Sign 'N Go
Final Group Report
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Problem statement:

Karen Volis, who works for the Computer Science HR department, was spending a lot of time reminding and emailing the TAs and RAs who work for the department to sign their timesheet each week so they could get paid. She had a binder on her desk with a list of everyone's names and a space for them to sign. Each TA/RA was supposed to come into her office once a week to sign for the 18 hours they work, no later than the Friday of that week. Each week, Karen would have to look through the sheet and see who had not signed and had to email them to remind them. She even had some people signing every sheet in the binder at the beginning of the semester to avoid coming in every week, which is an obvious fault with this system.

To make all of this easier, we have made Karen our app "Sign 'n Go". Our app is a two app system with an admin app on her desktop for her to set up semesters and add TAs and RAs into the database. Our app will then take care of reminding those who have not signed and preventing them from signing weeks in advance to them actually happening. Each week, Karen will get a list of those who have signed and those who have not and she can also request a full excel spreadsheet of all the data from her desktop app.

Alternative app analysis:

Full, business-class apps do exist, but they are meant to be used by a full fledged business. Using one of these would not only cost money, but would be overly complicated. They would need more information (such as start times at the company, addresses, personal information, etc.), things that Karen does not personally need for her use.

Our app does exactly what she needs: allows TAs/RAs to sign each week (and potential missed weeks and not ahead of time), sends them a reminder to do so before the last day, and sends Karen the organized information she needs, when she needs it, in a UI that is easy for her to use and has no extra features that she would need to worry about knowing. She also gets a user manual made for her and for her TAs/RAs so she has something to reference and will save time explaining to them how to use it.

Architecture design:

- Tablet App
    - This was for TA/RA use only. Designed to be very simple and intuitive for students to pick up quickly and not have to ask the administrator how to use the application

    - Name search screen
        - This screen was used for TA/RA to look up and find there specific
        - Simple design using auto populate with people in the database and only let people access a timecard that are already in the database

    - Timesheet Screen
        - Used for student once in there time sheet to select the current week and any weeks they have missed to sign for.

    - Signature Screen
        - Used for student to sign in a signature box.
        - They can clear if they have any issues or submit if their all set to sign.
        - This will sign for all weeks selected in the previous screen.
        - Students are not allowed to sign for future weeks

    - Background Actions
        - The applications sends an email once a week to Karin stating who has and hasn't signed for the week.
        - Students that haven't signed will receive an email stating that they haven't signed and need to go in and sign for that week.

- Web App
    - This was for Karin or administrative use only. This app was made to let the administrator fully set up the student application and get back useful data to look back at though the semester when submitting time cards.

    - Main Page
        - This page has a list of all the current students.
        - The administrator has the ability to delete and edit a TA/RA information.

    - Semester page
        - Allows the administrator to create a semester.
        - Also they can edit a semester before the start date of the semester they have created

- - ■ Lastly they have the ability to change the administrative email incase of an administrative switch. Allowing only the new administrator to get the weekly or requested emails.

  - ○ Email Button
    - ■ Brings up a pop up with the option for the administrator to receive a Excel file for the current or previous semester.
    - ■ This allows the administrator to easily manipulate and print a full list TA/RA signatures as well as all the rest of the information the administrator needs.

  - ○ Add Tablet Users Page
    - ■ This allows the administrator to easily add new students access to having a timesheet on the tablet application.
    - ■ As long as they fill in all the necessary information in the proper format this way there is no issues. But if there is the TA/RA information can always be edited.

List of individual teammate's code responsibilities:
- ● Dan
  - ○ General Planning
  - ○ Sending Emails on weekly basis
    - ■ Alarm receiver class
    - ■ Boot receiver class
  - ○ Database Structure
    - ■ Data class
    - ■ Semester class
    - ■ User class
    - ■ Week class
  - ○ Misc. code and bug fixes

- ● Sam
  - ○ Web Client App
    - ■ Adding users
    - ■ Changing/editing semester
    - ■ Autocomplete functionality when adding users
  - ○ Code Cleanup/Documentation

- ● Brianne
  - ○ UI for desktop and web client
  - ○ Signature Pad

- ○ Misc. bug fixes and code cleanup

- ● Peter
  - ○ Firebase setup
    - ■ Setting up firebase to android communication
  - ○ Excel Building
    - ■ Parsing Freebase data
    - ■ Formating Data to a CSV file

Reflection on the external project with clients:

- ● How is your experience different than other projects?

This project was not like any other project we have done in school. Usually you are given a predesigned task to accomplish yourself, but with this project, it was up to us to figure out what the client wanted and then build it for them. It also gave us real-world industry like experience. After our meeting about half way through, Karen asked us to add some things we did not previously have, adding more things than we had previously thought. This will most likely occur when working in the industry, which is a good learning experience for everyone because not everything will be as perfect as you may think it will be.

- ● What values do you think service learning give you?

Service learning will show future employers that we have real experience working with a client. This will show them that we have good communication skills and also that we can successfully make a customer happy with our work.

- ● If you need to redo the project, what would you do it differently?

One change we would make is making the desktop app a website versus an application. This may have made its use a little simpler for use to avoid set-up complications on her end.

- ● What recommendations would you make for instructor to improve this offering in the future?

Overall, this is a great class that shows you a glimpse of how the industry develops an application for a client. Your future plans of integrating IOS development is great idea too, though.