

Wingtip — Fornacis

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In this paper, we discuss a number of design changes we have made to our prototype. These design changes are justified by the data collected during the evaluations performed on an earlier prototype, both analytic and empirical in nature. We include a discussion of the design changes along with the extended reasoning behind each. Included in the appendix sections are annotated storyboards of our updated design, along with the set of screens (without annotation) which comprise the prototype in its current state.

KEYWORDS

bird watching; prototype; citizen science; update; prototype

1. Introduction

Our team has been developing an app to serve both as a bird watching reference as well as a platform on which bird watching enthusiasts can interact with one another. The app has a number of different functionalities which one in the hobby might find useful. These include a social feed where users may share and see recent sightings reported by other users, a map of sightings in the user's locality, individual profiles for each user, a Wiki-like database to aid in the identification of known or unknown species, among others. These are tools that a bird watching enthusiast might find useful. For example, if a user is unable to identify a species they are viewing, they could enter some basic information about their observation into a search function that returns a list of species that match the properties entered by the user. In addition, when a user captures an image of a species they are particularly proud of, they would be able to share that photo on their profile such that their friends would be able to view and react to the image.

Our team envisions this app to be a proverbial "one-stop-shop" for birdwatchers. By creating an interface where all these tasks are made clear and easy, it will effectively lower the bar for the effort required to become confident in the hobby. Often, those who desire to enter the hobby don't know where to start. By providing a unified location where reference material and support exist, and in a format that is portable and familiar, more people will be able to enter the hobby and get "up to speed" at a faster pace.

2. Materials

Throughout the design process, team Fornacis has used two primary mediums for developing prototypes. Low-fidelity prototypes were initially sketched and moderately refined on paper. After solidifying design ideas and the team agreed upon design elements, the sketches were translated to a high-fidelity prototype using computer software. The particular software allows users to interact with the interface as if it were a complete application, albeit with no logic underlying the design elements. In other words, one is able to scroll through pages and click buttons, but the app's state will not update according to user actions.

At the current stage, we are creating a storyboard consisting of still screens from the application prototype, which will be included in Appendix A below. The set of still screens for each page we have currently developed will be included in Appendix B.

3. Design Discussion

During our evaluations, we discovered a number of design issues that detracted from the usability of the application. These are split between issues uncovered through an analytics evaluation based on Nielsen's 10 design heuristics, and practical issues discovered through empirical studies with target users.

One of these issues we uncovered was the contrast of buttons throughout the application. We determined that buttons lacking significant contrast with their backgrounds made it slightly more difficult for the user to locate buttons at a glance. This could potentially lead to confusion about which buttons are interactive and which icons are simply static icons. By increasing the contrast for these buttons, it is made easier for the user to locate elements of the interface which they may interact with. Ultimately this reduces the time it takes to "learn" the application, and therefore aiding in usability.

Another issue uncovered through our analysis was the lack of navigational buttons when viewing a user's profile. After tapping a user's profile on the leaderboards, the user is presented with the profile of that particular user. However, there was no method of returning back to the leaderboard through that screen save for a highly roundabout method. To accomplish this task, the user would have to return to the home page and re-navigate to the leaderboards so they may view a different top user's profile. Obviously, this is less than ideal. By adding a back button on the profile page, it significantly reduces the number of steps required to undo that action. This also falls more in line with a user's pre-existing expectation of how social media apps operate, and therefore reduces frustration and increases overall usability.

A second issue regarding user profiles was the absence of an "edit" button on the user's own profile. This allows for a higher degree of flexibility, and obviously users should have the ability to edit their profile. We consider this to be adding just a small element that was overlooked and perhaps not an outright usability problem, as it doesn't affect the structure and behavior of the application. Also added was a follow button to profiles not belonging to the current user, such that the user may interact with the social aspect of the application.

