Logan Wingard

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CS\_362\_400\_F2017

Assignment-3

**BUGS**

**Unittest1:** Tested gainCard. No bugs

**Unittest2:** Tested scoreFor. Found a bug that caused the for loop that counts vp in a deck to iterate the number of times as cards in the discard pile instead of in the deck. (i.e. if there are 3 curses in the deck and no cards in the discard, the curses wouldn’t get counted.

**Unittest3:** Tested getWinners. Found a bug that would return player 0 as the winner even if player 1 had more VP.

**Unittest4:** Tested getCost. No bugs.

**Cardtest1:** Tested smithy. Found a bug that causes the player to gain 4 cards instead of 3. (My bug added in an earlier assignment.)

**Cardtest2:** Tested Adventurer. Found a bug that causes a segmentation fault, caused by looking for a card in a slot in the hand greater than the number of cards in said hand.

**Cardtest3:** Tested Council Room. Found a bug that caused the player to draw every card that the other players should have drawn.

**Cardtest4:** Tested village. Found a bug causing the player to only gain 1 action instead of 2.

**UNIT TESTING**

According to unittestresult.out, 17.82% of all of dominion.c was executed throughout my tests. 17.82% of 578 lines total is 103 lines of code. Looking through unittestresult.out, I can see which lines have and have not been executed. Through this I can see gainCard had successfully executed all but 2 lines of code, which tells me I could have done a better job at branch coverage. I also see that due to the asserts in my tests, village(which aborts on the first test of the unittest) hardly got tested at all, though it successfully identified the bug.

**UNIT TESTING EFFORTS**

For unittests 1-4, I wanted to cover as much of the code as possible with my tests. For example, on gainCard, I had three for loops, 1 for each pile of cards (hand, deck, discard) however, because I did not test more than the number of cards in the supply count, it never executed the code in that if statement. So for my future tests, I wanted to make sure to cover every single line, like in getCost which tests the cost of every singly card implemented.