SCIT

School of Computing and Information Technology
Faculty of Engineering & Information Sciences

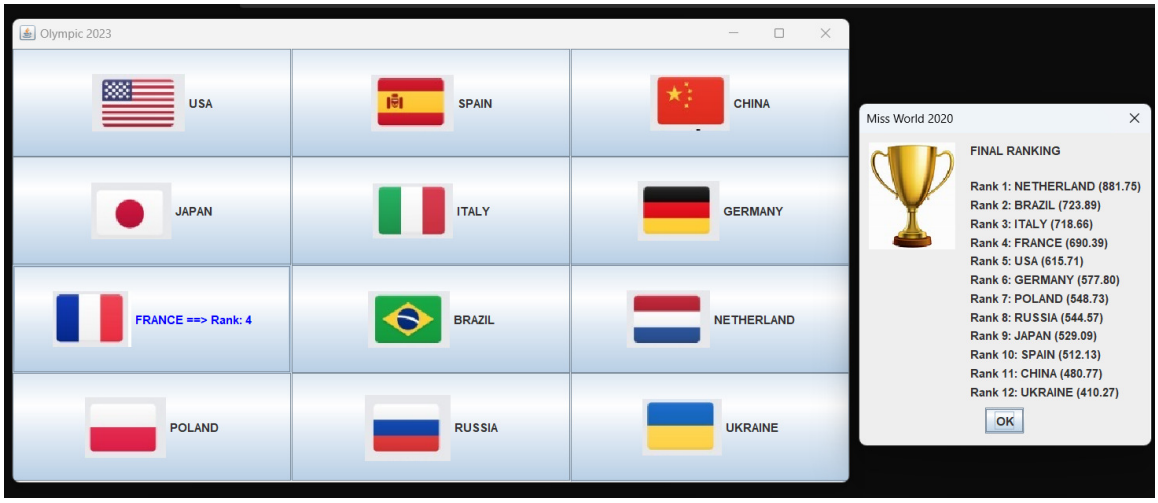
CSIT121
Object Oriented Design and Programming
Assignment 3
File name: YourName_No_A3.java
No = class list number

Objectives:

Practice java programming with GUI, Collections and Lambda

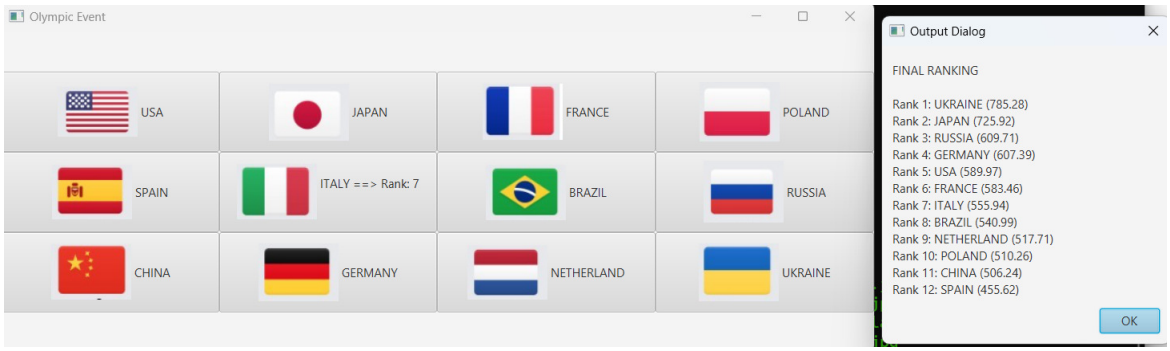
Task 1: (7 marks)

In an Olympic unknown competition, a few teams (for example 12 teams or countries) qualified for the final. The interactions and displays are simple:

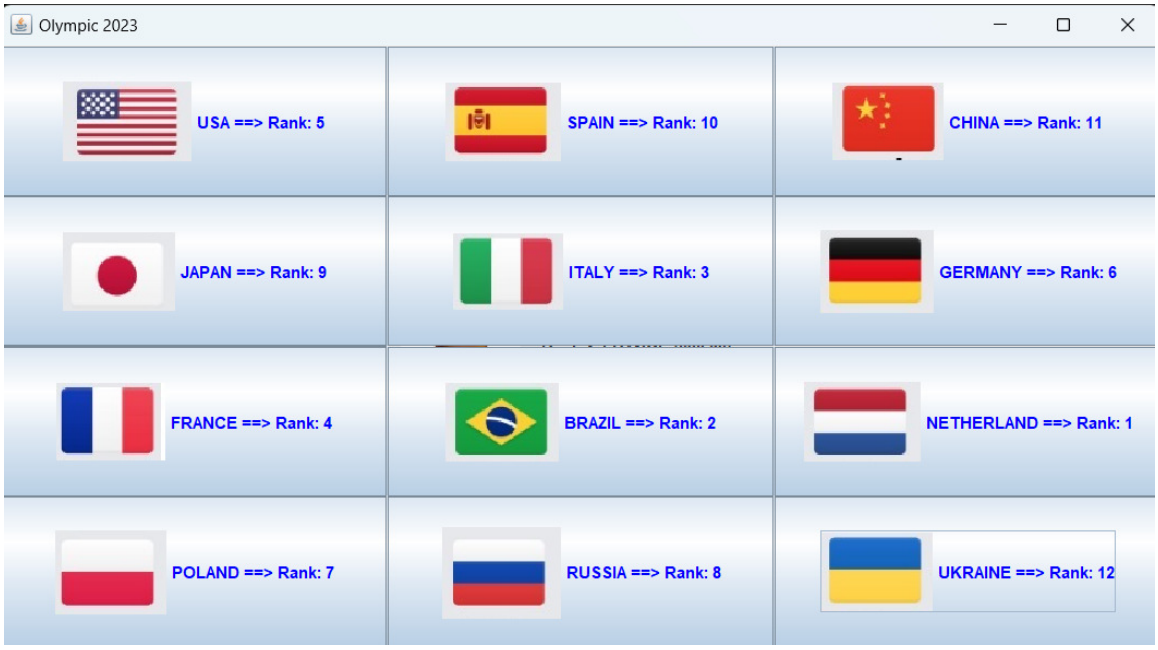


When we click a country, for example France; its ranking will be displayed in the frame, and the detailed final ranking with the scores will be displayed in another panel.