During an empirical evaluation, we had a user complain about the type of information displayed on the Wiki page for a species. He was irritated by the wall of text presented by the application, rather than quick visuals to indicate the information most likely to be desired. In particular, having a range map was mentioned as being an element that would be extremely helpful. When trying to identify an unknown species, it is very helpful to know whether it is plausible for a species from a Wiki to be the one you see. If a species has a range map that indicates they are only present in the eastern United States and you live in the western United States, it is unlikely that the species you are referencing is the one you see in the real world. Likewise, knowing the range of a species you are looking at on the Wiki coincides with your own geographic location is good evidence to check more information about that species. Having a visual for this piece of information greatly increases the speed at which a species may be ruled out, which is vital if you have a limited time before a bird leaves your line of sight.

Finally, we found the font size to be too small for the design format. The application is intended to be used on a mobile device, but our development so far has taken place on computers. We therefore made the font size too small, which resulted in perfectly readable text in a large, blown-up format, but was rendered too small to read easily when shrunk down to the size of a mobile device. By slightly increasing font size throughout the app, the user can more easily parse information.

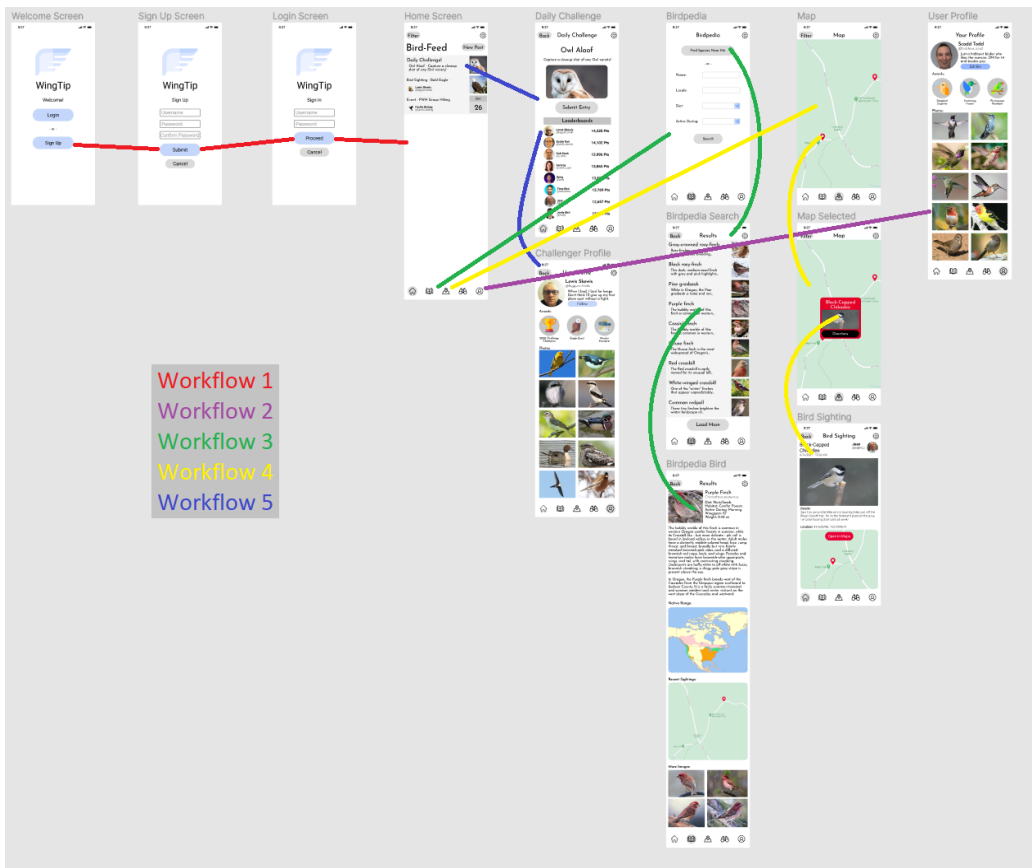
The empirical and analytic evaluations performed last week gave us valuable insight so that we may improve our prototype. By acting upon these evaluations, we are better able to design an app that users find easy and pleasurable to use.

