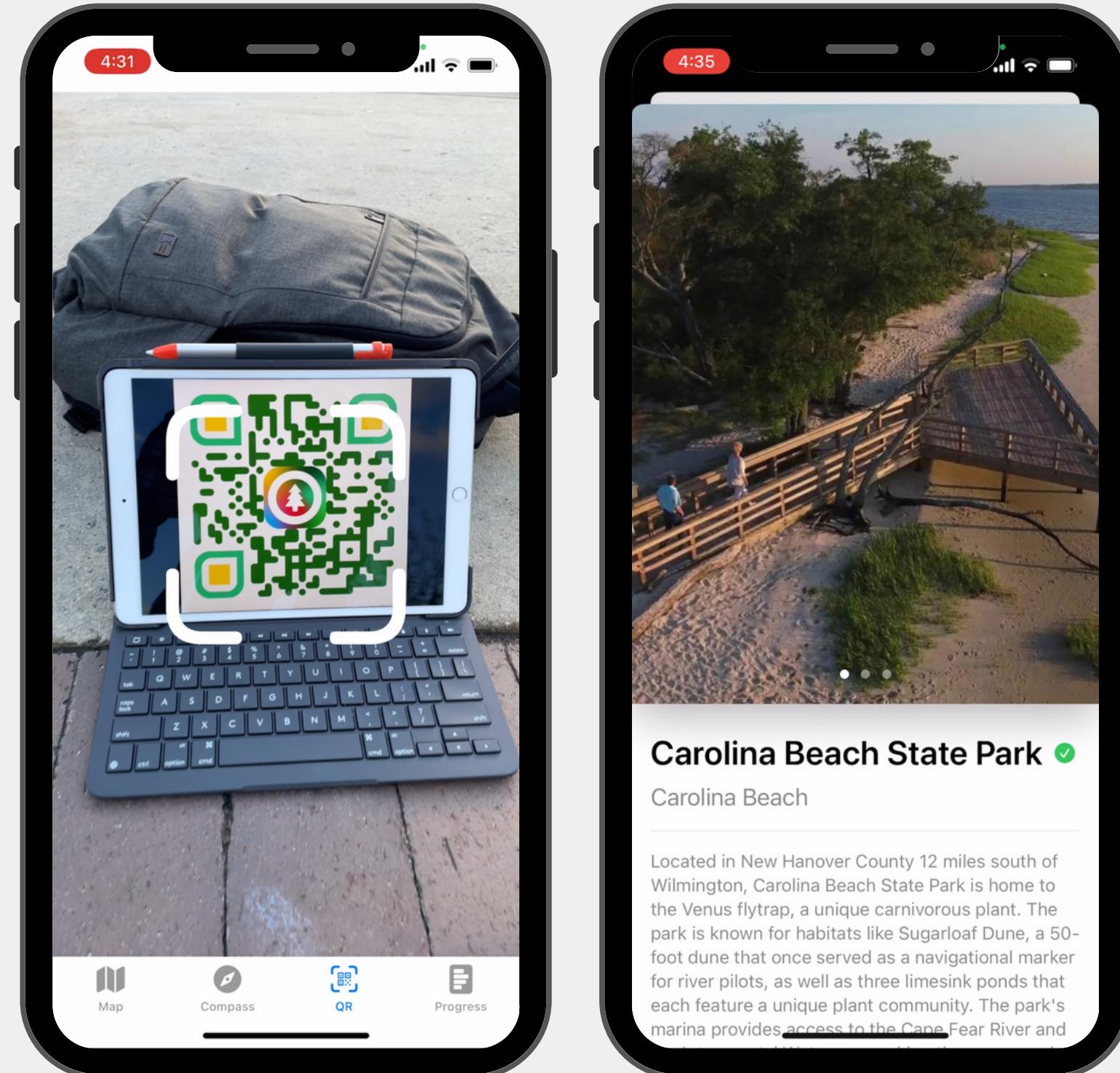


- 01** Points you In the direction of the nearest landmark without telling you what it is.
- 02** Provides live updates to your bearing and distance.
- 03** If you follow the arrow, you'll find your way to a landmark with a QR code you can scan.

