**Retrospective Activity**

One area of iteration two that our group will focus on for improvement in iteration 3 is in the quality of our estimations. In iteration two we were not able to complete all of our planned user stories as a result of significantly over-optimistic estimations. As a result we were working up until the very last minute before the hand-in deadline for iteration 2 trying to finish up our work, making last minute bug fixes, and adding small things like input validation.

Some factors that contributed to this situation are enumerated below:

1. Not adding in extra time for unforeseen problems (or not enough)
2. Not creating granular enough tasks to enable better accuracy in estimations
3. Underestimating the amount of time unit testing actually takes
4. Not taking into account the fact that other courses or deadlines may get in the way (i.e. not revising our estimates part way through when we knew they were no longer accurate because of such a time conflict)
5. Not taking enough time to understand the problems or think of possible solutions at the planning stage before coming up with our estimations

Steps that will be taken in iteration 3 to work on improving the situation are enumerated below:

1. We are adding specific developer stories and tasks for the customer/acceptance testing and integration testing, as well as this retrospective activity.
2. We are not going to schedule any new user stories originally planned for this iteration at the time of the release planning where all the big stories were formulated. We are scheduling in the one big story we were not able to complete for iteration 2. If and only if we have enough extra time we will make the decision as a group to continue working on new user stories, so long as we can be sure they will be done, done in time for the due date.
3. We are going to take extra time in our planning meeting for this iteration to brainstorm more fully what each task entails and break up the tasks into smaller chunks than we did previously.
4. We are adding in more time than we did previously to each task to deal with unforeseen problems.
5. We are going to increase the amount of communication between members of the group, via email or face-to-face, so everyone is more aware of the progress and/or impediments faced by everyone else. In this way we can respond to changing situations as a group and make the necessary changes to the schedule.

Criteria for evaluating success are:

1. We are able to adapt to changing circumstances during this iteration as a group.
2. Our meeting notes are more detailed than they were in previous iterations.
3. Our electronic contents for hand-in are prepared ahead of time such that we don’t feel rushed, preferably by the end of the day on Monday, July 4.