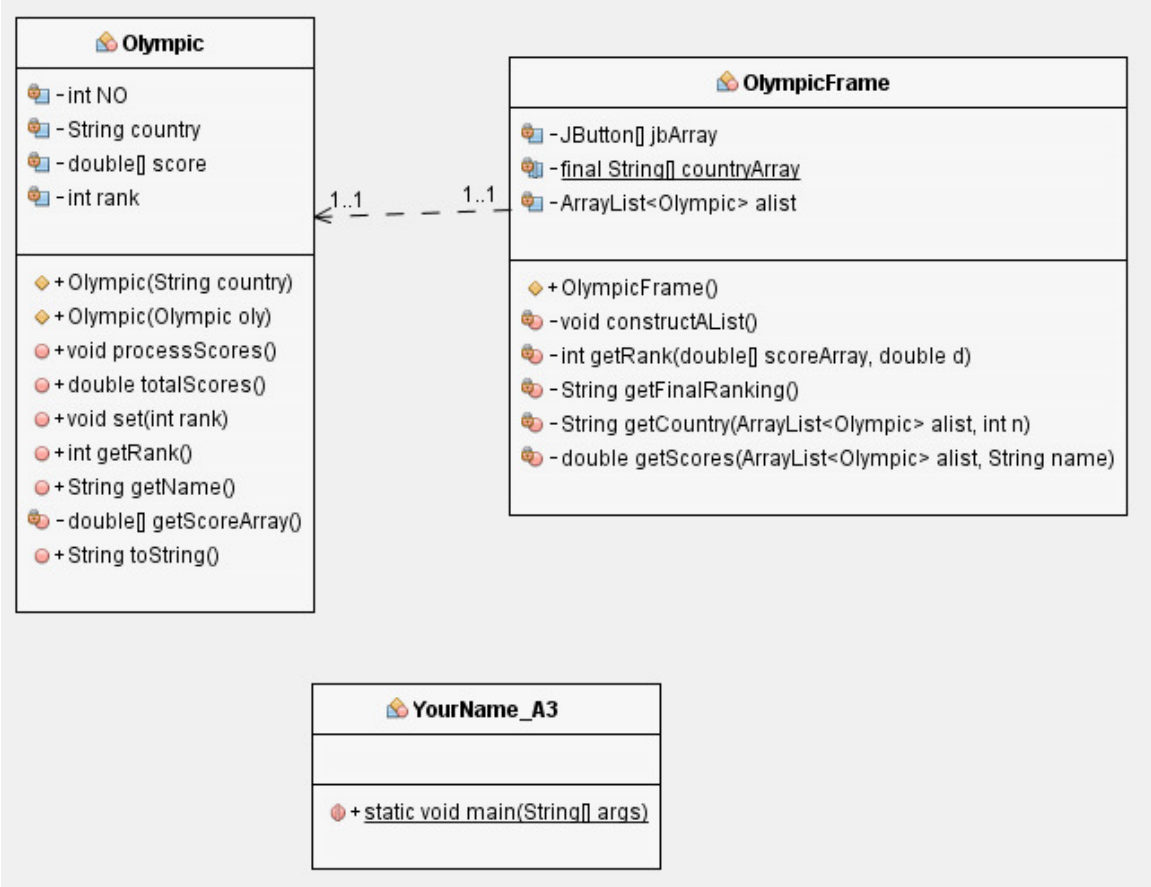
If working on Javafx, you can use output dialog to display the final ranking:



You can continue to click all the countries to see the ranking of all countries in the left frame:



Let us now explore the UML diagram for this task:



In the class Olympic, you have an important instance variable which is the name of the country. Each country receives an array of scores (the size is

NO, a constant, as specified in the class; the scores given by the judges) and a final ranking which will be updated later in the design.

When constructing an object of class Olympic, you only need pass in the country name. The processScores method is to generate some scores (upon 100) for each judge.

The class OlympicFrame designs your GUI. You construct a list of Olympic objects and determine the ranking.

A few important methods in the class OlympicFrame:

- The getFinalRanking constructs and returns a string that you can display this string in the panel.
- The getCountry method returns the country name that has rank n.
- The getScores method returns the total scores of a country.

Note that this assignment emphasizes modular design, object-oriented designs, and a bit of functional programming with lambda expressions in your coding's!!!!

You do not need to upload the image files, just labelled the image file names as 1.jpg, 2.jpg, 3.jpg etc

IMPORTANT

Put all your classes in a file called **`YourName_No_A3.java`** and make sure that this file can be compiled and can be executed. Upload **ONLY** this file to Moodle**. ALL ZIP FILE SUBMISSION WILL BE REJECTED**

No re-submission will be allowed after grading.

In the above file, remember to put down your name and the following declaration (some similar contents):

```
// Tell me if it is your own work, and whether you have passed your
// program to your friends etc etc etc
// and willing to accept whatever penalty given to you.
```

- **Wrong file name -0.5 mark**

- **No declaration, no name etc -1 mark**
- **Failing to demo -1 mark**
- **Programs indentations and alignment of statements -0.5 mark**
- **Late penalty: -0.1 mark per hour**