Mobile Passport

QR Code Scanner

Scans the QR code posted In the environment to verify and track a user's exploration.



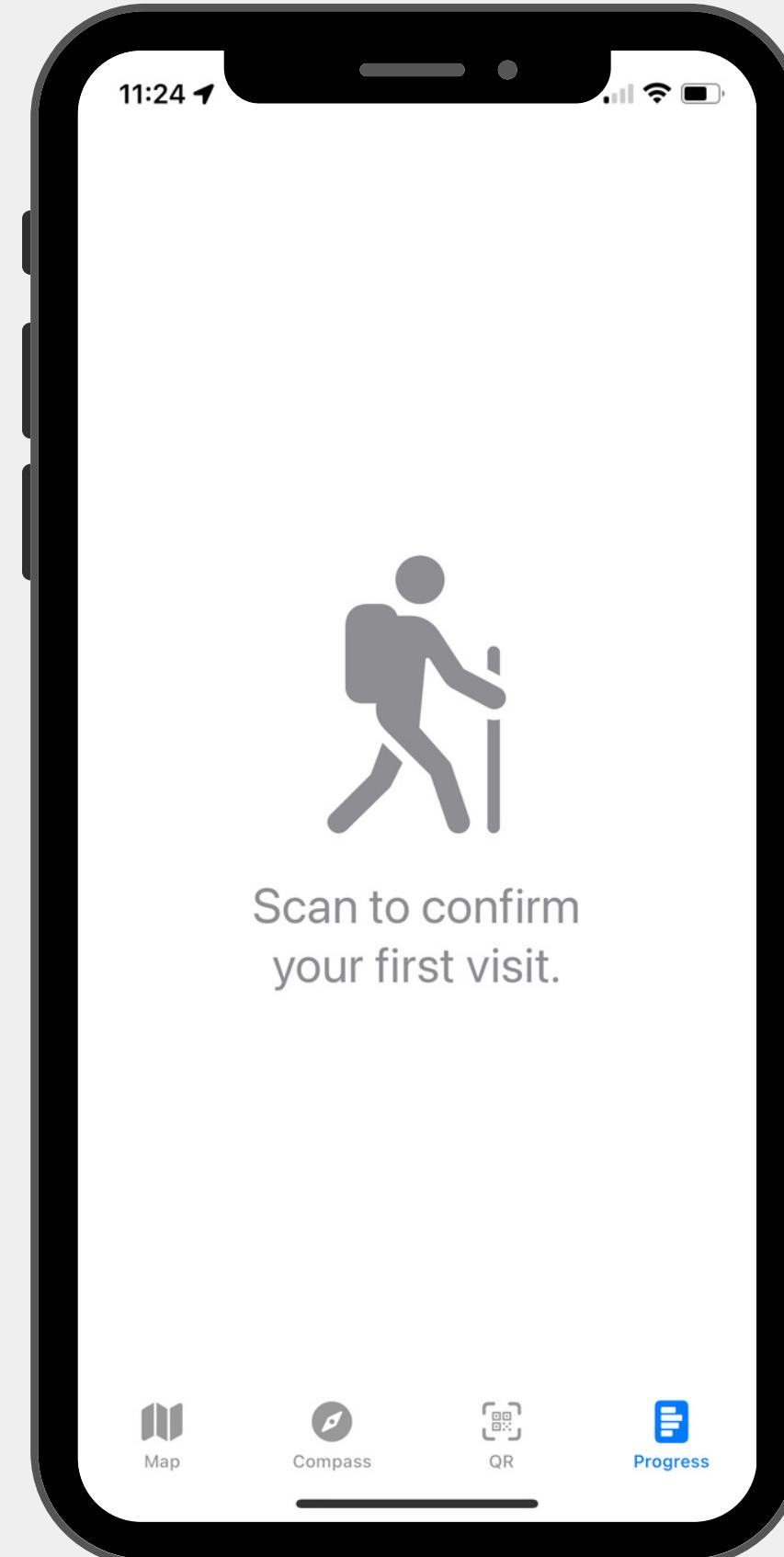
- 01** If you scan a QR code for one of the parks In our data service, you'll be presented with a page with information about this landmark
- 02** If you go to the progress page, you'll see that this park and landmark have been added. You can click on them to see the same information view again.
- 03** Going back to the compass, you'll find that it's now pointing in a different direction, guiding you towards something new to discover!



