

CSCD 210

API Lab

SPECIFICATIONS:

The purpose of this lab is for you to start to read and understand the Java API. In this particular lab you will be working with the API for the String class.

The documentation for Java 22 can be found at
<https://docs.oracle.com/javase/22/docs/api/index.html>

Create, compile and execute a program for the following.

1. Create a new folder named APILab
2. In the src folder, add a Java file named CSCD210APILab
3. Add the class level constant named YEAR above the method header for main

```
public static final int YEAR = 2024;
```

4. In main create a Scanner object named kb

```
Scanner kb = new Scanner(System.in);
```

5. In main create the following:
 - char ltr;
 - String name = null;
 - int birthyear;
6. Asks the user, in this order, for
 - For a single alphabetic character (guaranteed lower case)
 - Their full name meaning first middle last (read from the keyboard as a single String)
 - Birth Year
7. Using System.out.println statements and the methods in the String API complete the following.
8. You must use the built-in functions in the API for String, System and Character to:
 - Print the first letter of the name
 - Print the last letter of the name
 - Print the middle name
 - a. NOTE: You can't use the split method
 - Print the hash code of the last name + YEAR (use the constant) + the birth year (use the number)
 - Print the results of replacing all the characters in the name that match the alphabetic character (case not sensitive) with a question mark (?). Example the character is a f. You would replace all occurrences of the letter f or the letter F in the name with the ?.

HINTS:

- Your code will look similar to

```
System.out.println("The first letter of your name is: " + name.charAt(0));
```

- Of course the name.methodName will be different for each bullet above

NOTES:

- Assume that the user enters the correct input
- You will need to read the API for the classes mentioned.
- You will have at least 3 output runs in a file named **cscd210apilabout.txt**
- How do you handle Kiefer William Frederick Dempsey George Rufus Sutherland?

TO TURN IN

A **zip** file that contains APILab. APILab will contain

- All your code so we can compile and run your program
- The output runs of your program named **cscd210apilabout.txt**

Name your zip file with your last name, first initial of your first name, apilab.zip
(Example: **johnsonsapilab.zip**)

PARTIAL SAMPLE RUN

Please enter your full name: Lucy Oregano Baggins

The first letter of your name is: L

The last letter of your name is: s

Your middle name is: Oregano

More output goes here...