**Task 1**

My program for task 1 starts by creating a very poorly laid out window using JFrame. This window asks the user to input a year, gender letter, and a name. Once the Submit Query Button is clicked, based on this info, it will search through the files accordingly. This is done by taking the year and finding a file with that year. Then, the file is opened and its lines are read. Each word in a read line is then separated by a space and stored inside the String array called String[] record, which is inside the Submit Query Button’s Action Listener.



Once stored, the program compares the name entered with the corresponding gender name extracted from the file. If a name is found, a new window is created which displays the gender, name, and rank of the provided name.

Graphical user interface, application

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If a name is not found or does not match its gender, the program will state that the name was not found in the given year. Similarly, if the year doesn’t match, the program will create another window and state that no file for the desired year was found. Ex:

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Graphical user interface, application

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**Task 2**

For this task, I did not create a GUI, as I was too disgusted with my GUI work in task 1. This program defines a functional interface called ArrayProcessor, along with a class called ArrayProcessorClass, which defines four members of type ArrayProcessor. The purpose is to perform operations (from ArrayProcessor) on doubles and return them. The members of the class ArrayProcessorClass return ArrayProcessor type data using Lambda expressions. This functionality is tested inside the main method of the ArrayProcessorClass, where the user is asked to define an array of type double. This array is then processed using the functions defined by the ArrayProcessorClass through the functional interface ArrayProcessor.

The execution of these functions are as follows:

Text

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