Mobile Passport

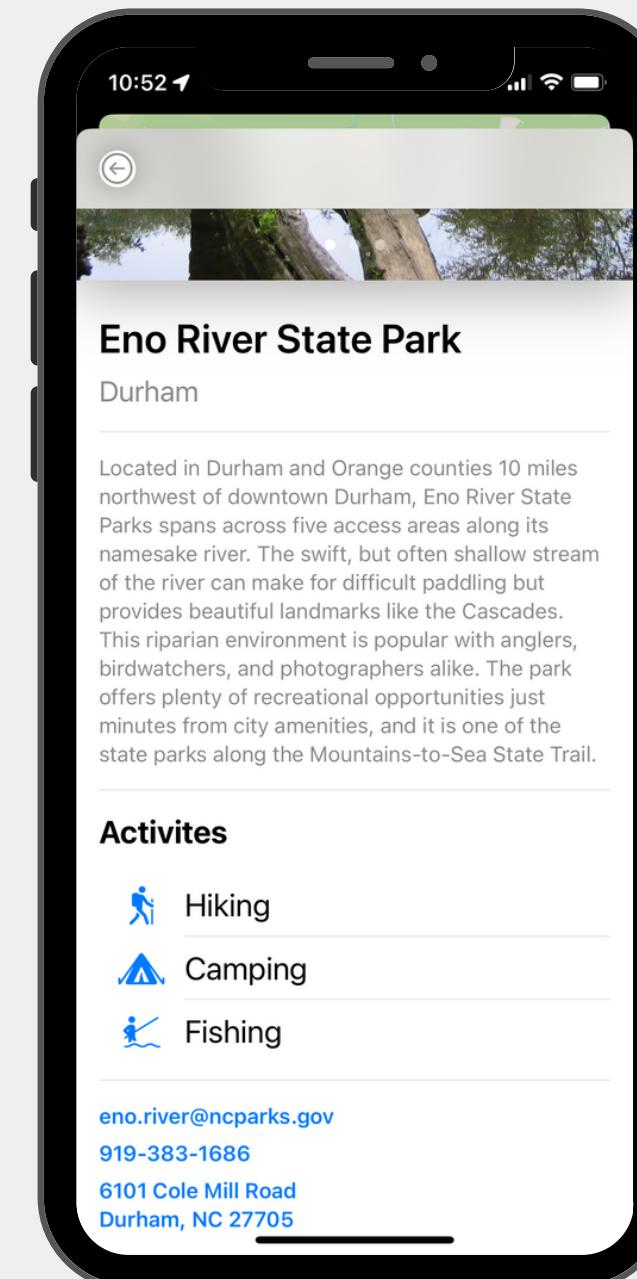
