Chapter 18

The Design Document

The Design Document is the designer's entire vision spelled out in detail, which includes all of the storyline, character dialog, world maps, city views, and room specifications with sample wallpaper, artwork, and rug designs, audio content for background or ambient sounds, sound effects and character dialog (with accents and speech patterns), programming, and AI considerations. This document is often called the "Design Bible," since it is the document written by the designer for the entire team to follow, including the programmers (game and engine, technical programmers), the artists (both scenery and character artists), audio specialists (composer, special effects, background sound engineers, ADR and Foley specialists), and game testers. The concept is "if something exists in the game, it must appear and be described in the Design Document." It is the common point of reference that the entire team understands and follows to create the designer's vision. It is from this document that programmers (usually the lead programmer or technical director) and the artist (usually the head artist) refer to when documenting the technical spec (or specification), which explains in detail the in-depth technical issues of all the game code, the engine code, and the artwork and audio files (describing the file's name, size, and description).

Background

In late May 2001 I met with Phantom EFX in Iowa to discuss a follow-up game to Reel Deal Slots. My previous "casino" games included products from Villa Crespo Software, such as video poker (Stanford Wong Video Poker and Dr. Wongs Jacks+), black jack (Dr. Thorp's Black Jack), craps, roulette, and poker (Amarillo Slim's Dealer's Choice, 7 Card Stud, and Ruckus Poker). The meeting determined that the product was to be a poker game, and some basic game design issues were discussed and written down.

In June 2001 the project was underway as design, programming, and artwork progressed concurrently. The distributors wanted a Christmas product, and that meant a mid- to late-August deadline (a gold master reproduced and boxed by the end of August). That was a 12-week project

life cycle. My friends in the industry laughed when I chatted with them about the project, claiming that the time needed to complete a game of this size was six to twelve months.

This case is *not* (I repeat *not*) the usual project life cycle. Several important issues had to be done to meet these critical deadlines, such as numerous daily meetings in the beginning to flesh out the game design, total control of the project by the programmer (me), and working six to seven days a week, ten to sixteen hours a day. Needless to say, the official design document was never written. The design discussed daily was written down, and artwork submitted to programming had to be documented (filename, screen positions, file format).

The project shipped on time with a few items dropped from the design document and the Internet component placed in the first patch (downloadable update). In the design document of Reel Deal Poker Challenge in this chapter, I note the design originally planned, and in brackets ("[this was dropped from the game because...]") I discuss issues and reasons for changes, later implementations, or dropping the issue from the game.

I have often read articles and books on game design that discuss game design documents in theory. In this chapter I show you in detail what goes into a game design document. This document is provided as a tutorial so you can start with this template and create your own, much better design documents for your visions—the games of the future.



Reel Deal Poker Challenge Design Document

PUBLISHER: PHANTOM EFX

GENRE: CASUAL GAME WITH ADVENTURE

ELEMENTS

PLATFORM: WINDOWS 98/2K/Me/XP WITH DIRECT X 8.0

DESIGNERS: (Alphabetic order)

Roger E. Pedersen Aaron Schurman Danny Stokes Marty VanZee

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Chapter 18

Poker Four Player

First Floor: Roman Motif

Yvette

```
Profile
          Poses
          Mouth Animations
          Animated Eyes
     Sven
          Profile
          Poses
          Mouth Animations
          Animated Eves
     Hoyt
          Profile
          Poses
          Mouth Animations
          Animated Eyes
Second Floor: Oriental Motif
     Melvis
          Profile
          Poses
          Mouth Animations
          Animated Eyes
     Jacqueline
          Profile
          Poses
          Mouth Animations
          Animated Eyes
     Mortimer
          Profile
          Poses
          Mouth Animations
          Animated Eves
Third Floor: Egyptian Motif
     Lizzie
          Profile
          Poses
          Mouth Animations
          Animated Eyes
     Qiangsheng (aka "Q")
          Profile
          Poses
          Mouth Animations
          Animated Eyes
     Lou
          Profile
          Poses
          Mouth Animations
          Animated Eyes
Special Floor: World Championship Poker Room
```

```
Trevor
                     Profile
                     Poses
                     Mouth Animations
                     Animated Eves
                Trevor has been beaten (Red Dress Dance)
     Eight Player Characters
     Cards
           Whole Cards
          Discarded Cards
          No Alpha Round Cards
          Fake Drop Round Cards
          Fake Drop Shadow Cards
Cashier's Cage
     VIP Casino Card
     VIP Clipboard
     Cashier's Cage
Credit Screen
Statistics Screen
The Prize Vault
Chips
Tournament First Prizes
     Floor 1 $5,000 Tournament Prizes
     Floor 1 $25,000 Tournament Prizes
     Floor 2 $25,000 Tournament Prizes
     Floor 2 $100,000 Tournament Prizes
     Floor 3 $100,000 Tournament Prizes
     Floor 3 $500,000 Tournament Prizes
     Special Floor $2,500,000 World Championship
Exit Game
Betting/Raising
Scriptwriting
     Yvette
     Sven
     Hovt
     Melvis
     Iacqueline
     Mortimer
     Lou
     Q
     Lizzie
     Trevor
     Cashier, Bouncer, and Manager
Programming
Basic Poker AI
     The AI to Determine the Best Poker Hand Using Five to Seven Cards
     Draw Poker (No Openers and Jacks or Better to Open)
```

Five Card Stud

Seven Card Stud, Chicago Lo, and Chicago Hi

Texas Hold 'Em and Omaha

Game Variations: Order of Play

Draw Poker No Openers and Jacks or Better to Open

Five Card Stud

Seven Card Stud, Chicago Lo, and Chicago Hi

Texas Hold 'Em

Omaha

Overview

Reel Deal Poker Challenge takes place in the Poker Palace where players from each level's lobby enter the cashier cage, the slot room, the poker room, or the poker tournament room.

The goal of Reel Deal Poker Challenge is to advance through each of the three levels by winning tournaments and finally beating the World Champion in a winner-takes-all showdown.

Poker game variations available are Draw Poker, Draw Poker with Jacks or Better, Five Card Stud, Seven Card Stud, Chicago High, Chicago Lo, Omaha, and Hold 'Em. (Omaha, a variation of Texas Hold 'Em, was added due to its Internet and casino popularity.)

Based on the successful features from Reel Deal Slots and Video Poker, Reel Deal Poker Challenge will incorporate two addictive features, such as the Prize Vault and "VIP" player areas.

Players enjoy guessing what prizes they can win and gaining prizes in their "prize vault," as well as earning the right to have access to upper levels where there are better players and higher stakes. The Internet play through the Game Spy site will allow players (up to eight) to play a selected poker variation and increase their chip inventory against other human players.

Each room and lobby will have its own unique theme from "Oriental" to "Roman" to "Egyptian" accompanied by ambient (background) music in the lobby and in each room.

The slot room will be an extension to the Poker Palace to show off (and gain sales for the slot game) and increase the player's chip inventory.

(Although the players could enter the slot room and play several slot games, the money lost or won in the slot room is not added to the player's chip inventory. The prior product written in Linux and Windows under a different compiler using a special library for graphics and sound combined with the extremely short development cycle made this feature a low priority. Finally, it was implemented as a separate room with an "order this great product" screen before returning to the Poker Palace lobby. These are the realities that separate a design document and your vision versus getting the product on the shelf in the time required—usually beyond most of the team's control.)

Rules of Poker

Poker is played by using a single deck of 52 cards. The deck has four suits: clubs , diamonds , hearts , and spades . Each suit has 13 cards ranked two through ten, jack, queen, king, and ace (the ace can be the highest or lowest card).

Poker games always begin with a shuffle to randomly sort the deck. A brand new deck always has the 52 cards in suit and rank order.

Hand Rankings

The following examples are in ranking order, meaning the best hand has a ranking of one and the worst hand is of rank ten.

