

Assignment 5

Bug-Reports

All bugs in dominion.c are found by running against my tests. Below is list of bugs I found when running my teammate's dominion code against my tests.

cardtest2/ randomtestadventurer - test Adventurer card function

- Deck count should be decremented by 2, but actual deck count was zero.

cardtest3 - test Great Hall

- Action was added by 2 instead of 1.

Test-Report

My testing experience went well. I was able to successfully run almost all the tests I wrote against my teammate's dominion refactored code, except for randomtestadventurer test, where there was an error of abortion when my code was trying to run assertion on if the actual deck count matches expected. I adjusted my test codes by replacing the assertion with if statement, in order for the test to run through and complete.

Below is a chart of test coverage.

Test	Test Target	Coverage
unittest1	updateCoins()	97.92% of 48
unittest2	getCost()	100.00% of 67
unittest3	initializeGame()	100.00% of 17
unittest4	buyCard()	86.67% of 30
cardtest1	Smithy	80.33% of 61
cardtest2	Adventurer	81.58% of 38
cardtest3	Great Hall	87.80% of 41
cardtest4	Steward	100.00% of 82
randomtestadventurer	Adventurer	87.80% of 41
randomtestcard1	Steward	100.00% of 94
randomtestcard2	Great Hall	100.00% of 41

I don't think my teammate's refactored dominion code has high reliability because there were a lot of failed cases after running against my tests (see detailed bugs in above Bug-Reports section). Since my tests only covers 4 cards and 4 functions, with the scale of dominion.c program, more tests are needed to check the validity of this program.

Debugging

All tests were able to run through, the issue was within the logic of dominion.c codes. I put my codes into Eclipse and used the debugging tool to step over codes to catch any logic error - such as checking before and after value after a logic is applied to see it matches expected. The way I located where to put the breakpoint was based on the bugs I have identified after running my tests.

cardtest2/ randomtestadventurer - test Adventurer card function

Error: Deck count should be decremented by 2, but actual deck count was zero.

Fix: I noticed the logic statement for cardDrawn excluded cardDrawn when it equals to gold - because valid treasure card types are copper, silver, and gold. So, I added back logic when cardDrawn equals to gold and ran the program again, however, that doesn't seem to help. Other parts of the code followed the logic correctly. So, I am having difficult time determining what was wrong. As I keep looking into how to fix this error, this error continues.

cardtest3 - test Great Hall

Error: Action was added by 2 instead of 1.

Fix: I checked the lines of code related to the calculation of actions after Great Hall is played. It turned out the logic was to add numActions by 2 instead of 1. I updated the code by only incrementing numActions by 1. That fixed it.

URL for my GitHub fork (also recorded in the comment section in Canvas submission):
<https://github.com/wangch7/CS362-W2019>