Croatian Kuna APCS1 pd 2
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Final Project Proposal
Texas Hold 'Em

We plan to first replicate the gameplay of Texas Hold 'Em with 1 player against the dealer (which will be the computer). The computer (using simple AI) will look for 10 different types of hands (Royal Flush, Straight Flush, 3 of a Kind, Full House, etc.) Through sorting the hand, the player can determine if they have a good or bad hand and bet with that in mind. The game ends when the player or computer runs out of money. If the player wants to stop playing, we will build this program to keep track of the balance, storing it in a text file and later retrieving it when the player resumes play.

Concepts largely covered by this project:

- InsertionSort (for most efficient sorting of cards because the sort will run in linear time)
- ArrayList & Typecast (generic typing for ArrayList)
    - arrayList is used to hold the hand of the player
- Abstract classes / Subclass & Superclass
- Scanner (user input for game)
- Constructors

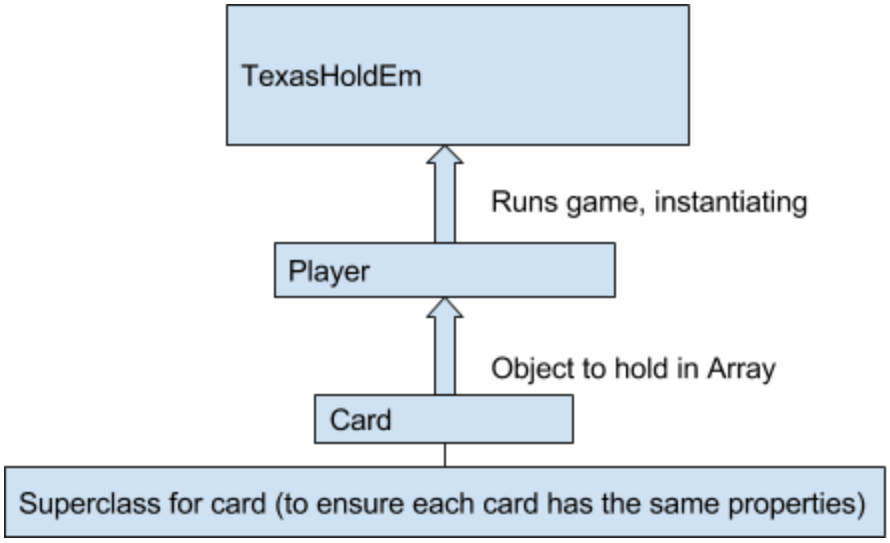
To-Do List:

- Make class Card
    - Simple, 2 variables

- Make class Player
    - Find how to keep the balance through separate runs of TexasHoldEm
- Make class TexasHoldEm (aka Woo.java)
    - Run through gameplay and fix bugs if necessary

Classes:

- TexasHoldEm (run this class to begin playing)
    - Accesses class Player
    - Actions for player: Call, Raise, Fold
    - Finds types of hands (3 of a kind, full house, etc.)
- Card (represents a card)
    - Variables: suit, value
- Player (ArrayList of class Cards)
    - Variables: balance
    - Accesses class Cards
    - Cards on the table will be put into the ArrayList as well, allowing the player to see the different pairings of cards the player has in hand (will be using InsertionSort)



- Using Keyboard, TexasHoldEm takes in input (for bets) through the terminal
- Users will be able to see the cards on the table along with their 2 personal cards, then place bets when asked
- When the user runs out of money, the program ends
- When the user quits with money still in the balance, the balance will be saved for the next run of TexasHoldEm
- Computer will also be built to occasionally bluff (AI?)

We are going to look into Mapping, where we assign each card in the deck a number (the key)

e.g. 1 = Ace of Diamonds

2 = 2 of Diamonds

If we are able to create multiplayer for this game, we will look into how to effectively use terminal, with timers and screen clearing mechanisms to prevent the different players from seeing each others' hands.