Rank	Hand Name	Description of Hand	Example	
1	Royal Flush	A, K, Q, J, 10 of same suit	10 , J , Q , K , A	
2	Straight Flush	Five same-suit consecutive cards	4 ,5 ,6 ,7 ,8	
3	Four of a Kind	Four cards of the same rank	7 ,7 ,7 ,7 ,6	
4	Full House	Three of a kind plus a pair	3 , 3 , 3 , K , K	
5	Flush	Five cards of the same suit	3 ,7 ,10 ,Q ,A	
6	Straight	Five cards in sequence	5 ,6 ,7 ,8 ,9	
7	Three of a Kind	Three cards of the same rank	J,J,J,8,9	
8	Two Pair	Two pairs of different rank	5 , 5 , 9 , 9 , 8	
9	One Pair	Two cards of the same rank	A , A , 2 , 4 , 8	
10	High Card	None of the other rankings	K , 2 , 4 , 6 , 8	

Poker Variations

Poker has many variations with each variation having its own rules. The more popular poker variations are Draw Poker, Five Card Stud, Seven Card Stud, Chicago Hi, Chicago Lo, Texas Hold 'Em, and Omaha. Most poker variations can be played with two to eight players. The cards are shuffled and distributed by a player called the dealer. In all variations, the first card is given to the player to the left of the dealer. A round of betting consists of each player deciding whether he should bet (or raise after the first bet was made) an amount from the group's agreed-to minimum to maximum, fold (quit this round of play), or check (agree to cover the current amount due to the pot). When three raises to the original bet have been made or all players have checked, the betting round is completed.

In Draw Poker, all players make a small blind bet or ante before receiving any cards. Then the players, starting with the player left of the dealer, receive cards until each player has five cards. Players carefully look at their cards and determine which cards to keep and which cards to discard. Players can discard up to three cards (or four cards if they are keeping an ace). Before discarding, each player may bet or raise, fold (quit this round of play), or accept the current bet amount (check). Then the remaining players discard their cards. Another round of betting occurs where each

player can bet, fold, or check. After all players have checked or three raises have occurred, the players must show their cards; the player with the highest hand wins the pot (all bets made). If only one player remains (no showdown), he wins and his cards can remain unexposed.

One variation of Draw Poker that is commonly played is Draw Poker Jacks or Better, where to open the first round of betting the player needs a pair of jacks or better (a better ranking like three of a kind) to bet. This lets the other players know the player has a hand with a pair of jacks or better. If no player can bet (no hand has at least a pair of jacks), the cards are reshuffled and a new round begins (ante and all). This variation can make the pot quite large with antes and the bets of players with bad hands who fold earlier.

Five Card Stud is a variation where each player receives their first card face down (called the "hole"), the next three cards are dealt face up, and the last card is dealt face down. The player to the left of the dealer receives the first card. The player with the lowest first card must bet the minimum. Some variations have all players at the start ante up (a small bet). After all players have received their up cards (cards three and four), a round of betting occurs. Then after the fifth card (a down card) has been received by all players, the last round of betting occurs. In each betting round after the first, the player with the highest-ranking hand showing (only the up cards) starts the betting process. If only one player remains, he wins the pot and his cards can remain unexposed. Otherwise, the remaining players show all five cards and the player with the highest ranking hand wins the pot.

Seven Card Stud is a variation where the first two cards are dealt face down (the "hole") and the third card is dealt face up. On the first card up, the player with the lowest up card must make the minimum bet. Each player must either bet (raise), fold, or check. After the first round of betting, the player with the highest ranking hand of shown cards opens the betting round. The cards four through six are dealt face up, and after all players have received that round's card, betting occurs. The last card (the seventh card) is dealt face down unless in an eight-player game all eight players remain, and then the last card is dealt as a community card (shared by all players). If only one player remains, he wins (no showdown) and his cards may be left unexposed. Otherwise, all remaining players must show their cards, and the player with the highest-ranking hand wins the pot. If more than one player has the highest-ranking hand, they split the pot or the player with the highest suit wins. The suit order is usually spades (the highest), hearts, diamonds, and clubs (the lowest).

Chicago Hi plays exactly like Seven Card Stud, except the player with the highest spade in the "hole" splits the pot. The ace of spades is the highest card. If the last card (seventh card) is a community card, it cannot be used as a "hole" card. Chicago Lo plays exactly like Seven Card Stud, except the player with the lowest spade in the "hole" splits the pot. Players must decide whether the ace of spaces is the lowest card or the two (deuce) of spades is the lowest. If the last card (seventh card) is a community card, it cannot be used as the "hole" card.

Over the last few years, Texas Hold 'Em and Omaha have become popular variations.

Many of the top poker players consider Texas Hold 'Em to be the most challenging and sublime of all the poker games. Texas Hold 'Em is the game played to determine the undisputed champion at the World Series of Poker at Binion's Horseshoe in downtown Las Vegas.

Texas Hold 'Em is a seven-card poker game where each player receives two down cards and the remaining five cards are called "community cards," which are shared by all of the players. Each player must make his best five-card poker hand using five out of the seven cards (his two cards plus the five community cards). After the two down cards have been dealt to all of the players, the player to the left of the dealer must make a small blind bet. Then a round of betting occurs where each player must bet (raise), fold, or check. Then five cards are placed face down in the center as community cards. The middle three community cards (the "flop") are turned over (face up) and another round of betting occurs. Then the first community card (the "turn" card) is flipped over (face up) and another betting round occurs. Finally, the fifth community card (the "river") is turned over (face up) and the final round of betting occurs.

If more than one player remains, the player with the highest ranking hand wins the pot. Any combination of the player's own two down cards and the five community cards can be used to make the best five-card poker hand. The pot is split if a tie occurs.

Omaha is a form of Texas Hold 'Em that is very popular in casinos and on "poker night." Omaha is a nine-card poker variation where each player is dealt four down cards and the remaining five cards are dealt face down as community cards (for all players to use). Each player must create the best ranking poker hand by using two of his four cards plus three of the five community cards (Omaha players often say "Two from the hand, three from the board"). Just like in Texas Hold 'Em, after the first four cards are dealt, the player to the left of the dealer must make a small blind bet. Then the players must bet (raise), fold, or check. The middle three community cards are turned face up, and another round of betting occurs. The first community card is flipped, and another round of betting occurs. The last, fifth, community card is turned over, and the last round of betting occurs. The players remaining show their cards, and the player with the best ranking poker hand wins the pot.

Start of the Game (or After the Game Icon Is Clicked on)

The Cashier's Cage

Players start their first game in the cashier cage, where they must register to proceed into the lobby. In the cashier's cage, players can turn on or off the four-player poker room's character comments, turn on or off ambient sound (background music), look at their statistics for each poker variation (should I call if I'm only holding a pair of aces in Draw Poker?), register as a player and get their name and unique ID number on their VIP Casino Card, or see the credits (the people who worked night and day to provide you with this fine entertainment).





The cashier's cage

VIP registration

VIP Register

The VIP registration screen has several required fields that must be entered before proceeding to play the game, such as the player's title (Mr., Mrs., or Ms.), the player's first and last name (two separate entered fields), and the player's birthday (month and day as two digits). Optional fields are the player's address, city, state, and zip code (allow up to ten digits). "CANCEL" will clear all fields, and "DONE" will check the required fields for completeness and validity (the birth date check will validate the day based on the month—i.e., making 04/31 an invalid date). This screen matches the previous product's screen where there is a method for customers to register their product, sending the publisher their mailing information contained on this screen. [This feature of downloading the registration was not implemented by the publisher.]

The entry of "Mr." and "Mrs." or "Ms." flags the return "Welcome" verbal greeting of "Nice to have you back, (Sir or Miss)" and "Play well, (Sir or Miss)," which adds a nice touch to the game (How did it know?).

The last player to play the game is the player that the game assumes is playing. If not, the new or returning player must indicate so.

In the cashier's cage players can request additional funds when they are below the highest floor allowed or minimum tournament entry fee.

If the player is only allowed on the first floor and his current chip inventory is below \$250, he can receive an additional credit of \$2,500. The credit is added to his current chip inventory and the credit is noted in his casino record (see the "Statistics Screen" section).