Peer Evaluation

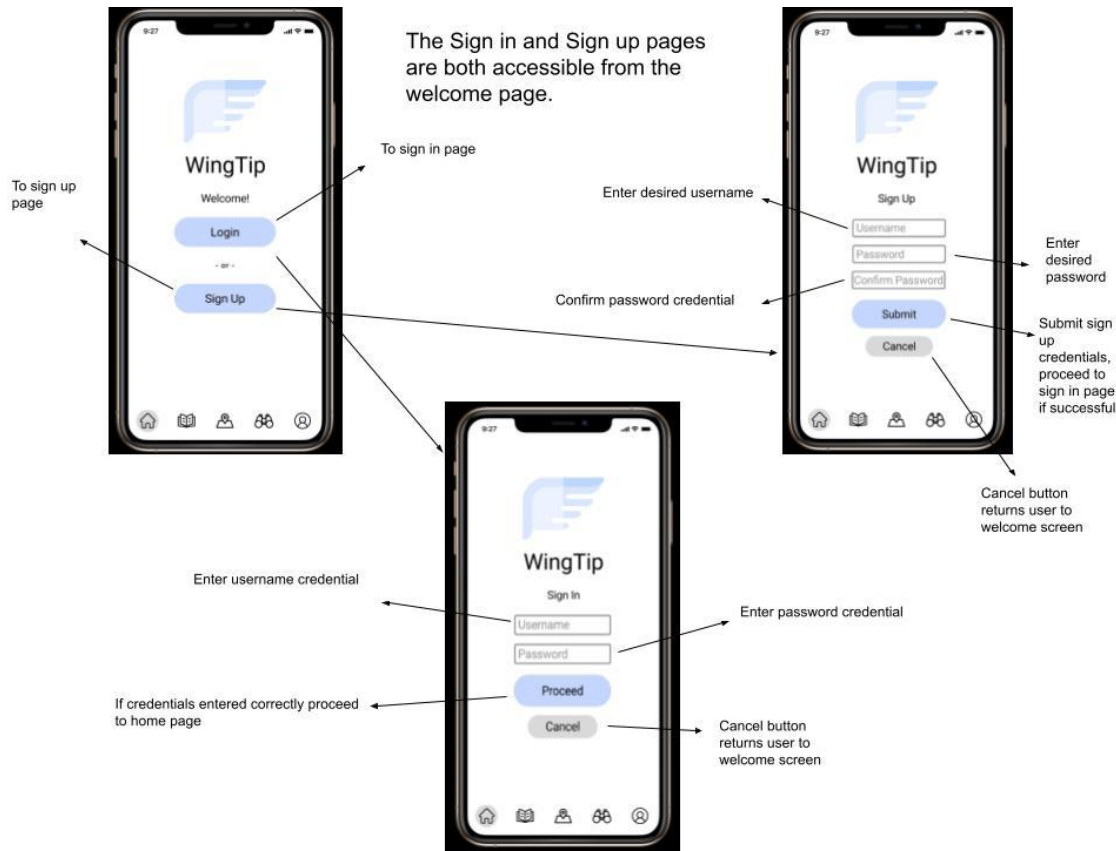
Member Name	Role	Responsibilities / Assigned Task	Task Completion Grade (0-5)
Wyatt Whiting	Management	Writing	5
Kyle Folk-Freund	Design	Workflow 2, 3	5
Ethan Hirsch	Research / Communications	Prototype Adjustments	5
Nicholas Minton	Design	Workflow 1, 4	5
Joseph Tong	Writing / Documentation	Prototype Adjustments, Workflow Overview, Workflow 5	5

Appendix A:

