Izzy Biel

Period 8

**Elevens Lab Activity Questions**

***Activity 2***

1. Relationship between Deck and Card: The Deck class contains instances of individual card objects. While the card class contains specific instance variables of the rank, suit, and point value, the Deck class contains instance variables of the size of **how many cards** there are in the deck, which is referenced via List.
2. The initialized deck contains 3 cards because there are three different ranks and point values, with 2 different suits. This means that of the three cards, two of them have the same suit.
3. String[] ranks = {“2”, “3”, “4”, “5”, “6”, “7”, “8”, “9”, “10”, “J”, “Q”, “K”, “A”};

String[] suits = {“Spades”, “Hearts”, “Diamonds”, “Clubs”};

int[] pointValues = {2, 3, 4, 5, 6, 7, 8, 9, 10, 10, 10, 10, 11};

1. The only thing that matters in terms of keeping elements in order is making sure that the ranks array and the pointValues array are parallel. If they are not, the card will not be assigned the correct pointValue according to the rank. Otherwise, the numbers do not need to be in order.

***Activity 3***

1. public static String flip()

{

Random generator = new Random();

int coin = generator.nextInt(3);

if( coin == 0 || coin == 1)

{

return “heads”;

}

return “tails”;

}

1. public static Boolean arePermutations(int[] array1, int[] array2)

{

Boolean[] return = new boolean[array1.length];

for( int i1 = 0; i1<array1.length; i1++ )

{

for( int i2 = 0; i2<array1.length; i2++ )

{

if( array2[i2] == array1[i1] )

{

return[i1] = true;

}

else

{

Return[i1] = false;

}

}

}

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

{

If( return[i] == false)

{

return false;

}

}

return true;

}

1. 1, 2, 1, 2

***Activity 6***

1. All possible plays:

5+6, 5+6,

1. Yes – if the game is played correctly, there all pairs and triplets should be made. If there are three cards left and all other cards are used, those three cards must be a triplet of 11.
2. I don’t think it involves strategy – when there is more than one play possible, it doesn’t matter how the pairs are made because the amount of pairs that is made is still going to be the same. This game is based on chance.

***Activity 7***

1. ElevensBoard class private instance variables:

* deck
* numberOfPairs