If the player is only allowed on the first or second floors and his current chip inventory is below \$1,250, he can receive an additional credit of \$5,000. The credit is added to his current chip inventory and noted in his casino record (see "Statistics Screen").

If the player is allowed on all three floors and his current chip inventory is below \$5,000, he can receive an additional credit of \$25,000. The credit is added to his current chip inventory and the credit is noted in his casino record (see "Statistics Screen"). Otherwise, the player is given a sound bite of "Your account balance is not low enough to receive additional funds."

The "cash" area displays the player's current chip inventory in dollars and reputation points earned by participating in poker tournaments.

The birthday in this game will be utilized on the Prize Vault by giving the birthday player a present (a birthday cake plus a \$100 chip).



Player has registered



Prize vault birthday celebration



The Lobbies

There are three lobbies and a special level to play the World Champion in a winner-takes-all poker battle.

The first floor's motif is based on the Roman era with Roman Doric columns, wooden carved doors, and a mirrored ceiling reflecting the plush Corinthian rug.



The second floor sends the player into the Orient where Ming vases shoot out spirals of flames, lighting up the walls of famous works of art from the Han dynasty. The floor is cushioned by a rare Oriental rug under a simplistic wooden ceiling.



The third floor transports the player to the edge of the Nile, where pharaohs once ruled and the players enjoy visions of authentic Egyptian hieroglyphics, rare Egyptian doors from the throne of King Tutankamen, and an exotic rug from the temple of Cleopatra. The symbol of Ra, god of

the sun appears as the wall torches flicker, adding to the illumination of the magnificent array of constellations that shine through the high glass ceiling.

If a player hasn't earned enough reputation points to enter the elevator to the next floor, a security guard blocks the entrance to the elevator.



The Prize Vault

The Prize Vault (or the trophy room) is where players store their first place tournament prizes. There are 15 prizes to be placed in the Prize Vault. Winning them and discovering what they are is an addictive part of the fun (as experienced from the previous product Reel Deal Slots and Video Poker). There is only one of each type of prize to win (prizes once earned cannot be removed). If a prize is clicked on, its description and a larger picture of that prize appears on the screen.

If the date is between seven days before the player's birthday and seven days after that date, the happy birthday cake and message will appear. Only the first time will a \$100 chip be given as a birthday present (mark "Chip Given" and Year).

Audio

- All voice-over audio recorded
- Floor 1 (Roman) Ambience (Background Music): Several to be intermixed and not repetitive
- Floor 2 (Oriental) Ambience (Background Music): Several to be intermixed and not repetitive
- Floor 3 (Egyptian) Ambience (Background Music): Several to be intermixed and not repetitive
- Special Floor Ambience (Background Music): Several to be intermixed and not repetitive

- Player input sound effects for actions such as a button press or a mouse click
- Ambience (Background Music) for the other rooms on each floor such as the Cashier's Cage, the Elevator (arriving and exiting sounds), the Poker Room, the Tournament Room, the Prize Vault, and entering the Slot Room
- In-game sounds for card flipping, chip click when thrown on the table, chip rake when gathering your winnings, and a shuffle sound
- Music for winning a tournament and credits screen

Artwork

As a designer, your job (to the best of your knowledge) is to list all the needed artwork and the vision you have of your game to the artists. But they have to see the same vision you do. Since this is an internal design document and not a product for sale, provide detailed photographs and pictures of your world from any source. Borrow from the Internet, scan photos from books and magazines, and get on paper the closest visual to what you are envisioning as possible.

Lobbies

General

Multiplayer button and Multiplayer Mouse Over Next Level Congratulations

Poker Rooms for Four and Eight Players

Bet indicator	Marks the player who initially started the betting
Deal indicator	Marks the player who is dealer

First and Second Floor Card Icons

IconG5carddraw	Icon on green table for Five Card Draw Poker
IconG5carddrawjb	Icon on green table for Five Card Draw Poker Jacks
	or Better
IconG5cardstud	Icon on green table for Five Card Stud Poker
IconG7cardstud	Icon on green table for Seven Card Stud Poker
IconGChicagoHi	Icon on green table for Chicago Hi Poker
IconGChicagoLow	Icon on green table for Chicago Lo Poker
IconGOmaha	Icon on green table for Omaha Poker
IconGTexasholdEm	Icon on green table for Texas Hold 'Em Poker

Third Floor Card Icons

IconB5carddraw IconB5carddrawjb	Icon on blue table for Five Card Draw Poker Icon on blue table for Five Card Draw Poker Jacks or Better	
IconB5cardstud	Icon on blue table for Five Card Stud Poker	
IconB7cardstud	Icon on blue table for Seven Card Stud Poker	

IconBChicagoHi IconBChicagoLow IconBOmaha IconBTexasholdEm Icon on blue table for Chicago Hi Poker Icon on blue table for Chicago Lo Poker Icon on blue table for Omaha Poker Icon on blue table for Texas Hold 'Em Poker

Tournament



A tournament is a four-player game for a preset "entry fee" where the winner gets an additional money prize and in some rooms a "prize" to be added to their Prize Vault (or trophy room). All players keep their winnings. Early exiting from the room forfeits the "entry fee." Reputation points needed to advance to the other floors are gained by participating in tournaments. The player with the most money after 20 hands of poker (any variation but only one per tournament) wins.

Tournament Information

Floor	Level	Next Floor Points	Ante Min	Ante Max	Entry Fee	VIP Points (1st-4th)
1	1	100	\$20	\$50	\$1,000	15, 10, 5, 3
	2	100	\$50	\$200	\$5,000	25, 20, 10, 5
	3	100	\$250	\$1,000	\$25,000	35, 25, 15, 10
2	1	1100	\$50	\$200	\$5,000	150, 100, 50, 30
	2	1100	\$250	\$1,000	\$25,000	250, 200, 100, 50
	3	1100	\$1,000	\$5,000	\$100,000	350, 250, 150, 100
3	1	1100	\$250	\$1,000	\$25,000	1500,1000, 500, 300
	2	1100	\$1,000	\$5,000	\$100,000	2500, 2000, 1000, 500
	3	1100	\$5,000	\$20,000	\$500,000	3500, 2500, 1500, 1000
4	1	0	\$20,000	\$50,000	\$2,500,000	

Tournament Place Finished





First Floor

Lobby

RomanLobby The first floor's lobby

RomanBouncer The bouncer in front of the elevator

RomanBouncerText The bouncer's text when accessing the

elevator

RomanCashMO Enter the cashier's cage mouse over

RomanElevUpMO Access the elevator up mouse over (first floor)

RomanExitMO Exit the game (and save) mouse over

RomanGrandMaster Enter the Grandmaster button (play Trevor)

Only displayed when player has enough reputation points to access the "Special Floor"

and has not played Trevor yet

Roman Grand Master MO

RomanPokMO

Enter the Grandmaster button mouse over Play the non-tournament Poker Room mouse

over

RomanPrizeMO RomanSlotsMO RomanTournMO Enter the Prize Vault mouse over Enter the Slot Machine Room mouse over Play in a poker tournament mouse over

Poker Room



Four Player

Roman Table

Roman Deal normal, mouse over, on click buttons Roman Lobby normal, mouse over, on click buttons

Roman Stats Screen normal, mouse over, on click buttons

Profiles Turn On and Turn Off buttons

Profile Exit normal and mouse over button

Eight Player

Roman Table

Roman Deal normal, mouse over, on click buttons

Roman Lobby normal, mouse over, on click buttons

Roman Stats Screen normal, mouse over, on click buttons

Tournament Room

Four Player

Roman Table

Roman Deal normal, mouse over, on click buttons

Roman Lobby normal, mouse over, on click buttons

Roman Stats Screen normal, mouse over, on click buttons

Profiles Turn On and Turn Off buttons

Profile Exit normal and mouse over button

Second Floor

Lobby

OrientalLobby

The second floor's lobby

OrientalBouncer
OrientalBouncerText

The bouncer in front of the elevator
The bouncer's text when accessing the

elevator

OrientalCashMO Enter the cashier's cage mouse over

OrientalElevUpMO
OrientalElevDownMO
OrientalExitMO
OrientalGrandMaster
OrientalGrandMaster
OrientalGrandMaster
OrientalGrandMaster
OrientalGrandMaster
OrientalGrandMasterMO
Elevator up mouse over (to third floor, if able)
Elevator down mouse over (to first floor)
Exit the game (and save) mouse over
Enter the Grandmaster button (play Trevor)
OrientalGrandMasterMO
Enter the Grandmaster button mouse over

Play the non-tournament Poker Room mouse

over

OrientalPrizeMO Enter the Prize Vault mouse over

OrientalSlotsMO Enter the Slot Machine Room mouse over
OrientalTournMO Play in a poker tournament mouse over
LeftPot Animation of fire spiraling out of the left pot
RightPot Animation of fire spiraling out of the right pot

(Programming note: Offset the two pots' spiraling fire so they look more natural.)

