

```

1 public class DeckTest
2 {
3     public static void main(String[] args)
4     {
5         Deck deck = new Deck(); // test creating instance of a deck using constructor to fill deck
        ArrayList
6
7         System.out.println("Number of cards in DECK: " + deck.getDeckLength()); // test how many cards
        are in deck using getter method
8         System.out.println();
9
10        System.out.println("New deck of cards created"); // tests if all 52 cards are created
11        for(int i = 1; i <= 52; i++){
12            System.out.println(i + " - " + deck.getDeckEntry(i));
13        }
14        System.out.println();
15
16        boolean duplicateFound = false;
17        for(int i = 1; i <= 52; i++) { // nested for loop tests whether any of the cards in deck are
        duplicates
18            for(int j = i + 1; j <= 52; j++) {
19                if((deck.getDeckEntry(i).toString()).equals(deck.getDeckEntry(j).toString())){
20                    duplicateFound = true;
21                }
22            }
23        }
24        System.out.println("Duplicates found after creating all 52 cards: " + duplicateFound);
25        System.out.println();
26
27        ArrayList<Card> TEST = new ArrayList<Card>();
28        // tests whether first 9 dealt cards are shuffled and can be stored/retrieved in TEST Card
        ListArray
29        System.out.println("Test if first 9 cards are shuffled and can be stored/retrieved in TEST
        Card ListArray.");
30        for(int i = 1; i <= 9; i++) {
31            TEST.add(deck.deal());
32            System.out.println(i + " - " + TEST.getEntry(i));
33        }
34
35
36        System.out.println("Number of cards in DECK: " + deck.getDeckLength()); // test how many cards
        are in deck after dealing 9
37        System.out.println("Number of cards in stored in TEST Card ListArray: " + TEST.getLength());
        // test if 9 cards were retrieved
38        System.out.println();
39
40        System.out.println("Test whether card 7 can be retrieved from TEST ListArray above: " + TEST.
        getEntry(7));
41
42        System.out.println("\nTest if all 52 cards can be shuffled and dealt out.");
43        for(int i = 10; i <= 52; i++) { // deal out rest of cards into TEST ListArray until all 52
        have been dealt
44            TEST.add(deck.deal());
45        }
46
47        boolean duplicateFound2 = false;
48        for(int i = 1; i <= 52; i++) { // nested for loop tests whether any of the cards in deck are
        duplicates
49            for(int j = i + 1; j <= 52; j++) {
50                if((TEST.getEntry(i).toString()).equals(TEST.getEntry(j).toString())){
51                    duplicateFound2 = true;
52                }
53            }
54        }
55        System.out.println("\nDuplicates found after shuffling and dealing all 52 cards: " +
        duplicateFound2);
56
57        System.out.println();
58        System.out.println("Number of cards in deck: " + deck.getDeckLength()); // test how many cards
        are in deck after dealing all 52
59        System.out.println("Number of cards in stored in TEST Card ListArray: " + TEST.getLength());
        // test if all 52 cards were retrieved
60
61    }
62 }
63

```