

```
1 import java.util.Random;
2
3 /**
4  * This class holds the Deck functionality of the card game such as
5  * the DECK listArray and methods to manipulate the Cards in DECK
6  * such as dealing cards in a shuffled order.
7  */
8
9 public final class Deck
10 {
11     private final AListArray<Card> DECK = new AListArray<Card>(); // listArray to store cards in DECK
12     Random rand = new Random();
13
14     public Deck() // deck constructor creates a full deck of 52 cards
15     {
16         int NUMCARDS = 52;
17         for(int i = 0; i < NUMCARDS; i++) {
18             this.DECK.add(new Card(i%13, i/13));
19         }
20     }
21
22     public Card deal() // returns a remaining card in the deck in a random order
23     {
24         int x = rand.nextInt(1, getDeckLength()+1);
25         Card cardToDeal = this.DECK.getEntry(x);
26         this.DECK.remove(x);
27         return cardToDeal;
28     }
29
30     public int getDeckLength() // returns length of deck
31     {
32         return DECK.getLength();
33     }
34
35     public Card getDeckEntry(int index) // returns specific card entry from deck
36     {
37         return DECK.getEntry(index);
38     }
39 }
40
```