Poker Room

OrientalPokMO



Four Player

Oriental Table

Oriental Deal normal, mouse over, on click buttons Oriental Lobby normal, mouse over, on click buttons

Oriental Stats Screen normal, mouse over, on click buttons

Profiles Turn On and Turn Off buttons

Profile Exit normal and mouse over button

Eight Player

Oriental Table

Oriental Deal normal, mouse over, on click buttons

Oriental Lobby normal, mouse over, on click buttons

Oriental Stats Screen normal, mouse over, on click buttons

Tournament Room

Four Player

Oriental Table

Oriental Deal normal, mouse over, on click buttons

Oriental Lobby normal, mouse over, on click buttons

Oriental Stats Screen normal, mouse over, on click buttons

Profiles Turn On and Turn Off buttons Profile Exit normal and mouse over button

Third Floor

Lobby

EgyptianLobby The third floor's lobby

EgyptianBouncer The bouncer in front of the elevator
The bouncer's text when accessing the

elevator

EgyptianCashMO Enter the cashier's cage mouse over EgyptianElevUpMO Elevator up mouse over (to third floor.

if able)

EgyptianElevDownMO Elevator down mouse over (to first floor)
EgyptianExitMO Exit the game (and save) mouse over

EgyptianGrandMaster Enter the Grandmaster button (play Trevor)
EgyptianGrandMasterMO Enter the Grandmaster button mouse over
EgyptianPokMO Play the non-tournament Poker Room

mouse over

EgyptianPrizeMO Enter the Prize Vault mouse over

EgyptianSlotsMO Enter the Slot Machine Room mouse over EgyptianTournMO Play in a poker tournament mouse over LeftTorch Animation of fire flickering from the left

torch

Right Torch Animation of fire flickering from the right

torch

(Programming note: Offset the two torches' flickering fire so they look more natural.)

Poker Room



Four Player

Egyptian Table
Egyptian Deal normal, mouse over, on click buttons
Egyptian Lobby normal, mouse over, on click buttons
Egyptian Stats Screen normal, mouse over, on click buttons

Profiles Turn On and Turn Off buttons Profile Exit normal and mouse over button

Eight Player

Egyptian Table

Egyptian Deal normal, mouse over, on click buttons

Egyptian Lobby normal, mouse over, on click buttons

Egyptian Stats Screen normal, mouse over, on click buttons

Tournament Room

Four Player

Egyptian Table

Egyptian Deal normal, mouse over, on click buttons

Egyptian Lobby normal, mouse over, on click buttons

Egyptian Stats Screen normal, mouse over, on click buttons

Profiles Turn On and Turn Off buttons

Profile Exit normal and mouse over button

Special Floor



Boiler Room Table

Boiler Room Deal normal, mouse over, on click buttons

Boiler Room Lobby normal, mouse over, on click buttons

Boiler Room Stats Screen normal, mouse over, on click buttons

Profiles Turn On and Turn Off buttons

Profile Exit normal and mouse over button

Four-Player Poker Characters

First Floor: Roman Motif Four

Yvette

Profile



Poses



Mouth Animations



Phonemes for each of Yvette's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," "uh," and a smile)

Animated Eyes



For each of Yvette's poses, the eyes should blink, look mad, smile, and open wide.

Sven

Profile



Poses



Mouth Animations



Phonemes for each of Sven's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," and "uh")

Animated Eyes



For each of Sven's poses, the eyes should blink, look mad, and open wide.

Hoyt

Profile



Poses

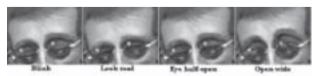


Mouth Animations



Phonemes for each of Hoyt's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," "uh," and a smile)

Animated Eyes



For each of Hoyt's poses, the eyes should blink, look mad, half-open, and open wide.

Second Floor: Oriental Motif

Melvis

Profile



Poses



Mouth Animations



Phonemes for each of Melvis' poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," "uh," a smile, and a sneer—of course!)

Animated Eyes



For each of Melvis' poses, the eyes should blink, look mad, brow up, left brow up, and right brow up.

Jacqueline

Profile



Poses

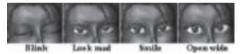


Mouth Animations



Phonemes for each of Jacqueline's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," "uh," and a smile)

Animated Eyes



For each of Jacqueline's poses, the eyes should blink, look mad, smile, and open wide.

Mortimer

Profile



Poses



Mouth Animations



Phonemes for each of Mortimer's poses ("ah," "ee," "eh," "mm," "oh," "oo," "sah," "seh," "smm," "soh," and a smile)

Animated Eyes



For each of Mortimer's poses, the eyes should blink, look mad, smile, and open wide.

Third Floor: Egyptian Motif

Lizzie

Profile



Poses



Mouth Animations



Phonemes for each of Lizzie's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," "uh," and a smile)

Animated Eyes



For each of Lizzie's poses, the eyes should blink, look mad, and open wide.

Qiangsheng (aka "Q")

Profile



Poses



Mouth Animations



Phonemes for each of Qiangsheng's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," "uh," and a smile)

Animated Eyes



For each of Qiangsheng's poses, the eyes should blink, look mad, and open wide.

Lou

Profile



Poses

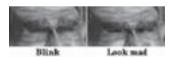


Mouth Animations



Phonemes for each of Lou's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," "pb," and "uh")

Animated Eyes



For each of Lou's poses, the eyes should blink and look mad.

Special Floor: World Championship Poker Room

Trevor

Profile



Poses



Mouth Animations



Phonemes for each of Trevor's poses ("ah," "ee," "eh," "fv," "mm," "oh," "oo," and "uh")—the World's Best Poker Player doesn't smile!

Animated Eyes



For each of Trevor's poses, the eyes should blink, look mad, and look up.

Trevor has been beaten (Red Dress Dance)

Trevor End Trevor dancing in a red dress animation (loops until

Exit clicked)

Ending Background Boiler Room Background

Close Ending Scene on click and mouse over





Eight-Player Poker Characters



Players (static 2D images)

Normal	Eye Open/Closed	Mouth Open/Closed	Extra Animation
Beth	BethEC	BethMO	
Carol	CarolEC	CarolMO	CarolWink
Carver	CarverEC	CarverMO	
Cathy	CathyEC	CathyMO	
Curly	CurlyEC	CurlyMO	CurlyTiltHead
Gerald	GeraldEC	GeraldMC	,
Harry	HarryEC	HarryMO	

Normal	Eye Open/Closed	Mouth Open/Closed	Extra Animation
Hazel	HazelEC	HazelMO	
Lakisha	LakishaEC	LakishaMO	
Mark	MarkEC	MarkMO	
Meredith	MeredithEC	MeredithMO	
Mitch	MitchEC	MitchMC	
Thomas	ThomasEC	ThomasMO	

Cards

There are 52 cards (or one deck) in poker. There are four suits named clubs, diamonds, hearts, and spades ("alpha" order) with rankings from a two or deuce (low) to the ace (high). In a low game like Chicago Lo, the ace can be the lowest card or the highest card or both.



