

CSCI212.12 Spring 2018 Assignment 1

This assignment can only be submitted once. So make sure that you are finished before submitting.

Look at the following three tasks:

1. Ask the user for 3 decimal numbers and return the average of those numbers. You need a variable of type double for each of the three numbers and one for the average. Use the `System.out.printf()` statement and restrict average to 3 decimal places. Page 104 in your book shows the format specifier.
2. Ask the user for a String and check if it is a palindrome. (A palindrome reads the same forwards and backwards.) Use `nextline()` method of the Scanner object to read the line. Use `charAt()` method of the String class after replacing any spaces in the string by `""`. If you need any help look up chapter 2 in your book or Java 8 API String class documentation. Return a boolean value.
3. You have three identical prizes to give away and a pool of ten finalists. The finalists are assigned numbers from 1 to 10. Write a program to randomly select the numbers of three finalists to receive a prize. Make sure not to pick the same number twice. For example, picking finalist number 3 is valid but picking 3, 3, 11 would be invalid because the finalist number 3 is listed twice and 11 is not a valid finalist number. Use the Random class to generate a random number between 1 to 10, where 1 and 10 are inclusive. Create an array of capacity 3 to hold the three numbers and return the array.

Create three different methods. Each method should perform one of the above tasks. Then create a main method which will directly call the above mentioned three methods. Print the results in the main method. Submit all four methods in one class.