Jon Raleigh
CS362
8/12/18

Bug-Reports

Bug: 1
Test: Card Test 1 (cardtest1.c)
Function: cardEffectSmithy()
Error: Expected top card of discard to be Smithy. Was not.

This bug was introduced by the user. It resulted in the Smithy card to not appear at the top of the discard pile as intended, meaning the card was removed from play and future use. It was located because the testing software looked at the top card of the discard pile to make sure that the card was discarded as intended.

Bug 2
Test Card Test 2
Function: cardEffectAdventurer()
Error: The game state failed to change in multiple ways.

This bug was introduced by the user. It resulted in the Adventure card to fail to function in the intended way, as cards were not drawn and added to the gameState struct. This bug was found with the card test software. The software compared the original state pre-function call and the state after the function call, comparing counts of cards that the Adventurer card could effect.

Test Report

Test: Card Test 1 (cardtest1.c)
Function: cardEffectSmithy()
Refactoring required: Sleight update to the testing software to pass the expected parameters to the unit. Updated test to look at cards on the top of piles.
Coverage 20.71% of Dominion.c total. 100% coverage of function.

This function was tested using the card test program written in a previous week. The card initially passed the tests, which caused the tester to go and add additional functionalities that were developed in later weeks to test other units and cards.

The unit is unreliable and causes the card to function in a way that is not consistent with the rules of the game. The card failed to be added to the discard pile as expected.

The code coverage was 100% of that tested and 20.71% of the entirety of Dominion.c.

Test: Card Test 2 (cardtest2.c)
Function: cardEffectAdventurer()
Refactoring required: The original bugged code had to have some changes made to compile.
Coverage: 21.79% of Dominion.c. Incomplete coverage of function.

This function was tested using the card test program written in a previous week. The code as it was available in week 2 was unable to compile due to arrow operator issues. After those were discovered during the compiling process, the code was then tested using the card test.

The card failed 3 of the tests, not changing the hand count and changing the total number of cards in play by adding cards without decrementing or incrementing properly.

The coverage was not complete in this case. The shuffle function was not called and drawn treasures were present such that the else on line 671 was not covered.

Debugging

Test1:
Bugs found and corrected: Line 654

GDB was used for debugging, but failed to catch any of the noted bugs.

The code was reviewed using the returned information from the card test. Since the code failed to place the Smithy card at the top of the discard pile, it was assumed that the problem was resulting from an incorrect call to the discardCard function. Because of the nature of the bug, the code had to be reviewed line by line to determine the issue.

The parameter was updated to send the correct parameter (0 instead of 1) to the discardCard function, causing the unit to behave as expected.

Test2:
Bugs found and corrected: Line 664, 666

GDB was used for debugging, but failed to catch any of the noted bugs.

The code was reviewed using the returned information from gcov and the output of card test 2. It was expected that state would change, so I looked for issues with the state parameters and located instances where they were passed incorrectly. After reviewing the function calls, it was determined that pointers were being used to pass parameters incorrectly.

The incorrect parameters were corrected and the card test began to pass as expected.