

Small Computer Software Network Blackjack  
EE/CS 356 Project 5

DUE 11-7-16

For project 5 it will be your task to recreate the card game blackJack, but instead of playing the game with someone across the table, you will be playing over the network.

**Blackjack**, also known as **twenty-one**, is the most widely played [casino](#) banking game in the world.<sup>[1]</sup> Blackjack is a comparing [card game](#) between a player and dealer, meaning players compete against the dealer but not against other players. It is played with one or more [decks](#) of 52 cards. The objective of the game is to beat the dealer in one of the following ways:

- Get 21 points on the player's first two cards (called a "blackjack" or "[natural](#)"), without a dealer blackjack;
- Reach a final score higher than the dealer without exceeding 21; or
- Let the dealer draw additional cards until his or her hand exceeds 21.

The player or players are dealt a two-card hand and add together the value of their cards. Face cards (kings, queens, and jacks) are counted as ten points. A player and the dealer can count an [ace](#) as 1 point or 11 points. All other cards are counted as the numeric value shown on the card. After receiving their first two cards, players have the option of getting a "hit", or taking an additional card. In a given round, the player or the dealer wins by having a score of 21 or by having the higher score that is less than 21. Scoring higher than 21 (called "busting" or "going bust") results in a loss. A player may win by having any final score equal to or less than 21 if the dealer busts. If a player holds an ace valued as 11, the hand is called "soft", meaning that the player cannot go bust by taking an additional card; 11 plus the value of any other card will always be less than or equal to 21. Otherwise, the hand is "hard".

The dealer must hit until the cards total 17 or more points. (At many tables the dealer also hits on a "soft" 17, i.e. a hand containing an ace and one or more other cards totaling six.) Players win by not busting and having a total higher than the dealer's. The dealer loses by busting or having a lesser hand than the player who has not busted. If the player and dealer have the same total, this is called a "push", and the player typically does not win or lose money on that hand. If all available players bust, the hand ends automatically without the dealer having to play his or her hand.

Blackjack has many rule variations. Since the 1960s, blackjack has been a high-profile target of [advantage players](#), particularly [card counters](#), who track the profile of cards that have been dealt and adapt their wagers and playing strategies accordingly.

Blackjack has inspired other casino games, including [Spanish 21](#) and [pontoon](#).



The image shows a digital display of a blackjack table with the title "Table Blackjack" at the top. Below the title is a table of rules and payouts. The table has two columns: the left column lists the rule or event, and the right column lists the corresponding payout or action. The background of the table is a light green color with some faint card icons visible.

Table Blackjack	
Blackjack	3 to 2
Wins	1 to 1
Pushes	Returns your bet
Insurance	2 to 1

Minimum implementation:

Server that allows 5 concurrent connection and nicely rejects additional connections.

Server must maintain the table and keep track of the shoe (seven 52 card decks). A new shoe should be shuffled when a single deck (52 cards or less) remains in the shoe after the completion of a hand. The server should act as the dealer allowing each player to bet on his/her cards, and must payout following the rules of blackjack. The server should deal each hand in an orderly manner controlling the flow of the game. IE each network player should wait for his/her turn. Each player should be able to see and follow the play of the other players.

The client user interface should allow space for up to 5 players and a dealers hand to be shown. Each player can receive up to 5 cards per hand. When a cards is dealt the interface should include an animation of the card moving to each player. After the initial deal each player should be allowed to bet or pass. After all bets are taken each player should be offered the chance to hit or stay based on the rules above. Game play should be organized by the server.

Betting can be done either with a simple text system. (IE current holding and current bet)

Additions:

Player Images

Chip animations

Drag and Drop

Reporting to connected user where they stand in line. Estimating wait time.

Online chat between players

Other animations

Hand Splitting

insurance