A Call from the Lab

- The Cornell Lab of Ornithology contacted CENS and asked them to make an application that will make their surveys easier and more accessible to the general public.
- One of the groups that the Lab focuses on is the Latino group – studies have shown that this group is more likely to use their mobile phones for more than just calling purposes. For this reason, we decided to create our application in English and Spanish.
- The Lab has several surveys they encourage individuals to participate in, and we decided to focus our attention on two: Urban Bird Watch and Pigeon Watch.

Urban Birds and Pigeons

- Commonalities
  - Both surveys look at time of day and relative climate.
- Urban Bird Watch
  - Urban Bird Watch aims to record the types of birds found in urban areas.
  - The Lab provides a list of 16 birds commonly found in such areas and asks the individual to point out which birds they observed.
- Pigeon Watch
  - Pigeon Watch is interested in seeing what color morphs are courting together.

There must be an easier way: Paper and Pen is just too much of a hassle

The Plan: Access Online and via Mobile Phone

- The Website
  - The website is designed to get users acquainted with our project before they go out and collect data. The data they collect than gets uploaded to the online database.
  - Originally, we planned to have a registration and login page. The quiz was meant to allow us to see where each data-collector is at in terms of their ability to recognize the different types of birds.
  - This, we thought, would help us differentiate between accurate and inaccurate data.
- The Application
  - The original plan was for the phone application to have a login page.
  - As of now, our application has two surveys, both in English and Spanish, and reference pages for both Urban Birds and Pigeon color morphs and courting gestures.

An application that does it all: Become a citizen scientist our way!

The Metamorphosis

- Weebly to Appspot
  - We created our website on a free hosting site (Weebly) before we moved it over to Appspot. In order to upload our data online, we used HTML and Java to create a server that synced our data to a database.
  - Due to programming complications, we were forced to temporarily delete the login page.

- One Application to Two
  - Because time became an issue, we split our surveys into two different programs. This reduced the number of Java and XML pages and we were able to recreate Pigeon Watch off of the Urban Bird Watch template relatively quick.

- Reference pages inside the survey
  - We originally had our reference page on one of the first pages in the applications but we moved it so that it could be accessible while the user is taking the survey; this is when the user is most likely to want to review the different bird types.

- Prerequisites
  - Our ideas at first centered around the quiz being a prerequisite to participation in the survey. After speaking with Eric Graham, we learned that there is a dual purpose to our application: outreach and scientific data collection.
  - The Cornell Lab of Ornithology hopes to get regular citizens more interested in observing nature, so restricting them because they did not get as high of a score as we hoped for defeats the purpose of outreach.

If only we had more time…

- Number Picker
  - For Pigeon Watch, we wanted to install an android element called Number Picker – this would have been useful for recording the “number of pigeons you are observing.” A spinner limits the user to picking a number we provide them with.

- Timestamp and Stopwatch
  - The Cornell Lab of Ornithology asks survey-takers to time their data collection sessions. Urban Bird Watch, for example, requires a ten minute time commitment.

- Login pages
  - Although our app and website started out with a login page, we did not have enough time to make this feature fully functional. As a result, we removed this aspect from the project. We feel, however, that this would have been really useful in determining the accuracy of the data collected – if linked correctly with each individual’s quiz score.

- Quiz Results
  - The quiz results can only be shown one at a time as of now. If we could, we would change this feature to score the entire quiz at once and to record each individual’s results.

- Layout and Design
  - Aside from being easy to use, we would have liked our application to be more aesthetically pleasing.