Team Members: John Herrick, Owen Cheng
Device Name: Shellder
Project App Title: "Bucket List"

Basic Instruction on Usage: On loading the application, a launch screen appears. Afterwards, the list of prepopulated list items appears. To add items to this list, a button with the "+" symbol on the upper right hand side can be pressed, and upon doing so, the app will bring you to an add page where you may add a bucket list item with a name, description, longitude and latitude, and date. Once you are done, press the "SAVE" button at the top right corner and it will bring you to the main page with the item added to the list. If you want to edit an item on the main page, slide left on the desired item and press edit. You will be taken to the "EDIT" page. Make desired changes and press the "SAVE" button to finalize your changes. Both the "ADD NEW ITEM" and "EDIT ITEM" page have the same basic interface for consistency. At any point, you may navigate back to the main page by pressing the back button ("<") on the upper left of the add/edit item pages. If a task is completed, slide left on the item and press "DONE." All items are organized by date of needed completion and separated on whether they are completed or not.
Special Info: You can also edit an item by tapping the item name as well as by sliding the item left and clicking the "EDIT" button.

Lessons Learned: The iOS mini project was a very education though stressful venture. It was slightly more difficult than the Android mini project because of the use Swift – a completely new language that we have little experience with. Thus, most of our success came from trial and error, YouTube tutorials, and StackOverflow threads. From the first milestone, we learned how to use Swift 3, Xcode, and the iOS simulator. The simulator was extremely useful and unlike the emulator in Android Development Studio, was extremely fast and efficient. We learned that the app delegate is automatically created when creating a new project. Specifically, it creates the window in which our content is drawn and creates the entry point for our app. Xcode provides an editor for storyboard, which is a visual presentation of the UI. It displays the various screens and connections within an app. Specifically, segue objects connect the scenes by representing the transition between two view controllers. Xcode was also really interactive and allowed us to visually see what each button does by dragging a button to a new function or screen (e.g. add buttons leads to add page). We also learned that Java and Swift have many similarities, and so it was relatively fast for us to pick the new language up. Of course, we bumped into issues but addressed them by googling and asking the TAs'. We also learned how to better manage our time. Unlike our first Android project, we started the project a few days further in advance. This limited the stress and lack of sleep that we encountered during the first project. We also took full advantage of office hours and the example code provided to us. By the day before the due date, we had also learned different ways to deal with edge cases. Examples include making sure to not allow saving an empty add page and allowing only numerical values to be inputted for latitude and longitude. We had to check for all of these, and in the end we made sure to address most of them. We also learned how to integrate a unique app icon for our project.