



# TEXAS HOLD'EM POKER

## TEAM 4

Texas Hold'em Poker is one of the popular forms of poker. Similar to regular poker, each player has two cards and the table have five cards. The goal of the game is get the highest cards and eliminate each player until there is one left. The winner wins all the money.

# TEXAS HOLD'EM POKER

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Description of the game:

Texas hold'em poker is known as a gambling game in tournaments and casinos. You can be a winner that walks out with millions of dollars or someone that leaves with nothing. Texas Hold'em is a standard game of poker. Each player has two cards face down and there are five cards face up on the table. The dealer flips the first three cards up, which is the first round. The Second round and River round, the dealer flip a single card on each round. Also, players can bet or call a move on each round. Fold is when the player forfeits the round and losses the chips he bet. Raise is when a player makes an amount of bet. Call is when the player accepts the other players raise. Check is when the player does not make a bet if only the previous players did not make a bet. Lastly, all in is when a players bets all of his/her pot. The difference between hold'em with other poker games is the betting structure. The dealer is rotated clockwise after each hand which changes the position of the dealer and blinds. Small blind and big blind which force two players to bet and rotates around the table, also for the dealer. The objective of the game is to eliminate each player until one player is left and the last players wins the entire pot.

For more details refer to <http://www.pokerstars.com/poker/games/texas-holdem/> for information about how the game is played.

## A.I. GOALS

We would like the A.I. to be able to beat the average Texas Hold'em player, or at the very, least someone who is learning the game. The A.I.'s strategy will be based off of the probability that his hand will beat the other players' hands. Eventually, after we have a template for our A.I., we may consider having a few different A.I.s with different personalities, such as impulsive, conservative, etc. The reason this idea is so open ended is that this is a very ambitious project, and before we can get started on the A.I. we must have a fully functioning game. We don't want to commit to something that we may not have time to do.

**Project Manager:** George Uy de Ong II

## Specifications:

- Support 2-5 players locally
- Implement a GUI interface that enables user to *raise*, *call*, *fold*, *bet*, and create *hand combinations* via buttons and/or drag and drop
- Project shall be able to support all the rules of No-Limit Texas Hold'Em
- Implement a GUI interface that resembles a Texas Hold'em layout
- AI will be able to determine when to *raise*, *call*, *fold*, and *bet* based on an algorithm

- AI will be able to respond to its turn within two minutes
- Create an Artificial Intelligence (AI) with a **minimum 95% success rate.**

## Team members:

## Emails:

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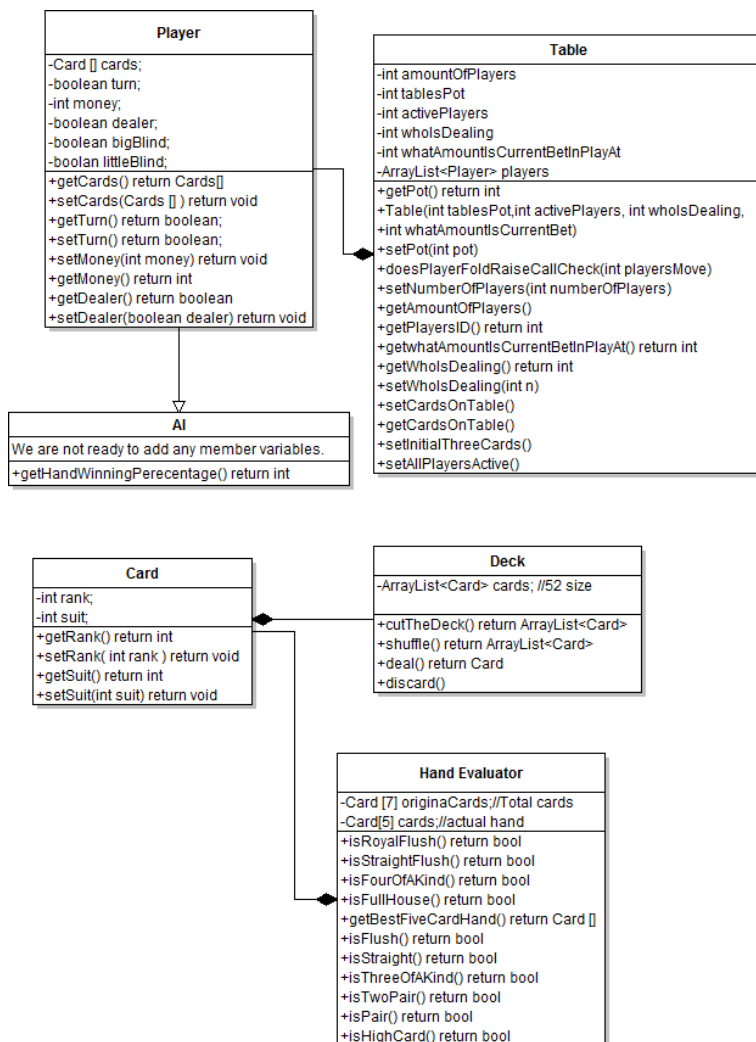
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## UML



### INFO on non intuitive classes

#### -Player

Everyone who is playing has a player object. The Player class will keep track of various things. These things can be seen by the members of the class. The player will interact with the GameObject. i.e. when you place a bet you are telling the GameObject what the bet is and the GameObject will add it to the pot

# Texas Hold'em Poker Game

Single Player  
Settings

Chance to win  
62%

Bot 2



Bot 1



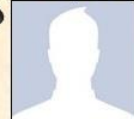
Bot 3



Bot 4



Player 1



\$5000

Fold

Pass

Call

Raise

All In