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COMP 465W

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Project Deliverable 8: Group Reflection

Our team decided to build the BookList iOS application because we have all experienced the absurdly expensive book market run by USD and other vendors. It is far more profitable to find a fellow student to sell one's book to, but it is usually difficult to find buyers. BookList set out to solve this issue for USD students by creating a platform with which students can communicate in a localized, friendly manner. In the end, we were able to implement most of the functionality that we had hoped to, but we are still missing some components. Our current app allows users to post books, search by subject, and view a listing for information regarding the seller's contact details and the book's condition. From the listing, users can contact the seller if they wish to purchase the book.

Our app was also originally intended to implement search functionality by subject and book title, search functionality by multiple subjects, and a page for a user to manage their own listings. In our first customer meeting, it was suggested that we increase the maximum number of books that a single user can post from ten to twenty, which we did implement. Between our first and second customer meetings, however, we were unable to implement the suggestion of being able to sort by aspects such as price or alphabetically. Although our end-product did not meet our original hopes, we are proud of what we were able to build and we learned a great deal about the software engineering process.

One element of software engineering that we are very grateful to have experienced first-

hand is the agile approach. Most of us had never participated in agile methods before, so we were curious to see how we could implement in them in such a small team. The most prevalent method that we utilized was the scrum meeting. It was very difficult trying to discuss tasks and progress when we were not all present, so we found scrum meetings to be extremely productive, since we had most or all our members gathered to discuss the project. The fact that scrum meetings are typically rather short also encouraged us to keep our discussions concise and on-track. Our first documented meeting acted as the task-assignment and plan-creation meeting, while the second documented meeting enabled us to get caught up on our progress, discuss customer feedback, and plan what we still hoped to implement.

In addition to the scrum meetings, our group also utilized paired programming. Our two group members who had the most experience with the Swift programming language and Firebase worked in a pair in order to get the bulk of the development done, while the rest of the group performed research and provided additional support. Although this assignment of tasks sounded like a good idea from the start, we eventually came to realize that it was nonoptimal to have only two group members who were experienced in our development language. In retrospect, we should have designated at least one other member to learn Swift, or picked a different programming language from the beginning.

Despite all the obstacles that we encountered, we are very happy to have a functional BookList app. We are especially proud of the successful implementation of the search-by-subject functionality, as well as the ability to open a particular listing. Our team worked hard to overcome both the planning and programming obstacles in developing the app. Communication during meetings was a clear strength of our team, as our documented scrum meetings and our bi-weekly scrum meetings enabled us to plan and discuss numerous details efficiently.

If we were given more time for this project, we would undoubtedly tackle at least some of the features that we had hoped to implement but were unable to, including: search functionality by subject and book title, search functionality by multiple subjects, and a page for a user to manage their own listings. We think these functions would help make our app a more legitimate online book-exchange application that would be useful to USD students. We believe that our group could successfully implement all of these features in roughly two weeks. If we had this opportunity, we should implement the previously suggested strategy of having additional group members learn Swift so that the development process can move as efficiently as possible. This would require group members to scale a harsh learning curve in a short amount of time, but it would be worth the hard work.

For Project Deliverable 7, our group failed to submit a video documenting a final meeting. This failure was due to the extremely busy schedules of all our group members, in addition to our attempts to complete the application. However, we showcased the entire user side of our application during our presentation, and so we believe that we earned five points out of ten. Although this is not the grade we hoped for on any of our deliverables, part of being a responsible software engineer is owning up to one's own shortcomings. We acknowledge our failure in this regard, but this video would definitely also be a part of our planned tasks if we had more time to work on the project.

Our BookList project taught all of us a great deal about the software engineering process. From our development difficulties, we learned that software engineers must thoroughly plan and be realistic about the features that they can implement in their software. The agile methods taught us the importance of meeting with one's team frequently and efficiently so that all group members are on the same page. Finally, we learned that it is morally responsible for a

programmer to admit their own mistakes so that the project team can maintain a degree of clarity and integrity. Software engineering is a complex process that no one programmer can do alone. The software engineer's team is their most important asset, and although we did not meet our original expectations, we are happy to have been part of a software engineering team.