

Test Report 1

Test Approach

For this test, I chose to implement a random tester for buyCard similar to the one created for drawCard.

Random test:

```
for (n = 0; n < 2000; n++) {
    for (i = 0; i < sizeof(struct gameState); i++) {
        ((char*)&G)[i] = floor(Random() * 256);
    }
    p = floor(Random() * 2);

    c = floor(Random() * 10);

    G.deckCount[p] = floor(Random() * MAX_DECK);
    G.discardCount[p] = floor(Random() * MAX_DECK);
    G.handCount[p] = floor(Random() * MAX_HAND);
    G.coins = floor(Random() * 1000);

    checkBuyCard(c, &G);
}
```

The card to buy, the number of coins, and the rest of the game state are randomized, and 2000 buyCard checks are run. This test doesn't really handle segfaults or crashes at all.

A call to gcov shows the following coverage of dominion.c:

Function 'compare'
Lines executed:83.33% of 6

Function 'supplyCount'
Lines executed:0.00% of 2

Function 'fullDeckCount'
Lines executed:0.00% of 9

Function 'whoseTurn'
Lines executed:0.00% of 2

Function 'handCard'
Lines executed:0.00% of 3

Function 'numHandCards'
Lines executed:0.00% of 2

Function 'isGameOver'
Lines executed:0.00% of 10

Function 'scoreFor'
Lines executed:0.00% of 24

Function 'getWinners'
Lines executed:0.00% of 24

Function 'getCost'
Lines executed:0.00% of 30

Function 'discardCard'
Lines executed:0.00% of 13

Function 'gainCard'
Lines executed:0.00% of 13

Function 'updateCoins'
Lines executed:0.00% of 11

Function 'buyCard'
Lines executed:0.00% of 8

Function 'shuffle'
Lines executed:93.75% of 16

Function 'drawCard'
Lines executed:100.00% of 23

Function 'endTurn'
Lines executed:0.00% of 20

Function 'cardEffect'
Lines executed:0.00% of 231

Function 'playCard'
Lines executed:0.00% of 14

Function 'initializeGame'
Lines executed:0.00% of 61

File 'dominion.c'

Lines executed:8.24% of 522
dominion.c:creating 'dominion.c.gcov'

For some reason, though the test compiles, it segfaults immediately after calling buyCard, and so no code in buyCard is covered yet.

I hope to find and fix this issue for the next test report, and potentially try one of the test suites.