Assignment 02
CSE215

1) Write a class named Solution02 that has the following:
    a) One method generates distance to take an array of city names as a parameter. Given an array of city names, it creates an appropriate two dimensional array to store the distance between two cities. All distances are integers.
        i) Lowest distance between two different cities is 50 miles.
        ii) Highest distance between two cities is 90 miles.
        iii) Distance can be any integer value between 50 to 90 for two distinct cities.
        iv) Distance between cities A to B is the same as distance between cities B to A.
        v) Distance between cities A to A is always 0;
        vi) The distances must be assigned randomly - it can not be hard coded or taken from the console.

    b) Another method takes the array containing city names and the distance matrix defined in a). This displays the list of distances between any two cities in a table format. Assume the city name is at most 10 characters long. In the tabular format, the column must be 20 characters wide, and be well-aligned.

    c) Using a Stringbuilder, write a method to randomly generate City names between 5 characters to 10 characters. All characters are lowercase letters.

    d) You can also create a method that returns a predefined city name randomly from a hardcoded list of 250 cities. Each city name is at most 10 characters long.

    e) Ensure that the array of city names contains unique city names. While populating the array, check the city name against all city names so far. Use string.equals for string comparison, do not use == for comparing two strings.

    f) In the main method, using Math.random, create a list of 5 to 15 random cities and appropriately call method a - c to display results.

Compile and run the above program. Upload the appropriately named .java file and output snapshot. Submit a .pdf copy of the handwritten solution.