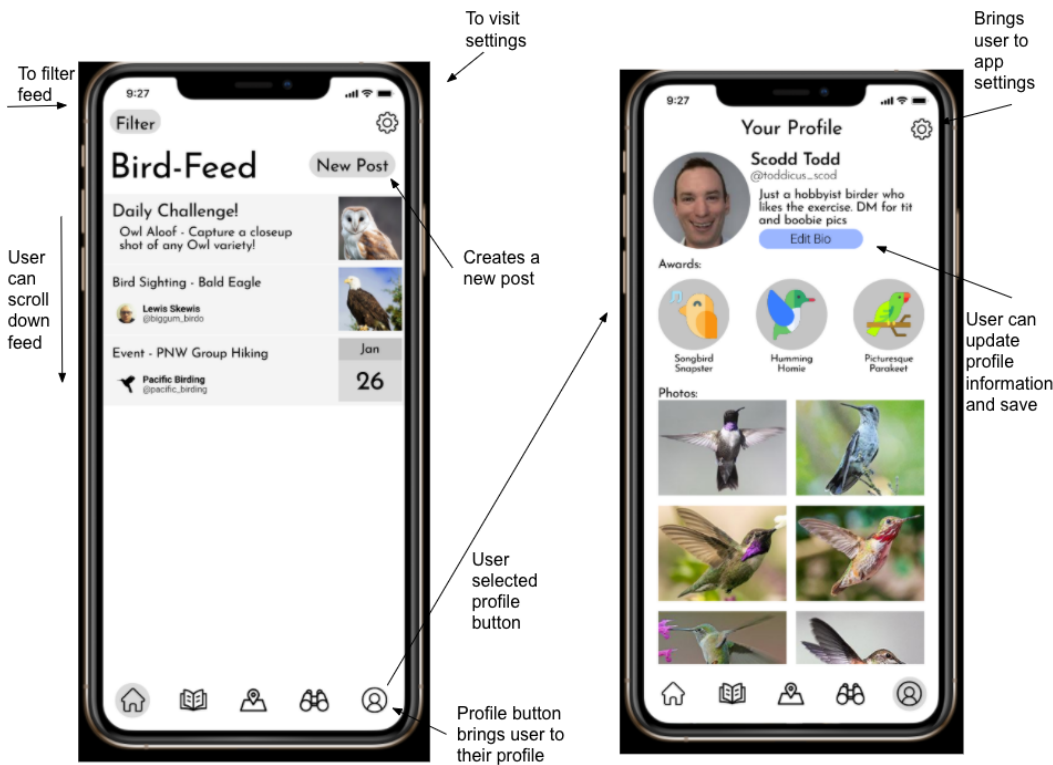
Workflow Overview:



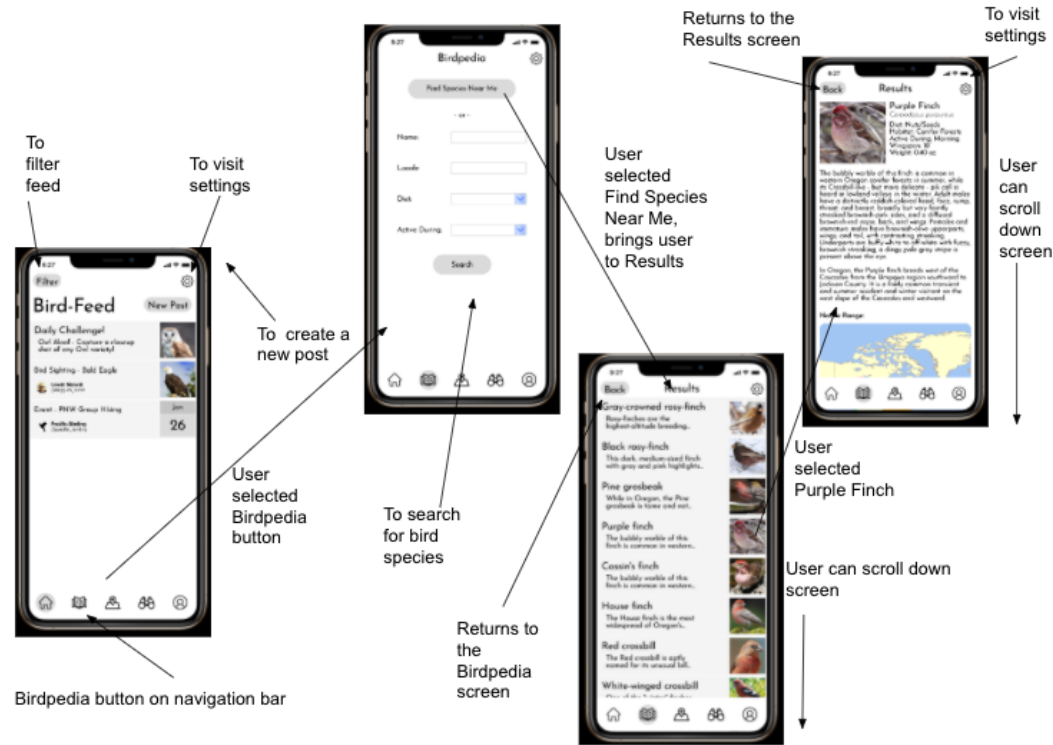
Workflow 1:



