**Bug 1:** Game does not pay out at correct level.

UAT case to replicate issue:

Description:

Confirm that player’s balance does not increase even if bet is won

Pre-conditions:

* Dice class exists
* DiceValue class exists
* Game class exists
* Main class exists
* Player class exists

Post-conditions:

* Game is executed
* Evidence that player’s balance never increases

Data required:

* None

**Debugging log**

Example output showing bug:

Turn 3: Fred bet 5 on HEART

Rolled CROWN, DIAMOND, ANCHOR

Fred lost, balance now 90

Turn 4: Fred bet 5 on ANCHOR

Rolled CROWN, DIAMOND, ANCHOR

Fred won 5, balance now 90

Simplification:

To reduce size of output, initial balance set at 10, and limit number of games to 1.

Output when program is run:

Start Game 0:

Fred starts with balance 10, limit 0

Turn 1: Fred bet 5 on CLUB

Rolled CLUB, CROWN, ANCHOR

Fred won 5, balance now 10

Turn 2: Fred bet 5 on CROWN

Rolled CLUB, CROWN, ANCHOR

Fred won 5, balance now 10

Turn 3: Fred bet 5 on DIAMOND

Rolled CLUB, CROWN, ANCHOR

Fred lost, balance now 5

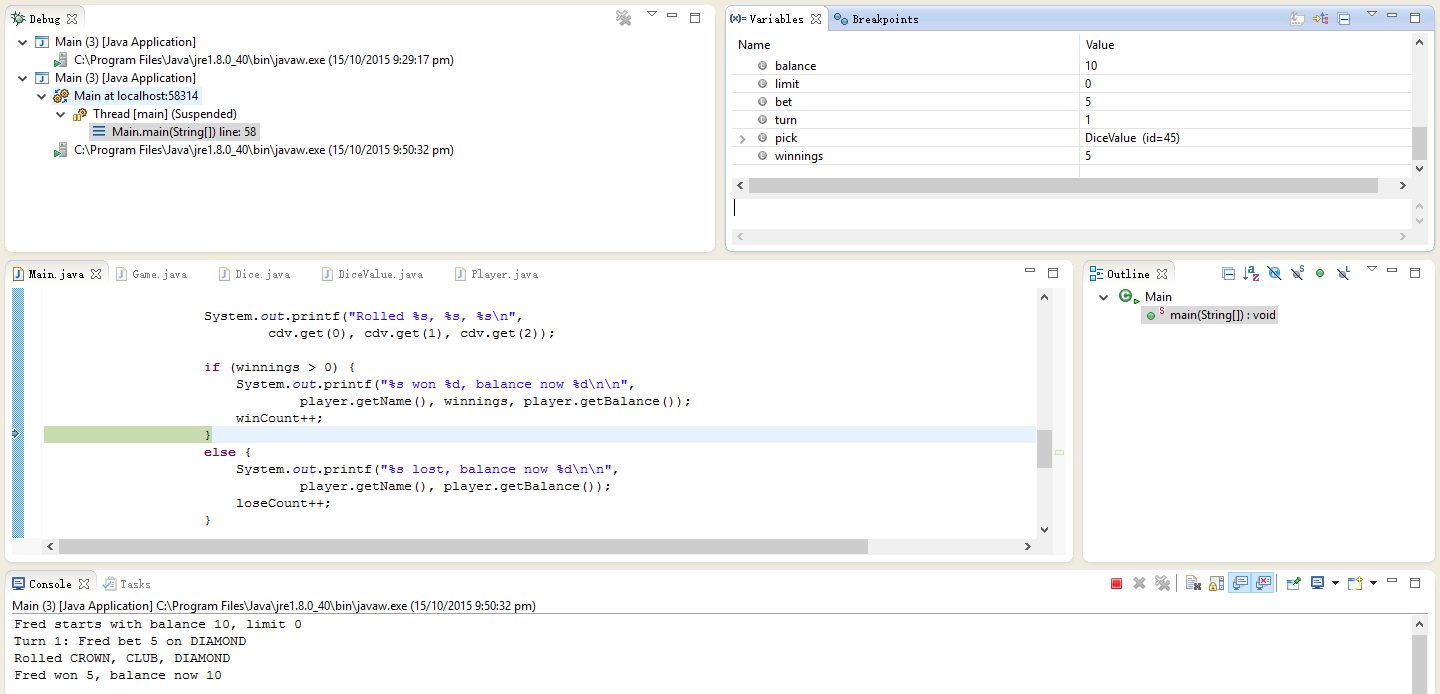
3 turns later.

End Game 0: Fred now has balance 5

Win count = 2, Lose Count = 1, 0.67

Clearly bug is still present after simplification.

Hypothesis: Whenever Fred wins a bet, he does not receive his original bet back.



Here, Fred won the bet. The winnings variable correctly shows 5 but the console incorrectly shows that balance is still 10. All variable values were correct until this point. It should be noted that the variable “balance” in the variable inspector represents the “balance” variable in Main.java and not Player.java. As such, its state is unimportant beyond setting the initial balance of the player.

Resolution:

In the playRound() method of Game.java, the last if statement was changed.

Output:

Start Game 0:

Fred starts with balance 10, limit 0

Turn 1: Fred bet 5 on ANCHOR

Rolled ANCHOR, DIAMOND, CROWN

Fred won 5, balance now 15

Initial balance and number of games was returned to 100. Results checked out to be sane.