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DATE: *December 12, 2013*

SUBJECT: *P4 project Retrospective: Collection$ (EE433 Software Engineering)*

Summary

This document summarizes the lessons learned while attempting to complete the software design project of an Android application called Collection$.

# What went Right:

* The initial documentation for this project was very helpful. The XMind tool (mind map) was especially helpful in organizing initial concepts and ideas for the project.
* UML Design at a higher, abstract level was a great tool for visualizing how things should interact.
* Using a repository tool (GitHub) was very helpful in keeping everyone in the group informed of progress made by other team members.
* In the beginning, none of the group had any experience with programming for Android - however by sharing tools, learning material, and code samples we all have a higher appreciation for developing in an android environment.
* Experience with using multiple development tools. Including :MySQL, Sublime, Eclipse ADT, Eclipse Java EE, and Netbeans.

# What went “not so right” (Wrong):

* With not much time remaining in the semester, the group realized it was behind schedule and needed to decide where to focus its attention, and what would be incomplete for the version 1 release. Most of the problems could be traced back to available time, schedule conflicts, hardware issues and improper use of the available tools.
* As the complexity of the project grew, the design and implementation started to need too many revisions. This was partly due to attempting to connect the implementation of 3 separate entities (android GUI, back end, and server)
* The functionality of the repository tool (GitHub) could have been utilized more efficiently. And GitHub software on PC is still a little buggy and troublesome at times.
* More team meetings would have been helpful; we were all busy with work and other classes that it made it difficult to sit down on a regular basis to make sure everyone was aware of each other's intentions.

# What to do next time:

* Hindsight is only useful as a tool for improvement, and application of the following points should produce successful results on future software engineering projects:
* Have established recurring time for organized meetings
* More clearly defined roles and responsibilities
* Better attention to Milestones
* Get help early
* Establish designated recurring time for coding and use results to measure progress
* Gantt chart

Although it is disappointing to not have a completed product for release, this project has been very productive in teaching project management skills that can be applied to any large project, especially a Software Engineering project.

* All team members should spend more time communicating between each other. Specifically, clear expectations of what is needed/required by a section of the total project in order for all sections to come together more easily.
* When learning to develop for a new environment (Android), much more time should be taken with tutorials and sample code before trying to develop the real project - it would save a lot of time to be better informed up front. While Android does use Java - there is a learning curve to apply what we already knew about java to an android environment.