WarPlus Design Specification

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## Summary

This is the card game called War, implemented with a computer player, and with bells and whistles added.

## Rules for the card game War

**Players:** [2](https://bicyclecards.com/players/2/)

The goal is to be the first player to win all 52 cards

### THE DEAL

The deck is divided evenly, with each player receiving 26 cards, dealt one at a time, face down. Anyone may deal first. Each player places their stack of cards face down, in front of them.

### THE PLAY

Each player turns up a card at the same time and the player with the higher card takes both cards and puts them, face down, on the bottom of his stack.

If the cards are the same rank, it is War. Each player turns up one card face down and one card face up. The player with the higher cards takes both piles (six cards). If the turned-up cards are again the same rank, each player places another card face down and turns another card face up. The player with the higher card takes all 10 cards, and so on.

### HOW TO KEEP SCORE

The game ends when one player has won all the cards.

## Pseudocode Game Flow

states:

deck Class

- cardsNum

- deckCategory (cardsUnplayed, cardsWon)

player Class

- player1CardsRemaining, player1WinPile

- player2CardsRemaining, player2WinPile

winner

tieQueue

tieWinner

1. playIntroGameMusic();

2. renderGameIntroScene();

3. turnOffMusic();

4. howToPlay() button is "available".

5. Initialize() game.

a) Randomize deck,

b) Split into two decks,

c) Assign each half to a player.

6. shuffleCards().

a) Actual card deck is randomized during initialize; this is just a visualization animation for entertaiment value.

7. renderGame()

a) first two cards are moved to the battlefield.

b) call cardsCompare().

c) if they are equivalent {

d) cardsGone()? Quit();

d.1) Move tie cards to the left. tieQueue.push()

d.2) Next two cards are moved to the battlefield.

d.3) If too many ties to move new battleCards into normal location, push new

card load to the right.

d.4) If a player runs out of cards during a tie, they lose.

d.5) Call cardsCompare().

e) else

e.1) Hightlight winning card with blinking border, moveCardsToWinnerAnimation();

e.1.a tieQueue.pop() until empty.

e.2) cardsGone()? declareWinner(), quit().

else

e.3) return renderGame();

8. quit()

a) renderWinnerAnimation();

b) playAgain()?;

## Functions

### function shuffleDeck() {

### }

### function showPayer1AmmoPile() {

### }

### function hidePlayer1AmmoPile() {

### }

### function showPlayer2AmmoPile() {

### }

### function hidePlayer2AmmoPile() {

### }

### function showPlayer1WinPile() {

### }

### function hidePlayer1WinPile() {

### }

### function showPlayer2WinPile() {

### }

### function hidePlayer2WinPile() {

### }

### function playPlayer1CardFaceUp() {

### }

### function playPlayer2CardFaceUp() {

### }

### function playPlayer1CardFaceUpFlipAnimation() {

### }

### function playPlayer2CardFaceUpFlipAnimation() {

### }

### function compareCards() {

### }

### function moveTieCardsAside() {

### }

### function playPlayer1CardFaceDown() {

### }

### function playPlayer2CardFaceDown() {

### }

### function moveCardsToPlayer1WinPile() {

### }

### function moveCardsToPlayer2WinPile() {

### }

### function movePlayer1WinPileToAmmoPile() {

### }

### function movePlayer2WinPileToAmmoPile() {

### }

## Sounds

### Cleartheboard.mp3

### Cowbell.mp3

### Launchswell1.mp3

### Launchswell2.mp3

### Player1cheer.mp3

### Player2cheer.mp3

### Quit.mp3

### Shuffling.mp3

### Startgame.mp3

### Swish1.mp3

### Swish2.mp3

### Toobad.mp3

## Images

### 6 player 1 images:

#### Default player 1 Image:

### 4 player 2 Images:

#### Default Player 2 Image: