CS362, Software Engineering II

Assignment Find/Fix Dominion Test Strategy

Assignment Find/Fix Dominion – Test Strategy

1. You do NOT need to upload code for this assignment.
2. You are going to describe your Unit Test Strategy for finding the Dominion bugs from the Piazza post 'Find and Fix Dominion Bugs'. You will choose **five** (5) bugs from the Piazza post and describe how you would test for those bugs. Describe the Unit Tests using a similar format to the updateCoins example from this week's reading material. Below is an example:

Bug Description: There seems to be a possible infinite loop(starting on line 764) in the feast case of the cardEffect function.

Unit Test: Describe a Unit Test that would find this bug. Describe the test in terms of code, but it doesn't have to be code that can be compiled and can be a mix of code and pseudocode. To Unit Test, you 1) set variable states, 2) call the function being tested, 3) assert whether your assumptions passed or failed. Since you know the bugs exist, the asserts would fail in this case.

Below is an example. Note that the variable states and the asserts are just general examples. You will need to tailor these for your bug and your strategy.

```
// set your card array
int k[10] = { adventurer, council_room, feast, gardens, mine
                 , remodel, smithy, village, baron, great_hall };

// declare the game state
struct gameState G;

// declare the arrays of all coppers, silvers, and golds
int coppers[MAX_HAND];
int silvers[MAX_HAND];
int golds[MAX_HAND];

printf("Begin Testing someFunction():\n");

// set the state of your variables so that you will trigger the bug for feast
memset(&G, 23, sizeof(struct gameState));   // clear the game state
r = initializeGame(numPlayer, k, seed, &G); // initialize a new game
G.handCount[p] = handCount;                 // set this up to trigger bug
memcpy(G.hand[p], coppers, sizeof(int) * handCount); // set this up to trigger bug
```

```
    // call the function that will trigger the bug
    cardEffect(p, &G, bonus);

    // verify that you found the bug with failing asserts
    assert(G.coins == handCount * 1 + bonus); // check a condition
    assert(some condition); // check a condition
    assert(some condition); // check a condition

    printf("Test completed!\n");
```

Deliverables:

1. Assignment-FindFix.pdf document with your Test Strategy for five (5) bugs uploaded to Canvas.