All cards are placed in racks for the four- and eight-player poker games. Most casinos use the "reverse alpha" order to break ties, meaning that the best suit is a spade, followed by the hearts, diamonds, and clubs.

Whole Cards



The 52 card faces and the decorated back of the card are used as the "community cards," cards shown in the middle of the table and used by all of the players such as center cards in Texas Hold 'Em, Omaha, and other variations if there are not enough cards left to play (Seven Card Stud with eight players needs 56 cards so the last card must be a "community card").

Discarded Cards



In Draw Poker, the player may discard his unwanted cards in order to receive new replacement cards. The player clicks on the card (as a toggle On/Off) to turn the clicked-on card "gray," meaning "to discard." Since the game places the cards in a rack, the cards (all 52) need to be only half drawn.

No Alpha Round Cards



All 52 cards plus the back of the card, drawn half size since the cards are placed in a rack, are mainly used as the top-right card without a shadow.

Fake Drop Round Cards



All 52 cards plus the back of the card, drawn half size since the cards are placed in a rack, are mainly used as the "discarded" cards beneath another card.

Fake Drop Shadow Cards



All 52 cards plus the back of the card, drawn half size since the cards are placed in a rack, are mainly used as the cards beneath another card (not a discarded card).

Cashier Cage



VIP Casino Card

Fonta numbers 0 through 9
Fonta letters capital A through Z and lowercase a through z

VIP Clipboard

VIP Clipboard (see Registration screen)
Numbers 0 through 9
Letters capital A through Z and lowercase a through z
Symbols dash and slash

Back of first name, Back of last name, Back of address, Back of city, Back of state, Back of zip code, Back of birthday, Back of birth month Cancel and Done on click buttons

Cashier Cage

Cashier Screen The cashier cage screen

Player Name Area Up to 20 previous players who registered Cash Prestige Font Numbers 0 through 9 for Cash and Reputation

area

Lobby To return to the Lobby (must be a registered

player)

Credits To honor those who have worked hard on this

game

Register To register to play in the casino

Additional Funds An ATM in the casino, like calling your parents

for money

Statistics To view the playing statistics for each poker

variation

Ambient Sound To turn on or off the ambient music

Character Comments To turn on or off the four-player verbal comments

Credit Screen

Credits The staff that will produce the vision

Statistics Screen



Note: On chart, the Straight Flush (including a Royal Flush) and Flush will mark the high card in the winning hand. The flush winning hands will be indicated in the columns marked spades, hearts, diamonds, and clubs ("reverse alpha" order). The chart numbers reflect the winning hands from the currently registered player's games (not just their winning hands) from all play in either the Poker Room or the Tournament Room.

- Bookman Demi10 font numbers 0 through 9 (for chart)
- Bookman Demi14 font numbers 0 through 9 plus the \$ and "," (for upper section)
- Bookman Demi24 font letters capital A through Z and lowercase a through z (for player's name)

The statistics are saved and can be cycled through for each of the poker variations, such as Chicago Hi, Chicago Lo, Five Card Draw, Five Card Draw Jacks or Better, Five Card Stud, Texas Hold 'Em, Omaha, and Seven Card Stud.

- Close normal, mouse over, and on click buttons
- Left arrow normal and mouse over to scroll back through the poker variations
- Right arrow normal and mouse over to scroll forward through the poker variations.

The Prize Vault



Lobby on click and Lobby mouse over to exit back to the Lobby. Stat Screen on click and Stat Screen mouse to view the Statistics screen.

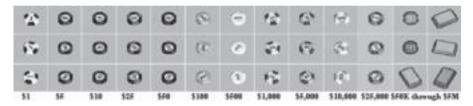
Chips

Chips are to be displayed for betting (click on a chip to bet that amount) and placed on the table in three varying positions to look randomly thrown.

Betting chips are to be valued from \$1 to \$5 million.



Table chips are to be valued from \$1 to \$5 million in three varying positions (one or two positions for the \$50K to \$5M chips).



Tournament First Prizes

Floor 1: \$5,000 Tournament Prizes



Floor 1: \$25,000 Tournament Prizes



Floor 2: \$25,000 Tournament Prizes



In addition to the cash prize the casino is awarding the following prize to the winner:

Floor 2: \$100,000 Tournament Prizes



Floor 3: \$100,000 Tournament Prizes



In addition to the cash prize the casino is awarding the following prize to the winner: SLOT MACHINE

Floor 3: \$500,000 Tournament Prizes



Special Floor: \$2,500,000 World Championship

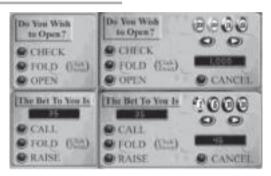


Exit Game



- "Yes" mouse over and on click buttons (save player's game settings)
- "No" mouse over and on click buttons

Betting/Raising



Clicking the left box for Open or Raise brings up the right box to enter the amount.

Check On click and mouse over buttons
Fold On click and mouse over buttons
Open On click and mouse over buttons
Call On click and mouse over buttons
Raise On click and mouse over buttons
Cancel On click and mouse over buttons

LED Font Numbers 0 through 9

Right Arrow On click and mouse over buttons Left Arrow On click and mouse over buttons

Chips See Artwork: Chips to set Amount of Open or Raise Chips

values displayed are determined by the Min and Max betting amount set by the poker game amounts selected

before entering the poker room.

Scriptwriting

For standard scripting format rules, see Chapter 14, "The Basics of Scriptwriting."

YVETTE

Wow! Good hand.

YVETTE

Oh, I like that.

YVETTE

Nice try.

YVETTE

Call.

YVETTE

I can't lose.

YVETTE

Check.

YVETTE

Now, that's a cute little card.

YVETTE

Did that feel good?

YVETTE

Fold.

YVETTE

I'm in, way in.

YVETTE

That's the card I'm looking for.

YVETTE

Not good for me.

YVETTE

Oh, baby.

YVETTE

Pass.

YVETTE

Where did you pull that out of?

YVETTE

Show me yours and "huh" I'll show you mine.

YVETTE

I suppose.

YVETTE

Sweet!

YVETTE

That was too close for comfort.

YVETTE

I wouldn't pass this up for anything.

SVEN

(German stuff)

SVEN

I'll be back.

SVEN

I can't believe you don't play now.

SVEN

Better luck next time.

SVEN

Call.

SVEN

I can't believe it's not better.

SVEN

Check.

SVEN

My day will come.

SVEN

Fold!

SVEN

I fold now.

SVEN

(German stuff) I'm in.

SVEN

Look at you, little girlie cards.

SVEN

Ha! Ha! (German stuff)

SVEN

I am triumphant!

SVEN

I'm in.

SVEN

I'm out.

SVEN

I'm liking these cards.

SVEN

Your money will be mine now.

SVEN

I must raise now.

SVEN

Nice cards there.

SVEN

Pass.

SVEN

Raise.

SVEN

Oh, (German stuff "Menee Guta")

SVEN

(German stuff)

SVEN

Sure, why not.

HOYT

Bah.

HOYT

Call.

HOYT

Check.

HOYT

Doh!

HOYT

Fold.

HOYT

You gotta know when to fold 'em.

HOYT

Good job, buddy!

HOYT

Hmmm!

HOYT

I'm in the money! I'm in the money!

HOYT

I'm in.

HOYT

I'm there.

HOYT

Later tator.

HOYT

Not me.

HOYT

On to you, pal.

HOYT

Shazam!

HOYT

Doh, I knew I should have run.

HOYT

Well, spank my ass and call me Shirley!

HOYT

You stayed in with that?

HOYT

This must be my lucky day.

HOYT

This pot's mine!

HOYT

Well, why not.

MELVIS

Ahhh...Yah

MELVIS

Baby!

MELVIS

Can't love these cards.

MELVIS

Ah... You can't treat the King like that.

MELVIS

Ah...Check baby!

MELVIS

Ah... That's a hell of a clambake!

