Elevens Lab Assignment Questions

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**Day 3**

1. Program code for flip method:

public String flip() {

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

if (i <=1){

return "heads";

}

return "tails";

}

1. Program code for arePermutations method:

public static boolean arePermutations(int[] a, int[] b) {

boolean ret = false;

Arrays.sort(a);

Arrays.sort(b);

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

int sel = a[i];

int indx = Arrays.binarySearch(b, sel);

if (indx <= -1) {

return false;

}

}

return true;

}

**Day 7**

1. To physically play Elevens, the required materials are a typical deck of 52 cards, players, and a board or area to play the game.
2. The minimum instance variables required for the ElevensBoard class are size to represent the amount of cards the board can hold, Card[] to represent the cards on the board, a Deck object, a Ranks and Suits String[] and a PointValues int[] to determine what the cards represent and their points.
3. Algorithm:
   1. Initialize the instance deck with the suits, ranks, and point values determined by the game rules.
   2. Deal nine cards from the shuffled deck and place them onto the board.
   3. Check if there are possible pairs to add to eleven or if a Jack, Queen, and King are each on the board. If neither is possible, the game ends and the player loses.
   4. If the cards the user chooses to replace or eligible for replacement, those cards are to be removed from the deck object.
   5. If the deck isn’t empty, deal cards corresponding to the amount replaced. Otherwise, check if there are cards remaining on the board. If there aren’t, the player wins. If there are, refer back to c.
4. The three private methods found in ElevensBoard class are dealMyCards, containsPairSum11, and containsJQK. The methods that call/should call them are the constructor, newGame, and isLegal.
5. public static void printCards(ElevensBoard board) {

List l = board.cardIndexes()

for (int i = 0; i < l.size(); ++i) {

System.out.println(board.cardAt(i).toString());

}

}