

Final Project Proposal
Cruzse Casino!

The aim of our final project is to simulate a real life casino, in order to allow a user to enjoy typical casino games without the threat of losing real life money. The primary game will be a form of Poker, either Blackjack or Texas Hold'em.

Our primary aim, at the absolute minimum, will be Blackjack, and then we will hopefully move on to Texas Hold'em.

Blackjack is played by dealing each player participating two cards, as well as two to the dealer himself. The dealer leaves one of his cards face down, and each player has a turn at trying to get the total value of their cards to 21, or any number under that. If the cards exceed 21, the player loses his bet. The player with the value closest to 21 at the end of the round is the winner. The dealer wins in any ties.

Texas Hold'em has slightly more complicated rules, which would be better understood reading a guide online. A very simple description is that, using 5 cards, you must try and get a combination of cards that holds the most "value". Some examples include a "two pair" (two of the same kind), "straight" (five consecutive ranks), or the best hand in the game, a "royal flush" (5 cards of the kind in order ending with an ace).

We may also include other games/forms of entertainment found in a casino, such as a slot machine.

The skills we hope to illustrate through this project include:

- Ability to create an organized and understandable class structure
- Knowledge of Algorithms through probability calculations based off of cards in play and potential outcomes, as well as a computer in Blackjack that can make logical decisions on whether to hit, fold or stand.
- Knowledge of data structures, specifically Arrays and how to manipulate them.

User Experience:

The user will be allocated a set amount of money when he enters the Cruzse casino, and allowed to play any game until all that money is lost or the user decides to leave. User input will be taken using the `cs1.Keyboard` package. The user will be able to make bets, raise and fold depending on the game, and alternate between games.