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Conclusion Paper

I came into this course with very few expectations as to what I would get out of it. Here I am at the end of the course with invaluable experience and the knowledge that I can come up with an idea, and implement it through code all on my own, which does wonders for confidence as I step out into the working world. I am pleased with the process, as well as all of the things I learned along the way.

When I began, I knew I wanted to code my app for iOS, simply because I own both a Mac and an iPhone, in addition to the fact that I had already taken a course on Android programming, and I wanted to learn something new. In order to code my app for iOS, I needed to learn either Objective C or Swift, as well as how to use Xcode, the programming environment for iOS. I decided to go with Swift over Objective C because it is a newer language, it is what Apple is pushing for iOS coding, and it seemed fairly intuitive. I was able to utilize iTunes U and find some informative online courses from Stanford University, introducing me to Swift and Xcode. I spent a few weeks watching and following along, and ended up creating a neat little calculator app, which taught me the basics that I needed in order to begin building my classroom management app.

Early on, I decided to use NSCoding protocol to save my data. This allows you to save your objects as a file, or something binary like that, in order for data to persist between app lifecycles. I chose this protocol because it was straightforward and much easier to implement than the alternative, CoreData. However, choosing NSCoding became a slight issue toward the end of my project. It works, but it is slow, and only gets slower as I have to save more objects of different classes- i.e. save more students. Because I have a primary array of students, an array of Date objects for attendance tracking, with each Date object holding an array of students that were there on that day in order to save attendance, my app gets bogged down saving and loading data. I decided it was too late to change my data schema for the project and course, but I do plan on changing from NSCoding to CoreData as time goes on, because I very much plan on using this app next year in my AWANA classroom. CoreData is basically a database, allowing instances of classes to be saved so that objects themselves don't have to be saved into memory. It can be backed up by an SQLite Database, which makes searching for saved data even faster. Had I had more time towards the end of the project, I would have made the switch, and had I known more about CoreData and NSCoding in the beginning, I would have chosen CoreData in the first place. This switch will help with the future plan for the app as

well, as I plan on making it so the app can host several different types of AWANA classes, rather than just the one that it does right now.

This project and course have been a very positive experience. I have more confidence in my project planning skills, and know that I can map out objectives and complete them within certain time constraints. I know that I can use resources around me to learn new languages, tools, etc. - something I know will be invaluable in any job I take, as I will constantly be required to learn new things. Moving forward, I plan to improve this app and possibly commercialize it, as AWANA has no classroom management app specifically for its programs. I have a working classroom management app which takes attendance, tracks students and their AWANA progress, which was all I wanted in the first place, and I am very proud of my hard work. However I have come away with much more than just the app; I have a renewed confidence in my coding skills, self-teaching skills, and project management skills.