**War Card Game**

**Game Description:**

* A card game played using standard card deck (52 cards)
* Played by 2 players
* Shuffle the deck and distribute 26 cards to each player
* Both players reveal the top card at a time
* Player with the higher card takes both cards played
* Card rank: A K Q J 10 9 8 7 6 5 4 3 2 (irrespective of suits)
* It’s called “War” when there is a tie (both cards played are equal)
* In case of “War” both players keep 3 cards face-down and next card face-up
* Player with the higher card takes all 10 cards
* If the face-up cards are again equal, then war continues
* All the cards won will be added to the bottom of the deck
* The first player to win all cards wins

**Assumptions:**

Since there are some rules which are different for different variations of the war game, I have made below assumptions

* The player who runs out of cards first loses the game.
* If any player has less than 3 cards when its war, loses the game

(Example: player1: many cards; player2: 3 cards and its war)

* If both players have less than 3 cards, now if they face war then the player with higher number of cards wins (example player1: 2 cards; player2: 3cards and its war)
* If both players have same number of cards and they are<=3 cards and it’s a war, then it’s a draw

**corner cases:**

* [player1 = 4 cards, player2= 3 cards; its war] [output = player2 loses]
* [player1 = 26 cards, player2= 26 cards; the rank in the order is exactly same]

[output = draw]

* Handled all the points mentioned in the assumptions

**what you might do differently if given more time:**

* I would add more test cases.
* Currently testcase validation is based on observing the output through command line, I would include mechanism to assert the test cases automatically.
* Enhanced Error handling mechanism example: we can’t have 2 same cards of same suit; I would handle such error cases in a better way
* Finally, I would build a nice GUI to graphically play the game