

Royal Crown Casino Briefing Document

Team Name: Team Cobra

Team: Daniel Bond, Evan Tyra, Michael Bjorge, Alexander Nichols

Overview

The Las Vegas gambling industry is one of the most lucrative and competitive markets in the country. With the ubiquitous presence of networked devices, the industry has turned towards software solutions to offer a gambling experience to customers at home. The time-honored classic of five-card draw poker has been selected as the first game to be implemented for Royal Crown Casino.

Game Mechanics

In Team Cobra's implementation of five-card draw poker, one player is selected at random as the "dealer" to determine the order in which hands are dealt and bets are placed. The "dealer" designation will be passed clockwise to the next player at the conclusion of each played hand. Before the cards are dealt, each player will contribute an ante to the pot. Cards will then be automatically dealt clockwise each turn starting with the player immediately left of the dealer. This continues until all active players have five-card hands. Each player can only see the cards in their hand.

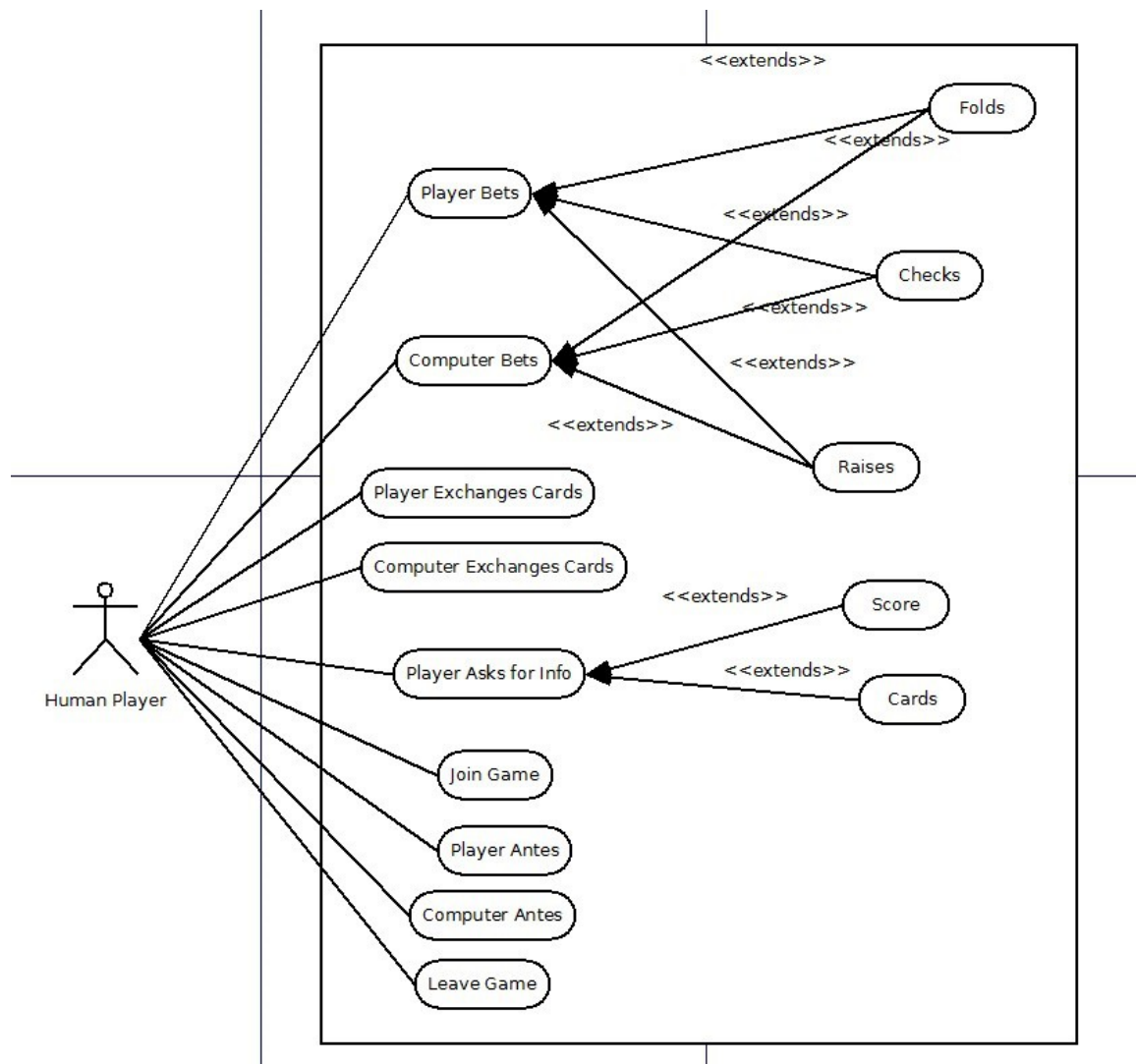
The ante that each player must contribute and the starting money that all players have will both be specified at the start of the game. When the initial hand is dealt, a round of betting occurs, and then players have the opportunity to discard no more than four cards in exchange for four random cards from the deck.

When confronted with a raised bet, subsequent players have the opportunity to match the bet and stay active in the current hand or fold and acquiesce all previous bets for the hand to whomever wins the hand. When all remaining players' bets have stabilized and are of equal value, players' hands will be displayed and the player with the highest hand value will collect all bets from the current turn.

