Lab Goal : This lab was designed to teach you more object oriented programming and how to write a larger game.

Lab Description : Write the Deck class. Deck is a collection of Card references stored in an ArrayList. Each of the Card references in the ArrayList will refer to some type of Card object. If you are playing BlackJack, the Card references will refer to BlackJackCard objects. If you were playing Poker, the Card references might be referring to PokerCard objects. The Deck class could be used for any card game. Show that Deck works as intended by instantiating a Deck in the main and displaying all of the shuffled cards in the debug window.

```
public class Deck
{
   public static final int NUMFACES = 13;
   public static final int NUMSUITS = 4;
   public static final int NUMCARDS = 52;

   public static final String SUITS[] = {"CLUBS","SPADES","DIAMONDS","HEARTS"};

   private int topCardIndex;
   private ArrayList<Card> stackOfCards;

   // constructor
   public Deck()
   {
   {
     //initialize the instance variables

     //one loop to go through all SUITS
        //one loop to go through all FACES
       //add in each new Card() to the Deck
   }

   public int size()  {   return 0;   }

   public int numCardsLeft(){
      return 0;
   }

   public void shuffle(){
      //add code to shuffle deck - Collections has a shuffle
   }

   public Card nextCard(){   return stackOfCards.get(topCardIndex--);  }

   public String toString(){
      return stackOfCards + "   topCardIndex = " + topCardIndex;
   }
}
```

Files Needed ::

Card.java
BlackJackCard.java
Deck.java
DeckTestOne.java

Sample Output (DeckTestOne.java)

```
lots of cards

num cards left in the deck == 0


shuffling
num cards left in the deck == 52


lots of cards again
```