Eric Prouty CS4233 Project pt. 1

Once my code for the AlphaMon project was complete I traded test cases with two other groups. From these new test cases I only found two total failures of my code. The first failure was in my diceValuesLeft() function. The failure was a result of a defect that my test cases did not catch as I had missed the specific condition when writing my test list. The comments for that function state that as a post condition the returned array must be sorted from largest to smallest. I missed this statement and as a result my code failed to pass that test.

The next test that failed was due to a vague specification of how the AlphaMon system should work. Since in its current state, any move that does not go to a location containing opposing pieces is deemed as valid, therefore I am not dealing with the remaining dice values as they are not technically used for movement. One of the other groups tests requires that the diceValuesLeft() be checked that the size of the array is reduced by one after each move. However, given the current specification I think that this is a superfluous test and should not be included in the current implementation. Also, the only feedback I have received from another team in regards to my test cases is that it found a defect where they were handling the rolling of the dice using the diceThrown() method, rather than in the nextTurn() function as specified by the game comments.

For this implementation of the project I developed 32 test cases over the course of creating the code base, this was then further tested with another 20 and then 18 from two separate groups. Now, taking into consideration that I had the most test cases out of the groups and then only ran into two minor defects when running the other 38, one conclusion could be that having the most test cases provided me with the strongest chances of finding every defect in my system. While this one situation cannot provide concrete proof of this statement, in my opinion having more test cases allowed me to work out more defects before I ran it through other teams test suites.

I think my test cases were very through in the development of this project. The ability to complete 99% of another groups test suite without modification of my production code helped to demonstrate this. Though I had many more tests than the other two groups that I swapped with I think this helped to fully test every aspect of my code.