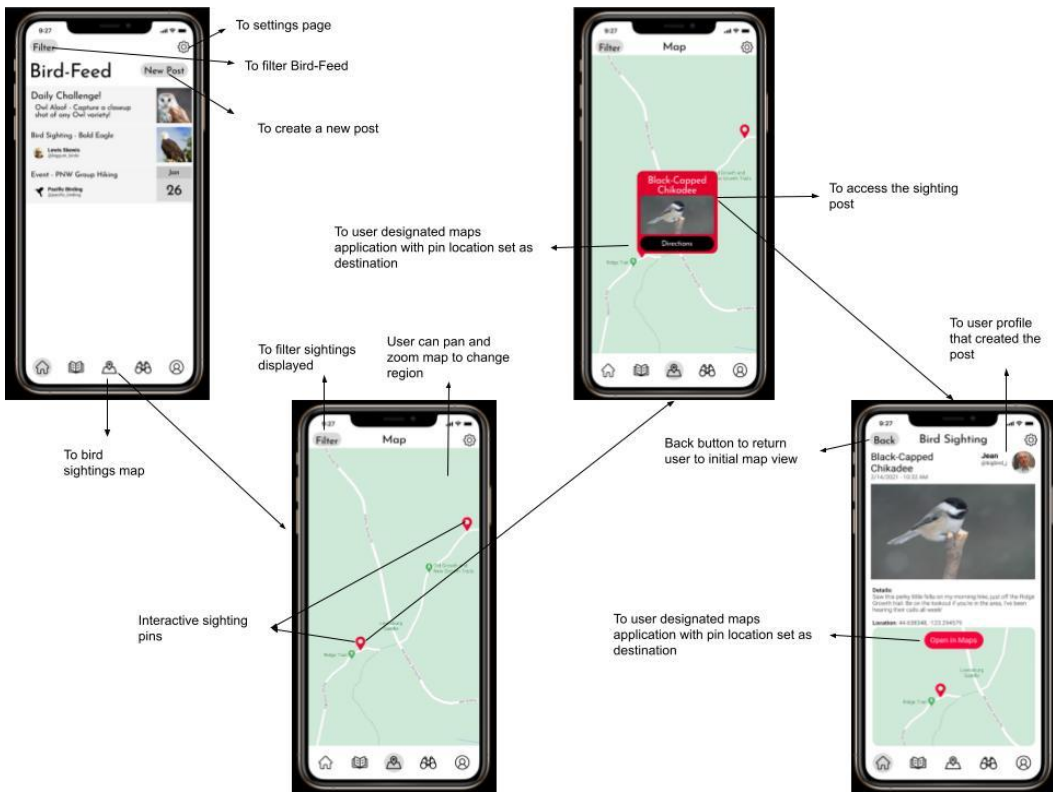
Workflow 2:



