# Lab assignment 16.3

# Deck Card Class

**Inside your SingleDimensionalArrays project, place the starter code for Deck, Card and Game. All of your work will go in Deck.**

The **Deck** class uses the **cards** array as an attribute to store **Card** objects. This lab assignment is meant to improve the **Deck** class. The starting version has a minimal **Deck** class.

You need to update the constructor so that all 52 cards of a normal card deck are assigned to the **cards** array. Keep in mind that card information needs to be stored inside the **Deck** class and is not passed by parameter. You must also call the **shuffle** method, which you will create, in the constructor.

Your program must re-define the **toString** method for the **Deck** class so that it can be used to display the attribute values in a convenient manner. Make sure to take advantage of the **toString** method that already exists in the **Card** class.

**public String toString()**

Your program needs to have a shuffle method.

**public void shuffle()**

You need to *shuffle* the deck by swapping the cards. Generate two random numbers in the **[0..51]** number range that will represent the indexes of the **cards** array and swap the cards. Make 1000 swaps and then display the cards. Use **Math.random** to generate random numbers.

**Hint:**

You can store instance variables in the **Deck** class that have an initializer list as shown below:

**private String[ ] suits = {"Clubs","Diamonds","Hearts","Spades"};**