CST 7284 – Lab 9

Due date: July 27, 2022

Challenge

Write a program that would sort a Person object based on some specific criteria defined below. Details are as follows:

Person class

1. Firstname: String
2. Lastname: String
3. Address (One line): String
    a. Ex: 123 Main Street, Ottawa, ON K2K 3L4
4. SIN (9 digits): String
5. DriversLicense (One upper case character (A-Z only) followed by 15 digits): String
6. DriversLicenseProvince(two uppercase letters; i.e. ON, QC…): String

Implements all required Getters and should have one constructor that takes all these params in. No default constructor.

PersonComparatorDemo class

This class would contain the main method where you define an ArrayList of 10 Persons at least with different data confirming to the set of criteria listed above.

You need to have two persons or more with same the last name but different first names. Also, two persons or more with the same DriversLicenseProvince but different DriversLicenses. Two persons or more with totally different first/last names. Two or more with different SINs.

One method that takes a List and prints it out using a for loop.

Main method Pseudocode:

Print out the original list.

Sort the list by using the NameComparator class explained below.*

Print out the sorted list.

Sort the list by SIN using the SinComparator class explained below.*

Print out the re-sorted list.

Sort the list by DriversLicense using the DriversLicenseComparator class explained below.*

Print out the re-sorted list.

*: To perform your sort, all you need to do is to use Collections.sort where you pass it the list of

persons and a new instance of the corresponding Comparator class.

NameComparator class

Implements Comparator interface.

Compare method takes two Persons and using slide#29 from the lecture slides where you would compare the last names first. If the last names are equal, you compare by first name after. Comparison should be case insensitive.

SinComparator class

Implements Comparator interface.

Compare method takes two Persons and compares them based on their SIN values. You can use compareTo method in String class to do so.

DriversLicenseComparator class

Implements Comparator interface.

Compare method takes two Persons where you would compare the DriversLicenseProvince first. If the DriverLicenseProvinces are equal, you compare by DriverLicense after. Comparison should be case insensitive.

What to submit: A zip file containing all the required .java files.