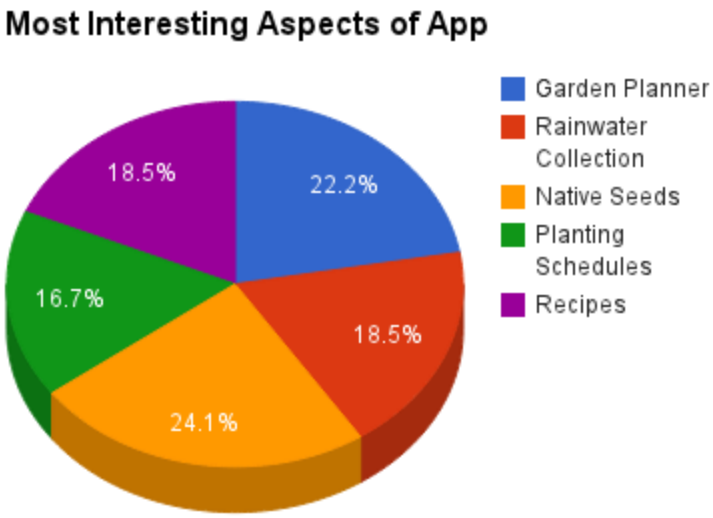
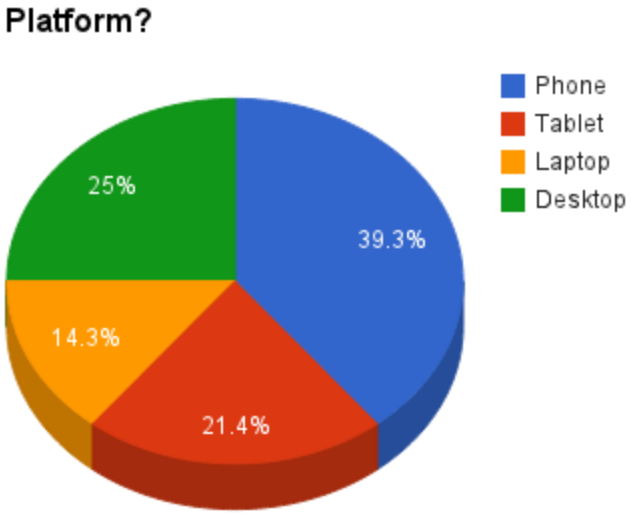
Sonoran Gardener

Problem:

Many people in Pima County, Arizona would like to be able to eat healthier, more sustainable foods, but they don't know how to get started, which crops would be well suited to the challenging growing conditions in the Sonoran Desert, when to plant crops, where to get seed, how to deal with problems when they arise, and how to prepare the foods that actually are very abundant around them. These needs were identified by user surveys conducted in Tucson, Arizona in late 2014.



While there is information available from various sources, including the University of Arizona, local native seed and water harvesting groups, and even the Tohono O'odham tribe, locating the necessary information can be challenging and time consuming. Most users surveyed would like to have the information they need accessible on mobile devices.



Proposed Solution:

Develop an Android app (and a complementary mobile-friendly web app at a later date) that will allow a user to identify the location they would like to grow a crop at, design a garden plan to provide the best possible growing conditions and water harvesting to minimize the need for irrigation, choose crops that can be grown sustainably and that will complement each other, determine when and how to plant the crops and how to care for them during the growing period, identify when and how to harvest the crops, and how to prepare them with both traditional and contemporary recipes. The app will also help users identify local resources, like sources for seed, gardening and slow food groups that can provide additional assistance, and restaurants and stores that sell native and local foods for inspiration (or possible purchasers of surpluses). The app should allow a user to save information, like favorite crops and recipes, garden plans, and useful resources to be accessed later by logging in.

The MVP being developed for the Developing Android Apps course will have minimal implementations of many of these functions in order to collect feedback from users before more extensive development is undertaken. However, there should be enough functionality in each of the views to make it apparent how the app will function when complete. Also, databases pulling data from public watershed or weather data sources, for example, will be fully functional for the initial target area for the app (Tucson, Arizona) and will allow the data to be accessed when the device is off-line.

The Sonoran Gardener app itself is a pilot for a family of hyperlocalized growing apps focusing on small-scale agriculture utilizing native and locally-adapted crops under the umbrella of The

Pineapple Project (ThePineappleProject.org) - a project that grew out of the International Space Apps Challenge, a NASA sponsored hackathon held in San Francisco in 2012. The hope is to grow the project to include small, local development teams that will customize and maintain apps for their local regions, such as the Caribbean (the next goal after the Sonoran Gardener pilot). I have been working on the project full-time for the past year and have done a lot of background and user research, but haven't built an MVP yet. This app will be that MVP...I hope!