

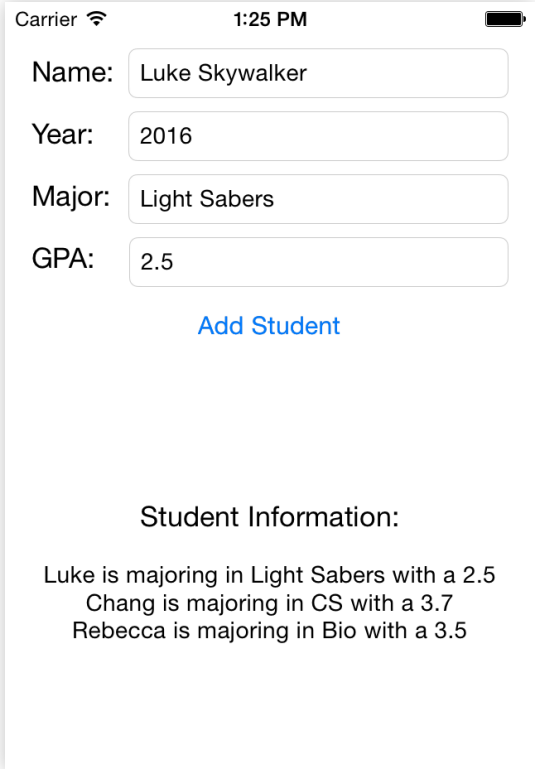
PROJECT #2

The Problem

Your task is to develop an application that stores a list of students. Each student has a name, year, major, and GPA. Every time a student is added to the list, you should print out the entire list of the students. You should display this list of students in a **UITextView**. If you plan on tackling any of the challenge problems, please read them ahead of time so you can architect your data accordingly.

Challenge Problems

1. Validate the year so that it can only be a logical number. If we aren't given valid values for year, don't add this student. (Hint: this was demoed in lecture)
2. After entering the student's GPA, verify that it is indeed a valid GPA (assuming highest GPA is 4.33 and that GPAs can't be negative). This solution is more difficult than the first challenge problem since we aren't dealing with type **Int**.
3. What if we wanted to sort the list of students? Perhaps in ascending or descending order of GPA? Name? Year? You could add a segmented control to select how the text view should sort its values.
4. Introduce a **UIDatePicker** that will set a birthday for the student. Display the date to the user on a label if you can, but at the very least have the date stored so that it will display when you print out the list of students.



The screenshot shows an iOS app interface. At the top, the status bar displays 'Carrier', a signal strength icon, the time '1:25 PM', and a battery level icon. The app has a white background. It features four text input fields with labels: 'Name:' (containing 'Luke Skywalker'), 'Year:' (containing '2016'), 'Major:' (containing 'Light Sabers'), and 'GPA:' (containing '2.5'). Below these fields is a blue button labeled 'Add Student'. Underneath the button, the text 'Student Information:' is displayed. Below this, there is a list of three students: 'Luke is majoring in Light Sabers with a 2.5', 'Chang is majoring in CS with a 3.7', and 'Rebecca is majoring in Bio with a 3.5'.

Reference

For this project, you'll need to figure out a few things on your own. One of the best ways to do this is to be able to lookup the *class references* of any class you need to learn more about. Some that may be particularly useful:

- Lecture 2 code

- UITextView Class Reference
- UIDatePicker Class Reference
- The Swift Programming Language (especially working with classes)

Lastly, if you are having trouble you can always ask questions on Piazza or come to our office hours. We are here to help!