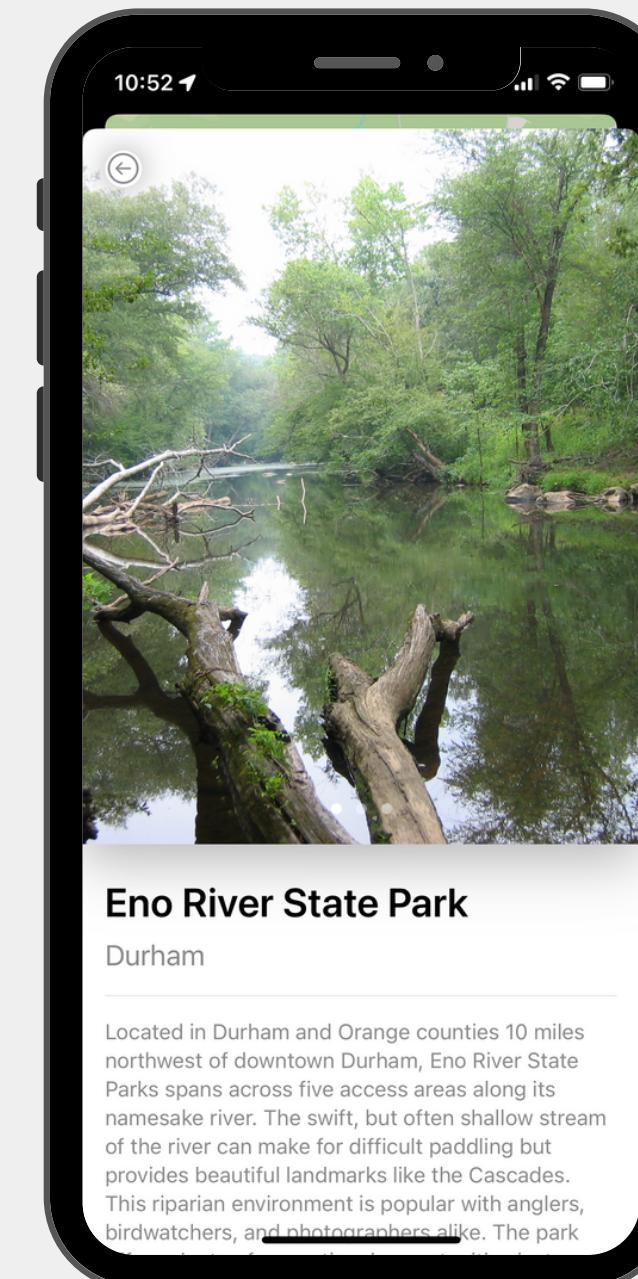
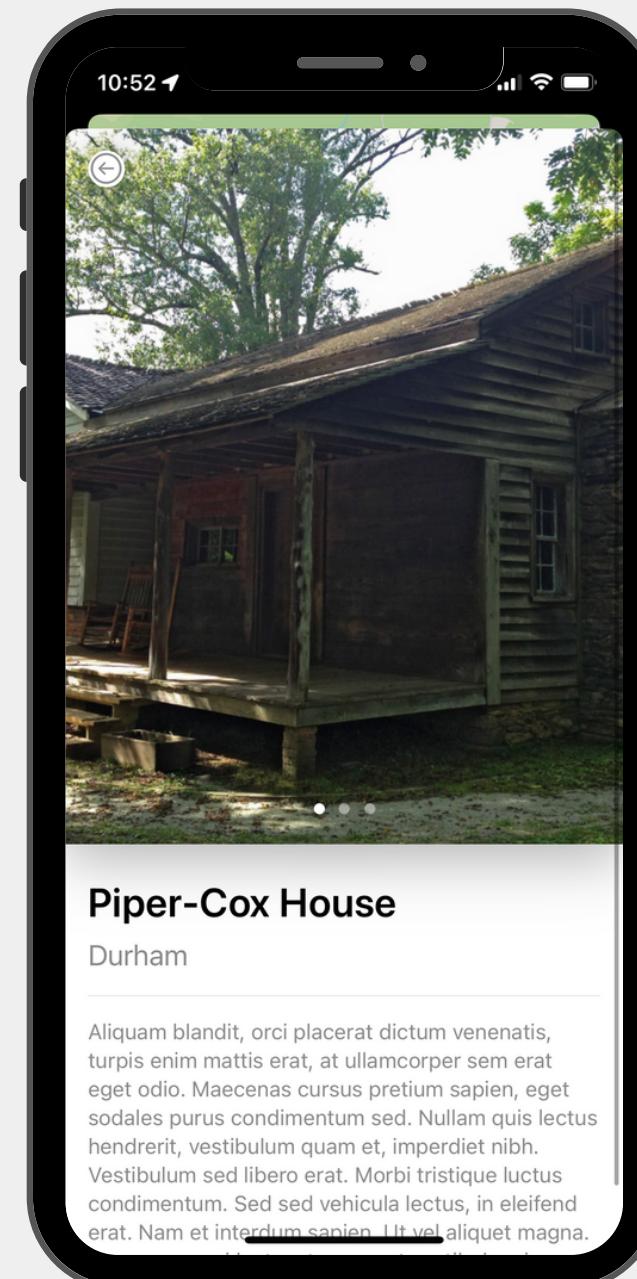
Progress View

