CB Lab #3

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Period 4

**Questions**

**Activity #2**

1. Deck is a list and the individual component of the list is made of cards.
2. 2
3. ***ranks*** : A, A, A, A, K, K, K, K, Q, Q, Q, Q, J, J, J, J, 10, 10, 10, 10, 9, 9, 9, 9, 8, 8, 8, 8, 7, 7, 7, 7, 6, 6, 6, 6, 5, 5, 5, 5, 4, 4, 4, 4, 3, 3, 3, 3, 2, 2, 2, 2

***suits***: spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club, spade, heart, diamond, club

***pointValues:*** 11, 11, 11, 11, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 9, 9, 9, 9, 8, 8, 8, 8, 7, 7, 7, 7, 6, 6, 6, 6, 5, 5, 5, 5, 4, 4, 4, 4, 3, 3, 3, 3, 2, 2, 2, 2

1. Yes. The elements in each arrays in the same index has to be of the same card.

**Activity #3**

1. public static String flip(){

int rand = (int)(Math.random()\*3);

if(rand == 0 || rand ==1)

return “heads”;

else

return “tails”;

}

1. public static Boolean arePermutations(int[] a, int[] b){

int count=0;

for(int i=0; i<a.length; i++){

for(int j=0; j<b.length; j++){

if(a[i]== [i])

count++;

break;

else

continue;

}

}

if (count==a.length)

return true;

else

return false;

}

1. 0, 1

**Activity #6**

1. 5club & 6club, 6club & 5 spade
2. yes because all the other ones have pairs, or triples of JQK. Since there is no more card left in the deck, the only possibility of 3 being left is JQK.
3. No. It depends on which card comes out next from the deck. Even if more than one play is possible and you choose to play the other pair, the first pair can be played the next turn. So it doesn’t matter.

**Activity #7**

1. board, cards
2. rank of one card + rank of other card == 11

or rank of one card ==J, rank of other card ==Q, rank of another card ==K

and A rank ==1

1. Yes
2. 1. ElevensBoard() (constructor)

newGame()

* 1. isLegal(), anotherPlayPossible()
  2. 0, 1, 3, 6, 7
  3. for( int i=0; i<cIndexes.size(); i++){

System.out.println(board.get(i));

}

* 1. anotherPlayPossible() because it has to see if there is another play possible without the other solution that might be chosen.

**Activity #8**

1. They have all the same rules of a pair of cards having to add up to a certain number such as 11, 13, or 10. But JQK cards are handled differently in each game.
2. The instance variables get the information from ElevensBoard. This is polymorphism because depending on which kind of object it is, the variables can receive different information.
3. Yes. If it didn’t cover all of it, ElevensBoard would have to be an abstract class as well and have sub classes to implement all the abstract methods.

**Activity #9**