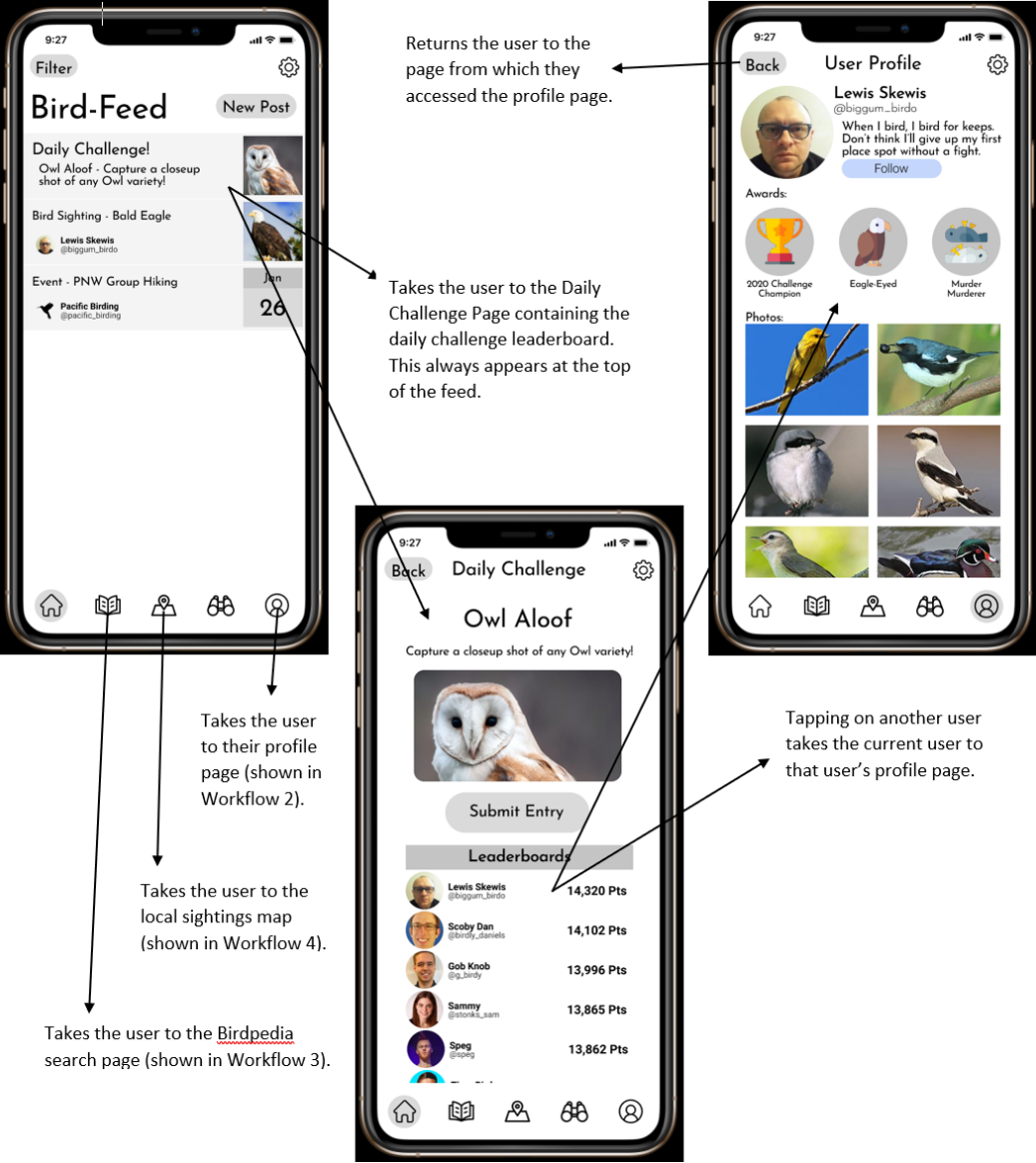
Workflow 3:



Workflow 4:



Workflow 5:



Appendix B:









