**Poker Java**

**Design**

Poker Java has similar design in Poker Design doc, however with Java, I have BestHand class instead of best\_hand(hands) function.

**class BestHand** (hands)

create Poker object for each hand

then compare each to find the winner

**class Poker**

parse hand

check for flush, straight

create kinds

call score\_hand()

see Poker Design doc for more details

**Some technical highlights**

Java is strong style language, so it is more complicated to write specially dealing with Hash data structures, converting between HashMap, TreeMap, ArrayList, …

I tried a few ways to sort HashMap like TreeMap; however, it is not trivial to convert TreeMap back to HashMap;

Finally, I use **unordered HashMap** for **ranks\_hash** to store (key, value) pair for ranks and ranks counts.

Then, I use **ordered ArralyList<Map.Entry>** for **valuesList**,

first valuesList is reverse sorted by keys(ranks),

then reverse sorted by values(ranks count).

I use Arrays.sort(list, Collections.reverseOrder()) and use entriesSortedByValues(..) to reverse sort values on List with HashMap.Entry. These sort processes simplify the sorting process and easy to understand the code.

**PokerResult class** contains data structure for **return from poker.scoreHand**() function

{ Integer score; ArrayList valuesRanks }

**BestHand class**

-create Poker object for each hand

-call poker.scoreHand() => PokerResult object

to find the winner compare score in PokerResult

if same score, then compare ArrayList in PokerResult by comparePokerResult(..)

comparePokerResult() call compareList()

**Poker class**

- parses each hand into char[] suits, and HashMap ranks\_hand

- convert rank “10” to “T”

- convert rank to index int using RANKS\_INDEX = "--23456789TJQKA"; to 2,3,4,5,6,7,8,9,10,11,12,13,14

- ranks\_hand: key is rank, and value is rank count

**scoreHand**()

check for flush, straight

create kinds

find score

create ArrayList<Map.Entry> valuesRanks

- first reverse sort on ranks into an ordered ArrayList= a List with Map.Entry

- second reverse sort on value of Map.Entry in this ArrayList valuesRanks

return PolerResult = { Integer score; ArrayList valuesRanks }

**I create Eclipse Poker project** with three classes – Poker, PokerResult and BestHand

**Testing**

**Using Junit**

create Poker\_test class

17 tests compare different combination of hands: flush vs straight, square vs full house, two squares, …