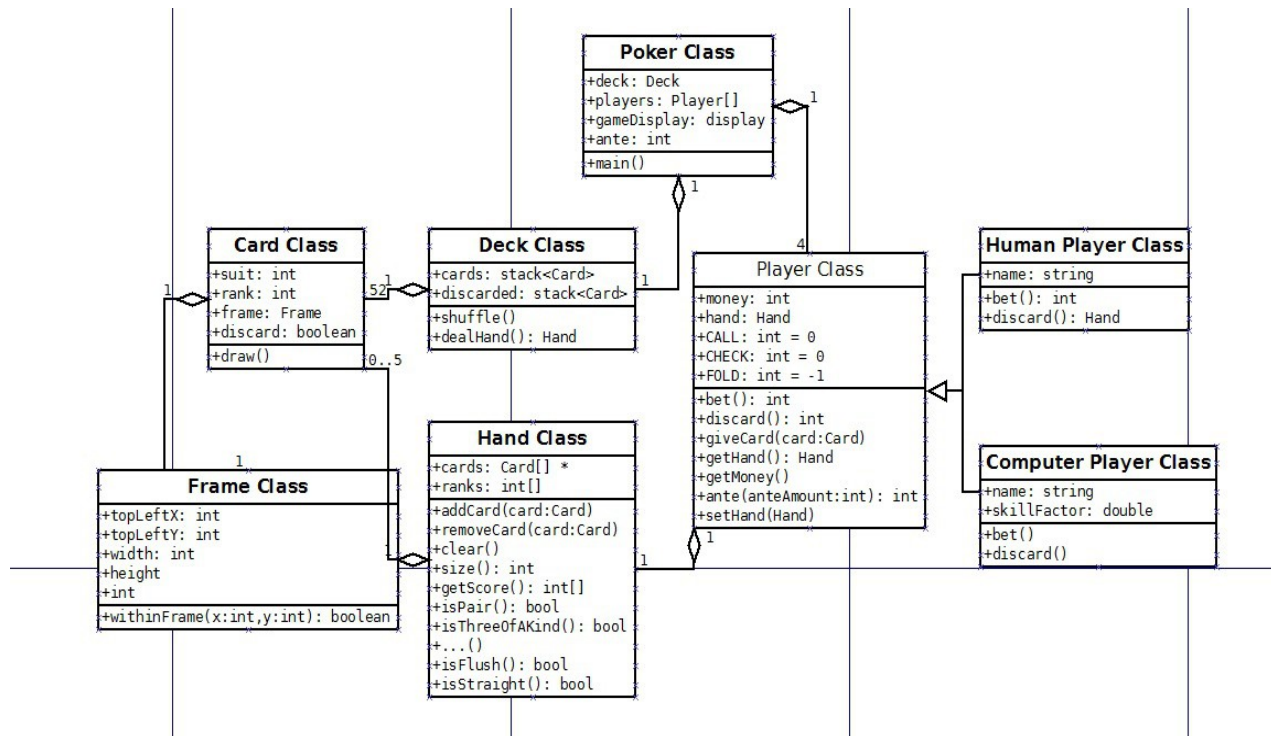
A hand is deemed to be greater in value than another based off of the following priority system: straight flush > four of a kind > full house > flush > straight > three of a kind > two pair > one pair > high card. In the event of equivalent hand classifications, the highest card involved in the classification will break a tie to determine the winner.

Supporting Unified Process documentation of Team Cobra's poker implementation appears on the next page. Description of deliverables outlined in the following diagrams and who on Team Cobra is responsible for them can be found in the accompanying Contract Document.

Use Case Diagram



Class Diagram



Royal Crown Casino Contract Document

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Deliverables

- Frame Class
Author: Evan Tyra

X and Y coordinates for the upper left-hand corner for a card location. Also has the height and width of the frame to specify the area on the screen the card will take up.

- Card Class
Author: Evan Tyra

Information relevant to one of 52 cards. Includes suit, value, and the Frame in which it lies on the user interface if it is in the user's hand.

- Hand Class
Author: Evan Tyra

Has all the cards in a given user/AI hand. Only accessible by the Player who holds the hand. Implements many methods for determining what the highest poker hand is from the current Hand object.

- Deck Class:
Author: Daniel Bond

Contains all 52 Card objects within the active deck. Shuffle method will prevent predictable card sequences from game to game. Discarded cards go into a separate deck until the end of the turn to prevent potential reuse.

- Player Class
Author: Michael Bjorge

Abstract class of Human and AI class. Players have a Hand object, a starting money value, abstract bet and fold methods, and the ability to exchange cards after a round of betting has occurred

- Human Player Class
Author: Michael Bjorge

Contains the Hand, current money, and human-user based implementations of the abstract bet and discard methods that are prototyped in the Player class.

- Computer Player Class
Author: Daniel Bond

Objects representing computer users that will play against the human Player. AI objects will be designed to make intelligent decisions, with no knowledge of other players' hands or the current contents of the deck. Also contains a Hand object, starting money value, and AI-based implementations of the abstract void and bet methods that are prototyped in the Player class.

- Poker Class
Author: Alexander Nichols

The controller class for the entire project. It will have access to the contents of the deck and discard pile, and user/AI hands. It will also control the turn system, check for a winner, and handle the card interface in the terminal window.

Delivery Date: October 28th, 2013

Agreed Bonus Amount: _____

Group Signatures:

_____	_____	_____	_____
Daniel Bond	Date	Evan Tyra	Date

_____	_____	_____	_____
Michael Bjorge	Date	Alexander Nichols	Date

CEO Signature:

_____	_____
Sandip Kundu	Date