# Scenario – Debugging

## Scenario Description

* This test is designed to find the bugs within the “Crown & Anchor” game.
* Each test will find a single bug within the program.

## Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| Version # | Date | Author | Description |
| 1.0 | 15/10/2017 | Corey Schmetzer | Initial Draft |

## Test Scripts

The following scripts will cover this scenario:

1. Bug - Odds in the game do not appear to be correct.

## Test Components/Requirements

* User plays the Crown and Anchor game

## Script: Bug – Odds in the game do not appear to be correct.

### Script Description

* This script tests the win and loss ratio. The game states that Crown and Anchor games have an approximate 8% bias to the house. So the win: (win + lose) ratio should approximately equal 0.42. This does not appear to be the case.

### Testing Requirements

This test follows the following rules of the game:

* A wager on a particular symbol shall win if the symbol appears on one or more of the uppermost face of the three dice and shall lose if the symbol does not appear.
* Winning wagers shall be paid at odds equal to:-

|  |  |
| --- | --- |
| if the symbol appears on the uppermost face of 3 dice | 3 to 1 |
| if the symbol appears on the uppermost face of 2 dice | 2 to 1 |
| if the symbol appears on the uppermost face of 1 dice | 1 to 1 |

* The overall result should be that the house in favor of winning the game by 8%, therefore the players win ratio should be 42% and should lose 58 out of 100 times.

### Setup

* The program should be running.
* The players balance should be greater than minimum bet.
* The player should place a bet on a single symbol.

### Post-conditions

* The win ratio of the player should be 42%, therefore on average the player should win 42 times and lose 58 times out of 100 plays.

### Script Steps

| **Step #** | **Test Action** | **Expected Results** | **Pass/ Fail** |
| --- | --- | --- | --- |
| 1 | Start a new game | A new valid game is created | P |
| 2 | Pick a symbol and bet 5 | 3 face values of dice and a win or lose result | P |
| 3 | Check winnings result | Confirm winnings amount is correct respective to dice values:   * 0 matches, winning amount = -5 * 1 matches, winning amount = 5 * 2 matches, winning amount = 10 * 3 matches, winning amount = 15 | P |
| 4 | Repeat step 2 to 3 until game ends | Game ends | P |
| 5 | Check win rate | Win rate of 42% | P |

### Test Data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| User | Starting Balance | Three Dices | A Bet | No. of Plays in Game |
| “Fred” | “100” | “d1,d2,d3” | “Crown” | 100 |

### Test Execution

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date/Time | Tester | Test ID | Test Phase | Status |
| 15/10/2017 10:45pm | Corey | 11603457 | UAT | Fail |
| 16/10/2017 10:40pm | Corey | 11603457 | UAT | Pass |