MELVIS

Foldin'.

MELVIS

I'm gonna call.

MELVIS

Ain't nothin' but a hound dog, baby.

MELVIS

Melvis has left the building!

MELVIS

Baby needs some blue suede shoes.

MELVIS

Ohh... nice hand there.

MELVIS

Oh mama!

MELVIS

Ouch, man!

MELVIS

Uh! huh huh!

MELVIS

Uh thank ya. Thank ya very much!

MELVIS

Oooh, ya baby!

MELVIS

You betcha!

JACQUELINE

Oh, you'll do better next time.

JACQUELINE

Check!

JACQUELINE

That pot was only chump change anyway.

JACQUELINE

Can we play yet?

JACQUELINE

My daddy told me I can't lose.

JACQUELINE

Daddy always said I could do it.

JACQUELINE

Hmmmmp!

JACQUELINE

I did it! I did it!

JACQUELINE

Sure, I have plenty.

JACQUELINE

Impressive!

JACQUELINE

Why won't you let me win?

JACQUELINE

Hmm...Pass.

JACQUELINE

Daddy, I need more money.

JACQUELINE

I must fold now.

JACQUELINE

Never too rich for my blood.

JACQUELINE

Oooo!

JACQUELINE

I'll see that and raise you.

JACQUELINE

You know what they say, the rich get richer.

JACQUELINE

Simply divine.

JACQUELINE

Sure, why not.

JACQUELINE

I want to win.

MORTIMER

Hee! Hee! Ain't missing this opportunity.

Hee! Hee!

MORTIMER

(Chuckle)

MORTIMER

Eh...that's what Daddy's talking about.

MORTIMER

Don't feel bad, it's only money.

MORTIMER

In my day we ran from cards like this.

MORTIMER

But I'm feelin' frisky.

MORTIMER

Now that's a good return on investment.

MORTIMER

Yeah...Sure. What have I got to lose?

MORTIMER

Horse hockey!

MORTIMER

This isn't worth a hill of beans.

MORTIMER

I'm in.

MORTIMER

I should've invested less.

MORTIMER

There goes my kids' inheritance.

MORTIMER

I'm in for the long haul.

MORTIMER

Nice hand.

MORTIMER

In my day, we played with nickels.

And we were thankful for it.

MORTIMER

In my day, we never saw cards like these.

MORTIMER

Whoopee!

MORTIMER

Call.

MORTIMER

Check.

MORTIMER

Fold.

MORTIMER

Raise.

LOU

I was actually nervous.

LOU

Call.

LOU

Hey, I can't win your money if we don't play.

LOU

Fold.

LOU

Get out while you still can.

LOU

Oh, give it a shot.

LOU

Good cards, pal-ie.

LOU

Have fun spending my money.

LOU

Hell yeah!

LOU

I'm in.

LOU

Bet on.

LOU

No more for me.

LOU

Not me.

LOU

I'm out-ie.

LOU

Pass.

LOU

I can't possibly lose.

LOU

Raise.

LOU

I'll raise ya.

LOU

See ya!

LOU

Suckers!

LOU

Let's sweeten the pot.

LOU

You talkin' to me?

LOU

What were you thinkin'?

LOU

Check.

Q

Ha! Ha! Ha! I always win.

Q

I cannot beat that hand!

I could beat a weaker hand.

Ω

Beginner's luck.

Q

I do not believe in your bluff.

Q

Call.

Q

Ha ha ha! You cannot defeat me.

Q

Check.

Q

A cherry blossom knows when to fall.

I know when to get out.

Q

I do not want it.

I will live to fight another day.

Q

Fold.

Only a fool fights in a burning house.

This pot is only half full.

I'm in.

Your cards are like sand, no substance.

Observe the lotus blossom, it needs no timekeeping.

Our money must experience more togetherness.

Pass.

Q How long does it take one to learn patience?

Raise.

For everything there is a season.

This is not mine.

I will see what happens.

This hand cannot help but spill gold.

Victory belongs to the honorable.

LIZZIE

Bingo! Wait, wrong game.

LIZZIE

How do you feel, taking my bus fare?

LIZZIE

Guess I'll take the bus home.

LIZZIE

Check.

LIZZIE

That's OK, sweetie, you deserve it.

LIZZIE

Fold.

LIZZIE

(Hiccup)

LIZZIE

See if you can keep up, sweetie.

LIZZIE

I'm kicking butt and taking names.

LIZZIE

How did you like that?

LIZZIE

Macy's, here I come!

LIZZIE

This is sweeter than a Mai Tai.

LIZZIE

Maybe next time.

LIZZIE

Nice win.

LIZZIE

Oh, well.

LIZZIE

Okay.

LIZZIE

I'll stay for one more card.

LIZZIE

Pass.

LIZZIE

Raise.

LIZZIE

Shame on you for pushing an old lady out.

LIZZIE

Wow! Squeaked that one out.

LIZZIE

How do you like that can of whup-ass?

LIZZIE

Too rich for my blood.

LIZZIE

Very nice.

LIZZIE

There goes my Wayne Newton ticket money.

LIZZIE

Yah! Why not?

TREVOR

Ahhh!

TREVOR

Hey, we don't have all day.

TREVOR

Bad luck.

TREVOR

Check.

TREVOR

Count me in.

TREVOR

That didn't turn out for me.

TREVOR

Fold.

TREVOR

Good deal.

TREVOR

You gotta pay to play.

TREVOR

Can you hang with me?

TREVOR

Hmm.

TREVOR

How did I miss that?

TREVOR

Sometimes, you need to know when to hold 'em.

TREVOR

Let's see what happens.

TREVOR

Ah, maybe next time.

TREVOR

Nice job.

TREVOR

Nice play.

TREVOR

Winning this hand is not my destiny.

TREVOR

Pass.

TREVOR

Raise.

TREVOR

Today is a good day.

TREVOR

Nice hand!

But if you actually beat me,

I'll put on a dress.

CASHIER

Your account balance is not low enough

to receive additional funds.

BOUNCER

Uhhhm, excuse me.

MANAGER

Welcome to Reel Deal Poker.

Please click the register button to continue.

MANAGER

Nice to have you back, sir!

MANAGER

Nice to have you back, miss!

MANAGER

Play well, sir!

MANAGER

Play well, miss!

Programming

An animation for each character in four-player mode is a combination of the character's pose, the eye position, and the mouth position. A 0 (zero) for an eye or mouth animation means that the pose eye or mouth default is used; in other words, "don't draw over the original eye or mouth if it's a zero."

```
YVETTE saying "Wow, good hand."  \{ \{ \text{pose 1, eye 3, mouth 0}, \{1, 7, 0\}, \{1, 7, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 5\}, \{1, 1, 3, 0\}, \{1, 3, 0\}, \{1, 3, 0\}, \{2, 10, 0\}, \{2, 6, 5\}, \{2, 10, 5\}, \{2, 10, 5\}, \{2, 1, 5\}, \{2, 1, 5\}, \{2, 1, 5\}, \{2, 1, 5\}, \{2, 1, 5\}, \{2, 3, 5\}, \{2, 9, 4\}, \{2, 9, 4\}, \{2, 9, 4\}, \{2, 9, 4\}, \{2, 9, 4\}, \{2, 9, 4\}, \{2, 9, 4\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5, 0\}, \{1, 5
```

For each character map (or associate), there are one to three phrases for actions such as "checking," "raising," "folding," "calling," "when they win a pot," "when they lose a pot (randomly select a character)," "when they are bluffing (betting on an average hand)," and "taunting the player when a minute has gone by without any input."

Basic Poker AI

The hand ranking is defined by a hand rank value, plus the highest card value. The hand rank values are for a royal flush 180, a straight flush is 160, four of a kind is 140, a full house is 120, a flush is 100, a straight is 80, three of a kind is 60, two pair is 40, a pair is 20, and a high card is 0.

All players are categorized as "conservative" or "not conservative" and "strong," "average," and "weak."

