1 Winter Progress Report - Kevin Stine

1.1 Introduction

We've been tasked with creating a mobile application that runs on both Android and iOS for Calvary Chapel of Corvallis. This app id designed to create a centralized hub of information that is readily available to members of the congregation. Currently the church has a website which has some information, but it can be quite cumbersome for people that just want to get specific information without having to weed through pages. This app acts as the next step to bridge that gap of information. It provides a simple, easy to navigate interface allowing users to view information about the sermons, donations, events and the bulletin.

1.2 My Sections

The sections that I've been working on have been the events page on iOS, the events page on Android, and the polishing and general design of the iOS app. I began by creating the basics of an application for everyone to work on that acted like a framework to outline where we would take our application. Besides creating the pages, I also created the page icons and got them added to the project which allows users to easily differentiate between the 5 different pages. In terms of the events page, I've been in charge of connecting to the CCB API using the admin account we got access to, and have been responsible to parsing through the XML data that the page returns. I'm in charge of the events page both iOS and Android and have spent most of my time getting it to work with iOS.

1.3 Progress and Problems

I've run into quite a few different problems with the iOS version of the app, specifically with the events page. The events page is setup using a UITableViewController, allowing the page to have a table that the data can be displayed in. Since this information is being populated dynamically, it has to have the ability to generate new cells when they are needed. Because of this, the UITableViewController interfaces with the EventsTableViewCell which is in charge of setting the various label for event name, day and time. I ran into quite a few issues initially when getting these two pages to work together. This was quite frustrating and after hours of debugging and trying to see what was wrong, I moved on to start the XML parsing portion of the events page. I was able to get the basic idea down before I hit a roadblock which required me to get the TableController pages working together. Errors were being thrown around about the two classes not being able to interact with one another, eventually leading me to scrapping what I had made and starting over almost from scratch. While this was quite a pain, the second time around I was able to get the two pages to cooperate with one another.

With the events pages finally working together, I was able to get fully invested in the XML parsing. I found some online resources which helped me get the ball rolling, and was able to get a working implementation of an XML parser working with some test data. When I tried running the XML Parser with our app and tried connecting it to the CCB API, I would get an error stating that the 'data stream could not be read'. As I haven't had too much experience with parsing XML data before, I was a bit confused and took to checking online to see if others had encountered a similar issue before. After days of researching online I wasn't able to find much information, besides some advice to change the config files to particular settings, which we had already had configured correctly. Finally I was able to determine the reason I couldn't read the XML data was due to the way our admin account was setup. We were given a username: bonnc@oregonstate.edu with a password. To connect to the CCB API's public calendar, you have to run a URL session which I was easily able to implement from the command line using curl. With curl however you can specify the -u for username and -p for password. The method that I had to connect with through swift was by doing 'https://bonnc@oregonstate.edu:password@ccb-api-url.com'. What I didn't realize was that the initial @ symbol would conflict with the rest of the URL connection, causing me to be routed to an oregonstate page rather than the CCB page. This realization made things a lot easier as I realized we just needed to change the username. We were able to get the client to update our username and I was able to successfully connect to the CCB API, retrieve the correct XML data, and parse through it to grab the most pertinent information (the event name in this case).

Once I was able to get the updated username working, I was able to make alot of the progress on the page. I was able to get the URL setup to grab the current days date and pass that into the URL connection so the user would be able to see the current date, rather than some random day. I was able to get all this done and figured out on a test app that I had been working on since I didn't want to interefere with Max and Courtney's ability to make changes and test the app. When I finally got to a place where everything was working in my test app, I finally ported it over to the master branch of our application and was immediately hit with some errors. The way that I was utilizing the class in the test app was a bit different than how it was setup on our master branch. I'm currently stuck with this error that I recently stumbled upon as I'm writing this progress report. That will be where I focus my energy next, but once I'm able to get the class issues sorted out, my section should be about done.

1.4 Evaluation

I believe that this has been a really great team to work with, and while we're all pretty new to app development, we're all equally invested and willing to learn as much as we can to get this app completed. Since we don't have much prior mobile development experience, we've really had to research and learn how to get this app working. We've each done our part to research the particular area we're working on, and have been more than willing to help out each other with

debugging or troubleshooting.

I would say that Courtney has filled more of a manager role, being the one who is mainly in contact with our client. Whenever we need to run something by Desiree (our client), we get in touch with Courtney generally over Slack and she'll shoot of an email within a few minutes. I think this has helped in terms of keeping just one consistent channel of communication with our client rather than us each trying to communicate with Desiree. I think Courtney has probably done a bit more than Max and I due to the fact that she's been able to move onto the Android application pretty quickly.

I would say that Max fills the role of the problem solver. He is generally able to take an issue we're having, whether it's having multiple pages not communicating with the main.storyboard, to having his computer not be able to run the simulator, he's able to troubleshoot and find a solution so that we can keep on moving as a team. I would say that Max and I have probably contributed on a pretty equal level when it comes to iOS. He's been able to get started more on Android which is more than I can say for myself.

I would say that I fill the role of the technical expert. I'm the go to guy when there's an issue with git such as merge conflicts, repos failing to find the upstream repo, etc. Generally I'm pretty available on Slack so whenever someone pops a question in there, I'm able to answer it prett quickly and help resolve the issue they might be having. I would say that I've been able to put in as much of a contribution as Max, while being slightly behind Courtney. I've run into a lot of issues with the events page, which I believe is probably our most complicated page that we have in our app.

2 Conclusion

With this term wrapped up I've still got a bit of debugging to do on the iOS version of the app. Once I'm able to complete that debugging I should be able to move forward and complete the iOS app in a relatively short amount of time. My test app had all the proper functionality, so once I figure out the issue with the class and variable passing, I should be able to move onto Android. Now that I have a pretty solid foundation on how to connect to the CCB API and how to parse XML, I think I should be able to get the Android section done relatively quickly. While it may require me to do more research on Java, I have a slightly lighter term for Spring and can dedicate more time to this class rather than having to split it amongst my other classes. In the next coming weeks I'm definitely looking forward to getting this app completed and moving onto getting our poster designed and completd and eventually get to expo.

3 Reflection

Table 1: Retrospective on Winter Term

Time	Positives	Deltas	Actions
Week 0	Got the framework started and began learning xcode	Began iOS Development	We all began the process of framiliarizing ourselves with x-code and Kevin started the IOS project
Week 1	Countinued to become more familiar with Xcode	no code changes this week	Got the starting code distributed to the whole team
Week 2	We delegated which parts each of us were to complete	We now have direction and started researching relevent methods to accomplish our goals	Began the process of teaching ourselves the relevent swift functionality
Week 3	Began work on the events page	Closer to our goals with a few hiccups	
Week 4	Began work on progress report	Overall tuning of the app and still awaiting client to send us more info that we need to continue	Beginning android project and the donations page
Week 5	Met with client and talked over the next steps and our needs	Able to get aditional information from our client and figure out our direction	Delivered a prototype to our client and did mid project followup
Week 6	Started work on XML parser	We began the process of creating a digital paper trail to our work and changes	Finished our progress report, noted some changes to our tech document, and created our presentation
Week 7	Continued work on XML parser	Basic framework for XML parser complete	Need to continue development to get fully functioning.
Week 8	Discovered the issue I was encountering with the XML parser	No changes as of week 8	Need to get in contact with our client so they can update our credentials
Week 9	Got new updated username	Was able to connect to the CCB API but with a different error	Get in contact with our client again to get the admin username updated
Week 10	Was able to get the admin username setup and working	Pulled in my code from my test app to the production app	Have some more debugging to do as a few things weren't working as intended.