**Exercise 3 : keep your source code for Exercise 4**

1. Copy class Country to your source file. Complete this class to make it concrete, but do not chane the visibility of each member

class **Country** implements Comparable<Country> {

private String name;

private int gold, silver, bronz, total;

public void report() { /\* print result \*/ }

public int compareTo(Country other) { /\* add your code \*/ }

}

2. Create ArrayList of Country. Read each line of input file into Country object & add this object to the ArrayList.

3. Ask the user to choose sorting criterion and print results

3.1 Criterion = N 🡪 sort the ArrayList by alphabetical order of names. This must be done

by the natural order of Country (implement Country’s compareTo)

3.2 Criterion = G 🡪 sort the ArrayList in decreasing order of golds, silvers (in case

of equal golds), bronzes (in case of equal golds & silvers), and alphabetical order

of names (if everything else is equal). This must be done by a Comparator

class **SortCountryByMedalsName** implement Comparator<Country> {

public int compare(Country c1, Country c2) { ... }

}

3.3 Criterion = T 🡪 sort the ArrayList in decreasing order of total medals and

alphabetical order of them (in case of equal total). This can be done by another

Comparator

class **SortCountryByTotalMedalsName** implement Comparator<Country> {

public int compare(Country c1, Country c2) { ... }

}

**medals.txt**

Brunei 0 0 0

Cambodia 0 0 0

Indonesia 7 13 12

Laos 0 0 0

Malaysia 0 7 4

Myanmar 0 0 0

Philippines 0 3 7

Singapore 1 2 2

Thailand 9 8 14

Timor-Leste 0 0 0

Vietnam 1 3 0

<https://en.wikipedia.org/wiki/All-time_Olympic_Games_medal_table>

Hint

After reading the whole line into a string (e.g. str), use str.split("\\s+") to split across spaces

Use str1.compareToIgnoreCase(str2) to compare 2 strings

