For our project, we would like to develop a plant identification application. The software’s main purpose would be to allow users to identify trees, plants, and flowers on their smartphones through either an interactive dichotomous key or a keyword search. We would like to include additional features to differentiate our software from existing applications by creating a more social experience. Users should be able to share pictures of plants that they have found, creating an accessible gallery of pictures of a particular plant in different settings. They may input the location and elevation of the plant (using the phone’s GPS system), adding it to a map, which will allow other users to plan hikes and create checklists of plants to see. These checklists could then be used to have plant-finding competitions or scavenger hunts in groups. If the key or search for some reason fails to identify a plant, users will be able to submit a photo and wait for a more knowledgeable user to identify it (which will add it to our database). We may also want to add a system in which users gain points for identifying or confirming identifications on thus far unidentified plants and for submitting their own photos, and the option to “save” or “like” plants and store them in a virtual “garden” so that users can access the information again or show off their gardens to other users.

We believe this will be useful software for anyone with even a vague interest in plants, as it can help people find out whether a plant they encounter is poisonous or just identify a flower that they find particularly beautiful. The interface should be attractive and user-friendly so that anyone from an amateur hiker to a master gardener can use the software for his/her specific needs. All of the technology necessary for this project exists, and most of the data that we need to make it work should be accessible. Since there are current applications with similar features and the main functionality is relatively simple, we are fairly certain that the design and implementation of our project is feasible. The straightforwardness of the core concept (an interactive dichotomous key and database search) also means that there is room for us to add interesting additional features as we see fit.