Post Production Notes

Changes in Design

The overall design remained relatively the same due to the fact that much of the code had already been written. However, the GUI lower level design changed in a few ways in part due to our limited understanding of Android applications and how to build them at the time. In particular much more organization was needed than was explained in the original design. First, we figured out how many activities were needed and how they would interact with each other. For example, the `loading_screen.xml` was used as the launcher activity that displays the name of the app once it is initiated. The next activity is the main menu where there are several buttons with the option to start a new game, check high scores, view the about page, or exit. Lastly, before entering a new game, there is an activity that records the difficulty value from a group of radio buttons. Additionally, the user's choice to play with black or white discs is recorded and passed to the `reversi_board.xml` activity. Once in the game board screen, we added a scoreboard, but everything else, such as using buttons, the tablets touch sensing capabilities for user interaction with the actual game and message prompts that displays what the user played, proceeded as planned in the design document.

Difficulties

We had two major difficulties: installing and running android studio correctly and writing the schema for the statistics portion of the assignment. In particular one of our group members had so much trouble installing and using Android Studio and Eclipse with the android plug-in that he could only contribute by not writing android specific code but pair programming and other tasks. Implementing the schema for statistics gathering was fairly difficult due to the requirement that it be stored in an XML file. While some solutions suggested using built-in android libraries, utilizing an XML file to store this information required more than just a simple utilization of a library and required a formatted XML file to store the information on. The complexity of the problem was further strained with the requirement of saving the file on an SD card.

Solutions

To get android studio working correctly the beta version has to be downloaded then run and installed as an administrator on the computer. Once complete updating the application results in no build errors for the SDK. Also when installing Android Studio the user should install it for all devices so that it is saved in the computer directory that the SDK will look for its needed files.

Lessons Learned

The main lessons learned was how to merge an existing project into an Android application. To create a full android app we have to consider variable screen sizes, learn how to arrange objects and buttons in such a manner in the GUI so that the view is inherently obvious to use, as well as creating readable and well maintained code so that future edits are not overly complicated to figure out. We also learned

the intricacies of implementing this such as in the statistics where we had to create an XML file to store the information.

Individual Workload Distribution
Haiping: 25%, Jorge: 25%, Tim: 25%, Joshua: 25%