

# Programming assignment 1

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**Due** Monday by 9am    **Points** 100    **Submitting** a file upload    **File Types** java  
**Available** Jul 1 at 9am - Aug 21 at 11:59pm about 2 months

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## Introduction

We implemented a rudimentary card game in class. The game included three classes, and two enumerations:

- Card.java
- Deck.java
- Game.java
- Rank.java
- Suit.java

## Randomizing an Array using the Fischer Yates Algorithm

We implemented a method for randomizing a deck of cards. However, the algorithm that we provided was rather inefficient. For the first part of this programming assignment, you are to replace the shuffle method with the Fischer Yates algorithm for randomizing an array. For this activity, your changes should be isolated to the source file, Deck.java.

## ArrayList

The second part of this assignment is also isolated to the source file, Deck.java. For this part of the assignment, you are to replace the Card array with an ArrayList<Card> in the Deck class.

## What to Hand In

The first programming activity, implementing the Fischer Yates Algorithm, store the changes in a file named Deck\_fischeryates.java. For the second activity, replacing the array containing cards in the Deck class with an ArrayList<Card>, store the code changes for the Deck class in a file named Deck\_alist.java.

Criteria	Ratings	Pts
Meet all of the requirements The program meets all of the requirements of the problem statement(s). The program has been tested, debugged, and does not throw any unexpected exceptions.		70.0 pts
Block comment at the top of the file Each file submitted has a block comment at the top of the file that includes the author's name, the class ID, assignment number, and a brief description of the contents of the file.		15.0 pts
Code comments The class, and the methods and fields within it are commented sufficiently so that reader can understand the source code by reading the comments.		15.0 pts
Total Points: 100.0		