

HW5 Due: April 15, Sunday, at 11:59PM

You are given the following problem statement:

Develop the design of the cards, deck, shuffle, and deal of the game of Battle Cards.

Battle Cards has the following rules:

1. There are K (at least 2) players who alternate being dealer.
2. The deck has 52 cards with 4 suits and 13 cards per suit.
3. Before each game the deck is shuffled by the dealer.
4. The deal starts with the non-dealer and alternates between dealer and non-dealer. All cards are dealt from the deck.
5. The players may not look at their cards.
6. The game is made up of a series of battles.
7. Each battle is played to its conclusion. At the end of a battle if a player has less than 5 cards they are out of the game.
8. Every player participates in a battle by putting 1 card on the table face up. The player with the **lowest** card wins the battle. **The Ace is the lowest card in a suit and the king is the highest.** If there is a tie for lowest card, both the players play one more cards on to the table face down and another face up. The last card of the two played are then compared. The lowest wins. This step can be repeated until the battle is won.
9. The player winning the battle gets all the cards on the table.
10. If during a battle, a player does not have enough cards to continue, they are out of the game and the game is over.
11. The game is over when there is only one player left.