**Step 1: Replication**

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| **Bug Number 2** | | Player cannot reach betting limit. | | |
| **Bug Description** | | Limit set to 0, but game ends with player still with 5 (dollars) remaining. | | |
| **Reproduction Test Description:** | | Run simulation, find instance where player wins on one match and compare balance to previous balance. | | |
| **Pre-conditions** | | Use ‘baseline’ version of Main class, or version after resolution of Bug 1 with steps noted below. | | |
| **Post-conditions** | | N/A | | |
|  | **TEST STEP** | | **EXPECTED TEST RESULTS** | |
|  | Run the simulation (execute Main.main()). | | Simulation starts & prints output of simulation (100 games and stats) to console. |  |
|  | Scroll to end (end of simulation) of output in console. | | Output ends with the player’s balance after the last game (and then stats on the overall simulation) |  |
|  | If the last game ends with the player having a balance of 200, rerun the simulation until the game ends with the player having a balance of 5 .  Note: if using the version after resolution of bug 1 this means re-running the simulation until at least 2 dice are rolled with the same value. | | See above |  |
|  | Scroll up until the start of the last game is found | | The output will describe the starting conditions for game number 99 |  |
|  | Compare the limit (declared at the start of the game) to the final balance (at the end) in the console output. | | While the limit is declared as 0, the game ends while the payer’s balance is still 5:  Start CrownAndAnchorGame.Game 99:  Fred starts with balance 100, limit **0**  Turn 1: Fred bet 5 on CROWN  Rolled DIAMOND, ANCHOR, ANCHOR  Fred lost, balance now 95  …  Turn 78: Fred bet 5 on CLUB  Rolled DIAMOND, ANCHOR, ANCHOR  Fred lost, balance now **5**  78 turns later.  End CrownAndAnchorGame.Game 99: Fred now has balance 5  Win count = 9016, Lose Count = 13587, 0.40 |  |

**Step 2: Simplification**

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| **Automated Test** | TestBug2 |
| **Test Description** | Given a player with a limit of zero, when he plays a round with three dice with a different value to his pick, then the player should end with a balance of zero (equal to his limit). |
| **Test Output** | An exception is thrown: “Placing bet would go below limit.” |