»



Mobile Passport

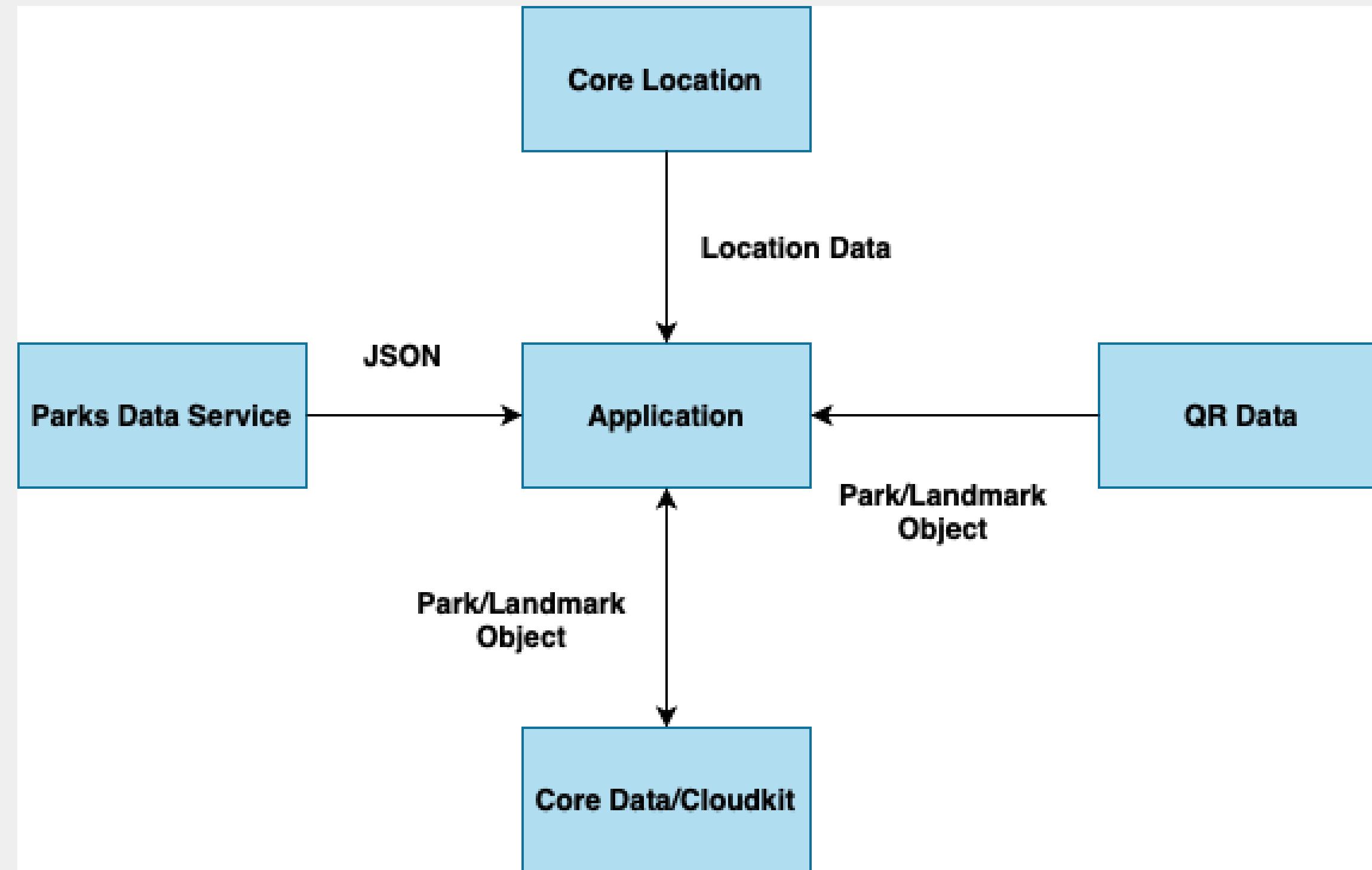
Detail Views



»

