CS 341 Project #3

- For this project, you will be extending Project #2 to play a complete game of *Clubs*:

  • Play continues until there is a winner. The first player to reach 15 points to wins. If more than one player reaches 15 points and the top players are tied then play continues (with all players) until some player has at least 15 points and more than all of the other players.

  • After the cards are dealt for each round, the next card is "turned up". If it is a club then play proceeds as described in Project #2.

  • If the "turned up" card is not a club then players (starting with the player to the left of the dealer) each have one chance to bid. They can either pass or bid between 1-5 tricks. They must bid higher than all of the previous players or pass. The highest bidder wins the bid and chooses trump for the round.

  • After trump is chosen, players (starting with the player to the left of the winning bidder) each decide whether they want to play or not. If a player chooses to not play then they re-enter the game on the next round. If a player chooses to play then the round is played as described in Project #2 (with players who chose to not play being skipped) using the designated trump.

  • Scoring for the round is as follows. Each player who chose to play gets 1 point for each trick that they took. Each player who chose to play but took no tricks gets 5 points deducted from their score. If the winning bidder did not take at least as many tricks as he/she bid then 5 points is deducted from their score.

- You can use any strategy that you like for bidding, deciding whether to play a round or not, and deciding what cards to play on a trick as long as there is some *strategy* used. In other words, you cannot always bid or play or use a random number to make these decisions. Your decisions must be based on the cards in your hand and the previous players' decisions. You can keep track of all cards played, but you cannot cheat (i.e., look in opponents' hands or the blind).

- In addition to submitting your code (which should display information about each trick and round as described in Project #2, and also information about the players' bids and decisions about whether to play a round or not and their scores after each round), you must submit a short write-up describing the strategy that you used for bidding and deciding whether to play or not.