JF section 4 practice

```
import java.util.Random;

public class ComputeMethods {
    private Random random;

    public ComputeMethods() {
        // Initialize the Random object
        random = new Random();
    }

    // Method to generate a random integer between min and max (inclusive)
    public int getRandomInt(int min, int max) {
        return random.nextInt((max - min) + 1) + min;
    }

    // Method to generate a random double between min and max
    public double getRandomDouble(double min, double max) {
        return min + (max - min) * random.nextDouble();
    }

    // Method to compute the average of an array of integers
    public double computeAverage(int[] numbers) {
        if (numbers.length == 0) {
            return 0;
        }
        int sum = 0;
        for (int number : numbers) {
            sum += number;
```

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    }
    return (double) sum / numbers.length;
}

// Method to compute the sum of an array of doubles
public double computeSum(double[] numbers) {
    double sum = 0.0;
    for (double number : numbers) {
        sum += number;
    }
    return sum;
}

// Method to generate an array of random integers
public int[] generateRandomIntArray(int size, int min, int max) {
    int[] array = new int[size];
    for (int i = 0; i < size; i++) {
        array[i] = getRandomInt(min, max);
    }
    return array;
}

// Method to generate an array of random doubles
public double[] generateRandomDoubleArray(int size, double min, double max) {
    double[] array = new double[size];
    for (int i = 0; i < size; i++) {
        array[i] = getRandomDouble(min, max);
    }
    return array;
}
```

```
    public static void main(String[] args) {
        ComputeMethods cm = new ComputeMethods();
        // Generate random numbers and compute results

        int[] intArray = cm.generateRandomIntArray(5, 1, 100);
        double[] doubleArray = cm.generateRandomDoubleArray(5, 0.0, 1.0);
        System.out.println("Random Integers:");
        for (int num : intArray) {
            System.out.print(num + " ");
        }
        System.out.println("\nAverage of Integers: " + cm.computeAverage(intArray));
        System.out.println("\nRandom Doubles:");
        for (double num : doubleArray) {
            System.out.print(num + " ");
        }
        System.out.println("\nSum of Doubles: " + cm.computeSum(doubleArray));
    }
}n.
```