Mobile Passport

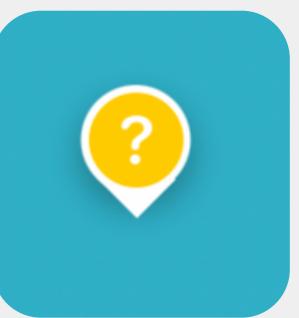
System Diagram



»

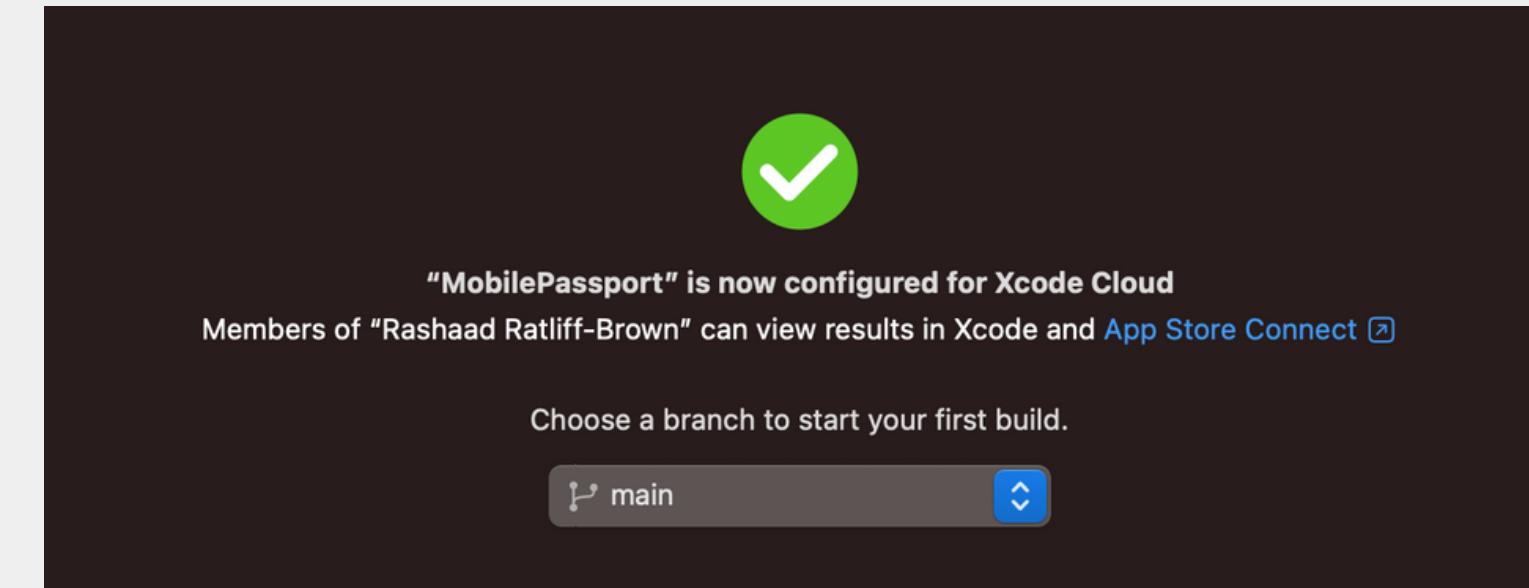


Demo



Mobile Passport

XCode Cloud and TestFlight



- Cloud-based continuous integration and delivery tool built into Xcode that performs automated testing.
- Beta testing platform that allows both internal and external testing.
- We chose to merge Xcode Cloud with TestFlight to always have the most recent gitlab push our application on our phones for testing.

»

Questions?