The AI to Determine the Best Poker Hand Using Five to Seven Cards

- 1. Flush—check to see if at least five cards are in the same suit.
- 2. Straight—put cards in ascending order and check if there are five consecutive cards. (Reminder: Place the ace in the lowest and highest positions.)
- 3. If flush and straight came out positive, we have a straight flush; check for ace high for royal flush.
- 4. If we have found a straight or a flush hand, set its value and return.
- 5. If nothing found so far, put the cards in rank order.
- 6. Check each rank from the ace (high) to the deuce (two, low card).
- 7. If one rank has four cards found, we have four of a kind; set its value and return.
- 8. If one rank has three cards found, we have at least found the highest three of a kind hand (set value to trip.) Remember we could be examining seven cards.
 - If another rank has at least two cards found, we have a full house (set value to a full house).
 - On three cards of same rank found, set value to trip or full house and return.
- 9. If one rank has a pair (two of the same rank), then we have at least found the highest pair (set value to a pair).
 - If another rank has a pair, then we have a two pair hand (set value to two pair).
 - On a pair found, value a two pair or pair value and return.
- 10. We have only a high card, so set the value to the highest card and return.

Draw Poker (No Openers and Jacks or Better)

All analysis assumes an eight-player game, and the logic works for any amount of players.

- 1. For strong players, don't open betting in position one through four without a pair of aces or two pair with queens or better.
 - A pair of kings can open in positions five and six, while position seven can open with a pair of queens or jacks with ace kicker. The dealer who goes last needs a pair of jacks or better to open betting.
- 2. In a high ante game, position one through three needs a pair of kings, position four through six needs a pair of queens, and the remaining positions need a pair of jacks to open betting.
- 3. Against strong players, don't "call" with less than two pair headed by at least a king. In last positions, seven or dealer, you can call with two pair.
- 4. Against weak to average players, you can "raise" with a pair of aces or kings if you are alone with the opener and last in position.
- 5. Don't "raise" with opened straights or four flush cards, and only call if the pot yields four times your bet.
- 6. "Raise" with trips (three of a kind) that are ten and below. "Call" with jacks or better before the draw to force players out or keep them in for the kill with the higher hands. Against strong players, you need strong cards to raise when they open. Against weak players (i.e., players who open with jacks or queens under the gun), you can raise aggressively when holding aces or kings.
 - Any player who checks during the first bet round can only call bets thereafter in the first round.

In Draw Poker Jacks or Better, the computer will check each hand to see if the hand passes the Jacks or Better test. If no player has this requirement, each player must "check" and the hand is redealt (the ante up will increase). If the player folds or tries to "open" and the requirement has not been met by any player, the computer assumes a "check." If the player (non NPC), has a pair of kings and "checks" and no other player has met the requirements, a new hand is dealt (the computer must not force the player to make an opening bet). In Draw Poker, a minimum starting bet or "ante" is made by each player before the first card is dealt. All cards are dealt face down, starting with the player to the left of the dealer. A player may discard up to three cards or four cards if they hold an ace (computer checks this situation) and receive replacement cards. Discarded cards are immediately reshuffled into the remaining deck after that player has received cards so that a player will never get his discarded cards back. If a player opens by betting or raises a bet, he cannot raise again, unless another player has raised. In all poker games, a maximum of three raises is allowed per betting session.

Five Card Stud

- 1. If hand value is a royal flush, straight flush, or four of a kind, "bet" or "raise" the maximum amount and return.
- 2. If hand value is a full house, flush, straight, or three of a kind (trip), "bet" or "raise" medium.
- 3. If the hand value is only a high card and seeing the others up cards shows that you have the highest single card (no one has a pair or better showing)...

If asked to "check," then check.

If you are to bet first and if it's the first round of betting and you have an ace (conservative) or a ten (nonconservative), "bet" medium.

If after betting round one you have the highest card of at least a queen, "bet" medium (conservative) or maximum (nonconservative).

If you are not the first bettor (a bet has been made) and you have an ace (conservative) or a queen (nonconservative), "bet" maximum.

Otherwise, "call."

If a raise has been made, conservative players always "fold."

Strong players "call" on betting round one and afterward; if they have the highest card showing or better, they "call;" otherwise, they "fold."

4. If you have no pair and not the highest hand showing and you are the first bettor...

Conservative "folds."

Nonconservative...

If betting round is three, then "fold."

If betting round is one or two, then...

With ace "bet" maximum.

With a queen or king "bet" medium.

Otherwise, "check."

5. If you have any pair on the opening bet round (first two cards) or any round a hand better than three of a kind...

If the highest hand showing is better than your hand, on the last betting round "fold."

If first to "bet" and pair is...

Less than a pair of queens, "check."

A pair of aces, "bet" maximum.

A pair of kings or queens, "bet" medium.

Two pair (remember the first pair may signal this code, so check to see if there's a two pair hand) then "bet" maximum.

Another player has bet and you have (a pair or better)...

A pair of aces or a better than a pair hand, then "bet" maximum.

Otherwise "check."

Another player has raised and your pair is...

Less than the highest hand showing and you are a strong player...

With queens or better then "call."

Otherwise, "fold."

6. If you have a full house or better and raises made are less than three, then "raise" maximum.

Otherwise, "call."

Seven Card Stud, Chicago Lo, and Chicago High

Special Case for Chicago High

One of your first two cards is a spade.

You have the ace of spades; therefore you can't lose, so "bet" maximum

You have the highest spade since any higher ones are shown, so "het" maximum.

You have the king of spades, so "bet" medium.

You have the next highest spade since any next higher ones are shown, so "bet" medium.

If the spade you have is within three ranks of the highest spade not showing then...

If no raises, then "call."

If raise was made, then "check."

If you are to bet and...

If the spade you have is within four ranks of the highest spade not showing, then "bet" minimum.

If the spade you have is within nine ranks of the highest spade not showing, then "check."

Otherwise, follow steps one through six.

Special case for Chicago Lo

One of your first two cards is a spade.

You have the ace of spades; therefore you can't lose, so "bet" maximum.

You have the lowest spade since any lower ones are shown, so "bet" maximum.

You have the two (deuce) of spades, so "bet" medium.

You have the next lowest spade since any next lower ones are shown, so "bet" medium.

If the spade you have is within three ranks of the lowest spade not showing then...

If no raises, then "call"

If raise was made, then "check."

If you are to bet and...

If the spade you have is within four ranks of the lowest spade not showing, then "bet" minimum.

Otherwise, follow steps one through six.

1. Hand value is better than three of a kind.

Your hand beats any hand showing.

You are the first to bet, "bet" medium.

Another player is the first to bet...

Round of betting is...

Conservative: Round one through three and then "check."

Rounds four through six and then "bet" maximum.

Nonconservative: Round one and then "check."

After round one, "bet" maximum.

Your hand is *not* better than anything showing...

Stay with it until the last (seventh) card and "call."

If a raise is on the table, don't stay with a loser ("fold").

2. Hand value is at least a high pair.

If hand is better than a pair or a pair of queens or better for conservative or eights or better for nonconservative, then...

Your hand is better than anything showing...

You are the first to bet, so "bet" maximum.

You are not the first to bet, so "raise" maximum.

Your hand is *not* the highest (a better one is showing)...

You are the first to bet, so "check."

"Call" bets until the fourth card is dealt and "fold" if no improvement.

A "raise" is on the table; don't stay with a loser.

On the last card, your hand has not improved, so "fold."

3. Hand is at least a medium pair, which is a ten or higher for a conservative player and a six or higher for a nonconservative player.

Your hand is better than anything showing...

You have a king or an ace in hand with the pair...

Betting rounds one to six...

You are the first to bet...

Betting rounds one to five and then "bet" medium.

Betting round six and then "check."

You are *not* the first to bet...

Betting round six and then "call."

Otherwise, "raise" maximum (if you can).

Last betting round (sixth)...

You are the first to bet so "check."

Otherwise, "fold,"

Your hand is *not* the highest (a better one is showing)...

You are the first to bet so "check."

