Institute of Computer Science

CMSC 22: Object-Oriented Programming

CHECKPOINT JOURNAL 02

Instructions: Accomplish* this journal every checkpoint so we can monitor your progress and improve everyone's learning experience. Answer and submit as Google Doc (PDF is only for those who have limitations in working online.)

**Accomplish this when you are done (or almost done) with the lecture and lab requirements for the week.*

Name: **Gabinete, Keith Ginoel S.** Checkpoint Topic/s: **Abstraction I**

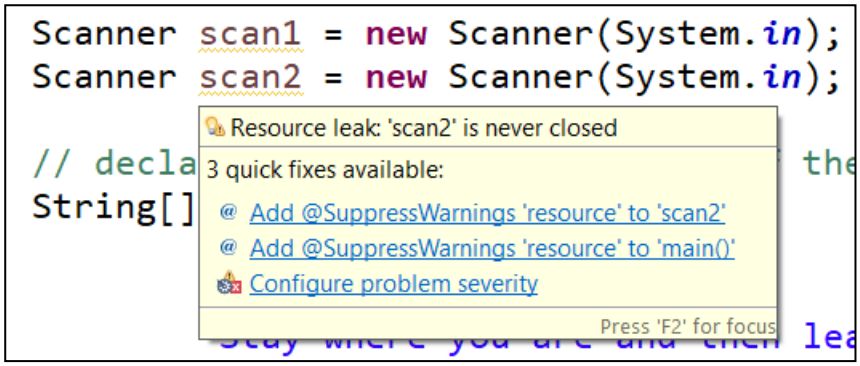
Student Number: **2020-03670** Date: **March 18, 2023**

1. What problem/confusion did you encounter about the lesson/s or requirement/s?

   Explain the specifics of the problem (Minimum of **2** sentences).

   *Note that even If no problem was encountered in understanding the lesson, it's certain that at least a minor issue will be faced while doing the requirements, especially the **lab exercise**. Discuss at least one challenge faced.*

   I was wondering what do these squiggly yellow lines mean under my declaration of scanner variables. Although I'm pretty sure that they do not pose a threat in the overall execution of my program (as I've noticed that even if I leave these line be, my program would still execute properly) I was still confused what do these resource leak warning means and what can I do to get rid of these squiggly lines.



2. How did you solve it and what became your solution? **Explain the specific solution found.**

   Include **references** and **code snippets** when applicable (Minimum of **3** sentences).

   I discovered from this stackoverflow thread <https://stackoverflow.com/questions/12519335/resource-leak-in-is-never-closed> that the solution to get rid of th is resource leak warning is to just invoke the close Scanner method through the declared Scanner objects (like the code snippet below)

```
// close the scanner objects used in our program
scan1.close();
scan2.close();
break;

/ Inform the user if he/she enters an integer value t
```

once we're already done using them or at least before we terminate our program. Although they said that leaving the scanner objects unclosed isn't really crucial in simple programs like the ones being tasked to do at school, it is still a good practice to close Readers, Streams, or any kind of input-output objects every time we open them not only to free up resources but to avoid memory leaks as well. Doing this practice every now and then should be beneficial to us especially once we start getting to work on more complex resource heavy projects.

3. Choose at least one of the things discussed that you understood the most. Imagine explaining it to a classmate. **Explain it in your own words** (Minimum of **4** sentences - can be 2 sentences for each of the week's topics).

I learned that abstraction in object-oriented programming is a blueprint concept that shows only the significant/essential characteristics of an object that makes it different from all other kinds of objects relative to the perspective of the viewer and ignores the irrelevant/unnecessary details related to it. This is done during the design phase of application development. This concept is valuable in software design as it reduces complexity and effort when creating a program. The features of the resulting software object using abstraction are just enough to solve the problem at hand. It also emphasizes some of the object's details with the help of its technique in simplifying the object's description. In OOP, classes are the blueprint of software objects.

I also learned that finding the main "actors" in a given problem domain would help me solve it more effectively and efficiently. Furthermore, when creating classes in my program, I should name them based on their responsibilities, as this could help me understand the characteristics of the class I created more easily. Breaking up classes that have too many responsibilities will also lessen my workload.

Please communicate urgent concerns to your instructor via Discord. Do not write them down here so that they can be addressed immediately. (Ex: Installation problems, health concerns).