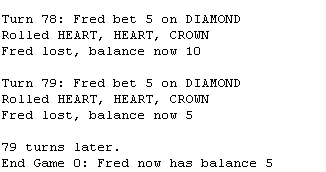
# Assignment 4 – Debugging and Problem Analysis

# Replication

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Name** | | BugTest\_001 | |
| **Bug Test Tested:** | | Player cannot reach betting limit. | |
| **Test Description:** | | Limit set to 0, but game ends with player still with 5 (dollars) remaining. | |
| **Pre-conditions** | | The player starts playing whenever the player’s money is more than zero. | |
| **Post-conditions** | | The player is not allowed to play any further when the amount goes to zero. | |
| **Notes:** | | Limit set to 0, but game ends with player still with 5 (dollars) remaining. | |
| **Result (Pass/Fail/Warning/Incomplete)** | | **FAIL** | |
| **TEST STEP** | **EXPECTED TEST RESULTS** | **P** | **F** |
| 1. | Run the Program | The program starts running with no problem(s) | **PASS** |
| 2. | Player Betting Start | Player starts betting while he has more than zero dollars and the player starts the betting with no problems | **PASS** |
| 3. | Player Betting End | The player should be able to bet until the money is zero | **FAIL** |

Result:

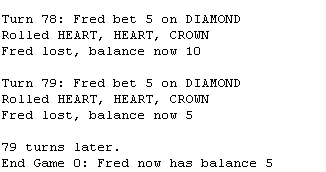


The game finishes when the user still has some balance on the account

# Replication 2

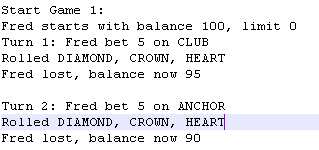
|  |  |  |  |
| --- | --- | --- | --- |
| **Test Name** | | BugTest\_002 | |
| **Bug Test Tested:** | | Dice rolled in each turn of game is same | |
| **Test Description:** | | Dice rolled supposed to be random on each roll | |
| **Pre-conditions** | | Dice rolled supposed to be random on each roll | |
| **Post-conditions** | | Dice rolled supposed to be random on each roll | |
| **Notes:** | | Always the same dice roll | |
| **Result (Pass/Fail/Warning/Incomplete)** | | **FAIL** | |
| **TEST STEP** | **EXPECTED TEST RESULTS** | **P** | **F** |
| 1. | Run the Program | The program starts running with no problem(s) | **PASS** |
| 2. | Player Betting Start | The game shows random dice on each run | **PASS** |
| 3 | During the loop | The program does not change dice value randomly | **FAIL** |

Result:



Always HEART, HEART, CROWN

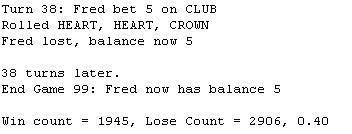
On the next run it becomes DIAMOND, CROWN, HEART



# Replication 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Name** | | BugTest\_003 | | |
| **Bug Test Tested:** | | Win Lose Ratio | | |
| **Test Description:** | | Testing bug where the win lose ratio is more than 42% OR 0.42 | | |
| **Pre-conditions** | | There is a player with balance more than 0 starts playing game. | | |
| **Post-conditions** | | The player finished playing with balance less than bet limit or balance becomes >200. | | |
| **Notes:** | | The bug doesn’t appear every time. But it exists in system and doesn’t comply with game rule. | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | **Fail** | | |
| **TEST STEP** | **EXPECTED TEST RESULTS** | **ACTUAL OUTPUT** | **P** | **F** |
| Run the program | At least one game has win lose ratio>42% | Overall win rate is  60.3% | Fail |  |

Result:

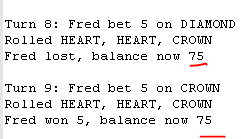


As you can see, the result is 0.40 it should be 0.42

# Replication 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Name** | | BugTest\_004 | | |
| **Bug Test Tested:** | | Game does not pay out at correct level. | | |
| **Test Description:** | | When the user wins, it does not add the win to the balance | | |
| **Pre-conditions** | | When player loses it subtracts | | |
| **Post-conditions** | | When he wins it does not subtract | | |
| **Notes:** | |  | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | **Fail** | | |
| **TEST STEP** | **EXPECTED TEST RESULTS** | **ACTUAL OUTPUT** | **P** | **F** |
| Run the program | When player loses it subtracts from balance |  | Pass |  |
|  | When player wins it does not add up to the balance |  | Fail |  |

Result



# Replication 5

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Name** | | BugTest\_005 | | |
| **Bug Test Tested:** | | Game does not pay out at correct level. | | |
| **Test Description:** | | When the user wins, it does not add the win to the balance | | |
| **Pre-conditions** | | When dice rolls and gives 2 similar results it does not add up double value | | |
| **Post-conditions** | |  | | |
| **Notes:** | | When dice rolls bet 5 on CROWN and dice rolled CROWN, CROWN, HEART it should give win as 10 and add up to the balance | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | **Fail** | | |
| **TEST STEP** | **EXPECTED TEST RESULTS** | **ACTUAL OUTPUT** | **P** | **F** |
| Player bets and wins double | It shows as won 10 | It shows as won 10 | Pass |  |
| Player bets and wins double | Adds up to the balance | Adds up only 5 | Fail |  |

Turn 7: Fred bet 5 on CLUB

Rolled ANCHOR, HEART, HEART

Fred lost, balance now 75

Turn 8: Fred bet 5 on HEART

Rolled ANCHOR, HEART, HEART

Fred won 10, balance now 80

# Replication 6

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Name** | | BugTest\_006 | | |
| **Bug Test Tested:** | | Game does not pay out at correct level. | | |
| **Test Description:** | | When the user wins, it does not add the win to the balance | | |
| **Pre-conditions** | | When dice rolls and gives 3 similar results it does not add up triple value | | |
| **Post-conditions** | |  | | |
| **Notes:** | | When dice rolls bet 5 on CROWN and dice rolled CROWN, CROWN, CROWN it should give win as 15 and add up to the balance | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | **Fail** | | |
| **TEST STEP** | **EXPECTED TEST RESULTS** | **ACTUAL OUTPUT** | **P** | **F** |
| Player bets and wins double | It shows as won 15 | It shows as won 15 | Pass |  |
| Player bets and wins double | Adds up to the balance | Adds up only 10 | Fail |  |

Turn 25: Fred bet 5 on DIAMOND

Rolled ANCHOR, ANCHOR, ANCHOR

Fred lost, balance now 20

Turn 26: Fred bet 5 on ANCHOR

Rolled ANCHOR, ANCHOR, ANCHOR

Fred won 15, balance now 30