"Call" bets until the fourth card is dealt, and then "fold" if no improvement.

4. Hand is at least a low pair.

Your hand is better than anything showing...

Betting rounds...

One and two for conservative and one through four for nonconservative...

Your hand is highest one showing...

You are the first to bet so "bet" medium.

You are *not* the first to bet...

No player has raised so "raise" medium.

Otherwise, "call."

Your hand is *not* the highest one showing...

You are the first to bet so "check."

A bet has been made by another player...

Betting round two for conservative or betting round four for nonconservative, and then "fold."

Otherwise, "call."

Three to six for conservative and five to six for nonconservative...

You are the first to bet so "check."

Your hand is the highest one showing so "call."

Your hand is *not* the highest one showing...

Betting round six and then "fold."

Betting round six...

If lucky, then "call."

If unlucky, then "fold."

Other betting rounds...

If no raises yet, then "check."

If raise, then "fold."

Your hand is *not* better than anything showing...

Betting round six or conservative and then "fold."

Otherwise...

If lucky, then "call."

If unlucky, then "fold."

5. Hand possibly a flush or a straight....

If your cards are of the same suit or rank within straight range....

First bet round...

You are first to bet, so "check."

You are not first to bet, so "call."

Second bet round...

You are first to bet, so "bet" medium.

You are *not* first to bet, so "call."

Five and six betting rounds...

If fifth betting round...

King or better in hand...

You are first to bet so "check."

Otherwise, "call."

If sixth betting round...

You are first to bet, so "check."

You are *not* first to bet...

Flush or straight and then "call."

Otherwise, "fold."

Three and four betting rounds...

You are first to bet so "check."

You are *not* first to bet so "call."

6. If there's a raise and you have nothing in steps one through five, then "fold."

Texas Hold 'Em and Omaha

- 1. The player to the left of the dealer is forced to make a "blind bet" ("bet" minimum).
- 2. Determine if you should stay with the first two cards (for Texas Hold 'Em) or first four cards (for Omaha) in your hand.

You have a pair (remember in Texas Hold 'Em you can use one, two, or none of your first two cards and in Omaha you must use two cards of your first four cards.

If your pair for conservative is aces or for nonconservative is tens or better, then "bet" or "raise" maximum.

If your pair for conservative is queens or kings for nonconservative is sixes or better, then "bet" or "raise" medium.

If you have any pair, then bet "minimum."

Otherwise, "call" or "check."

3. For all remaining betting rounds, get the value of your hand.

Your hand is only a high card...

You are the first to bet so "check."

You are *not* the first to bet...

Conservative players "fold."

Nonconservative player "call" for the second and third betting rounds and "fold" after the last "community card" is turned over.

Your hand is a pair...

You are the first to bet so "check."

You are *not* the first to bet...

A player has raised then...

If you have won the last two hands, then "call."

Conservative players "fold."

Nonconservative player "call" for the second and third betting rounds and "fold" after the last "community card" is turned over.

A player has bet...

For the second and third betting rounds so "call."

"Fold" after the last "community card" is turned over.

Players so far have checked and then you "check."

Your hand is two pair...

You are the first to bet...

Conservative players "check."

Nonconservative players "bet" medium.

You are *not* the first to bet...

No one has raised so "call."

A raise has been made...

You are in the first three players from the dealer so "fold." Otherwise, "call."

Only a call so far, so you then "call."

Your hand is three of a kind (a trip) or better...

You are the first to bet so "bet" maximum.

You are *not* the first to bet...

Your hand is a straight or better so "raise" maximum.

There are no raises yet, so "raise" maximum.

Another player has raised...

You are in the first three players from the dealer so "call."

You are the fourth player from the dealer so "raise" medium.

You are more than four players from the dealer so "raise" maximum.

Game Variation's Order of Play

Draw Poker No Openers and Jacks or Better to Open

Players "ante" or place the minimum bet into the pot.

Five cards are dealt face down to each player.

Betting session or round.

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session are allowed.

(In Draw Poker Jacks or Better, only a player meeting these requirements of a hand of at least a pair of jacks may bet. If a player doesn't select "check" and they don't have the requirements, then a "check" is the default option. If all players "check," then the deck is reshuffled and another ante is made by all players. If a player "folds" before any bet is made, the default of a "check" is done instead. The computer never looks at anyone's hand to process the NPC's AI, except in this case of checking for the requirements of a hand of at least a pair of jacks.)

Players starting with the player left of the dealer may discard up to three cards (four cards if they hold on to an ace—computer checks for the ace).

(Immediately, the discarded cards are replaced and the discarded cards are shuffled into the end of the deck behind the original 52 cards so that the game doesn't run out of cards and a player will not receive his own discarded cards or someone else's discarded cards before the original deck has been dealt.)

Betting session or round.

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Show all remaining players' cards.

Find the winning hand or hands if tied.

Pay the winner(s) from the pot.

Update statistics.

Five Card Stud

Deal one card face down to each player (card one).

Deal one card face up to each player (card two).

Betting session or round.

Lowest hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

If more than one player left....

Deal one card face up to each player (card three).

Betting session or round...

Best hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

If more than one player left....

Deal one card face up to each player (card four).

Betting session or round...

Best hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

If more than one player left....

Deal one card face down to each player (card five).

Betting session or round...

Best hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Show all remaining players' cards.

Find the winning hand or hands if tied.

Pay the winner(s) from the pot.

Update statistics.

Seven Card Stud, Chicago Lo, and Chicago High

Deal two cards face down to each player (card one and two, aka "the hole").

Deal one card face up to each player (card two, aka "door card").

Betting session or round.

The first round of betting starts with a forced bet by the lowest up card by suit in alpha order (clubs is the lowest suit and spades is the highest suit).

A player cannot bet and raise themselves consecutively.

Only three raises per betting session allowed.

If more than one player left....

Deal one card face up to each player (card four, aka "fourth street").

Betting session or round...

Best hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

If more than one player left....

Deal one card face up to each player (card five, aka "fifth street").

Betting session or round...

Best hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

If more than one player left....

Deal one card face up to each player (card six, aka "sixth street").

Betting session or round...

Best hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

If more than one player left....

Deal one card face down to each player (card seven, aka "the river" also a "hole" card).

If there are more cards needed than 52 as when eight players need seven cards each or 56 cards, the last card is a community card used by all players.

Betting session or round...

Best hand showing bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Show all remaining players' cards starting with the last bettor.

(For Chicago Hi, the best hand and the highest spade in the hole shares the pot. For Chicago Lo, the best hand and the lowest spade in the hole shares the pot. An ace may be used for high or low. If the seventh card is a

"community" card, then it isn't a "hole" card. The winning "hole" card doesn't have to be part of the winning hand.)

Using five of the seven cards, find the winning hand, or hands if tied.

Pay the winner(s) from the pot.

Update statistics.

Texas Hold 'Em

Deal two cards face down to each player (card one and two, aka "the hole").

Betting session or round...

A "blind bet" is made by the player left of the dealer.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Community cards two, three, and four (the "flop") are dealt center table face up.

Betting session or round...

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Community card one (the "turn" card) is dealt center table face up.

Betting session or round...

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Community card five (the "river") is dealt center table face up.

Betting session or round...

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Find the winning hand or hands if tied using any combination of the player's own two down cards and the five community cards.

Pay the winner(s) from the pot.

Update statistics.

Omaha

Deal four cards face down to each player (the first four cards, aka "the hole").

Betting session or round.

A "blind bet" is made by the player left of the dealer.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Community cards two, three, and four (the "flop") are dealt center table face up.

Betting session or round.

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Community card one (the "turn" card) is dealt center table face up.

Betting session or round.

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Community card five (the "river") is dealt center table face up.

Betting session or round.

Player to the left of the dealer bets first.

A player cannot bet and raise himself consecutively.

Only three raises per betting session allowed.

Find the winning hand, or hands if tied, using any combination of two of the player's own down cards and the three community cards. Remember, "two from the hand, three from the board."

Pay the winner(s) from the pot.

Update statistics.