Retrospective

Now that we have finished our design and implementation of our project, we can look back on what happened and see what went the way we expected and what we did not like. One of the issues that we had during this project was lack of detail in our initial design. We also had some issues with not having all of the features up front. Having one of the team members leave was a setback that we were not expecting. The team spent a significant amount of time on testing, but it could have gone better. The team feels that these were some issues that may have hindered our development but we dealt with them efficiently and were able to complete everything we needed.

In our design document, we had a good idea of what we wanted our program to do; it just did not have a very well laid out plan for how we were going to implement that design. This lack of a detailed design and implementation plan is due to the inexperience and lack of knowledge our team had with Java. During implementation we needed to refine and do some redesign of certain aspects of our system. One of the main places that this came into play was designing how our log and set files were used and what they contained. We had designed the contents of these files without knowing about Java's ability to use Serializable classes. This aspect of Java made the file systems we designed and worked on obsolete because using serilization was much cleaner and efficient. Another detail that we had to deal with due to our inexperience in Java was understanding Java applications, Java applets, and how the two compared to each other. The team originally decided to try to implement the project as a Java applet. We coded many of our projects key features with this in mind until we ran into a problem with reading and writing our files. The team tried to find ways around this limitation of applets by researching how to get an applet signed with a certificate that is supposed allow an applet to read and write files to a users computer. However, we eventually decided that the difficulties in an applet were too great and it would be better to develop it as an application.

Feature creep was something that our team had to deal with. Our team had begun implementing the main features of the program when our client came up with some more items that she wanted to be in the system. These features were not essential to the program and were just some nice extras that our client wanted us to place in if we could. It was understood that these late items that were added after we began implementation were not part of our contract and not necessarily going to be implemented. We did implement a lot of extra suggestions that were made such: as print arrangement, print additional information, randomly remove tiles, advanced tile bin options, save/continue

sessions, and overall arrangement comments. The application was improved by adding these new additional features and the team was able schedule them in.

One unexpected setback was one of the team members was lost. This gave us some time spent on needing to readjust our schedule and gave us less manpower to work on the project. The impact on our schedule was small but it could have been further minimized with advanced notice. This loss was not devastating because we rearranged the schedule to keep the tasks on time. Our team kept very good control of the schedule and updated it frequently to make sure all needed tasks were completed. Our team learned the importance of keeping an accurate and updated schedule.

This project put an emphasis on user testing and interface design. Our team had two main methods for getting user feedback. Our online testing that we developed did not yield as many results as we would have liked and did not give us a lot of feedback. If we had known how few online testers we were going to have, we could have spent this time on a different aspect of the project. The main benefit that we got from this type of testing was that a few teachers that submitted testing results were using Mac computers. This allowed us to know how our program looked on a different platform then what we developed it on. The other type of testing was user testing in the Human Computer Interaction room. The only thing that we would have changed about this is to spread it out a little more instead of having them all in the same month time span.

The team feels that we made the most of the time we had on the project and think that despite some of these issues, everything went well. The project was on schedule most of the time that we spent working on it with only a little extra time given to some aspects of the system that took longer then expected. We feel that we efficiently dealt with the issues that we had during this project like the lack of detail in our initial design, not having all of the features up front, unexpected loss of a team member, and few users participating in our online testing. The team thinks that our application is very well developed and due to our extensive user testing, it is easy to use. The application is ready for our client to use and it has everything we promised and more.

Version #	Date	Author	Description
1.0	4/28/06	Neil Alfredson	Initial Write-up