CHECKPOINT JOURNAL 01

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.

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Student Number:	**2020-03670**	Date:	**February 25, 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.

   1. As I was trying to handle some try-catch errors in my code earlier, I began to get curious as to how scanner functions in java actually work. Does the newLine() function of it acts more like a scanf function or an fgets function? I remembered that in C fetching waste data on the input stream such that none would be left there before calling another get-input-like function is really bad in scanf function, so I had to switch to using fgets() function in fetching inputs from the user in the usual basis. I believe that the problem that I'm trying to convey would be much easier to understand with a simple demonstration below :

   Using scanf():

```
teioh@teioh:/mnt/c/Users/ASUS/Desktop/CMSC 21 Codes/Laboratory Exercises$ ./a.out

Enter a word: ako si flash
ako

Enter a word: si

Enter a word: flash

Enter a word: █
```

   Using fgets():

```
teioh@teioh:/mnt/c/Users/ASUS/Desktop/CMSC 21 Codes/Laboratory Exercises$ ./a.out

Welcome!
        This program determines whether a word input from the user is a palindrome or not.
[A word is a palindrome if it reads the same backward as forward, such as mAdaM or racEcAr.]

        NOTE: You can exit the program if you enter "EXIT" as an input.
                    "EXIT" must be in CAPSLOCK.

Enter a word: ako si flash

Invalid Input! [Input must be one word only.]

Enter a word: █
```

1. Minor problem

   I encountered a small problem about renaming my java project file in eclipse earlier. I'm trying to find the rename button in different toolbars there and I can't find it. I thought that by remaining the name of the file or folder outside the eclipse ide would solve this issue but no, I was wrong, as it would just create a new empty file/folder once you modify its original source.

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).

   1. To compare, I already know that the nextInt() scanner function in java behaves more like the scanf() function in C.

   ```
   Please enter 5 numbers.

   Enter a number: asdkfjkl asdfkjaslkf sadkfajskdlfas
   Oops! That's not an integer! :(
   Enter a number: Oops! That's not an integer! :(
   Enter a number: Oops! That's not an integer! :(
   Enter a number:
   ```

   The message written inside a catch statement iterates for a number of times since there were still data left in the input stream when the nextInt() scanner function was executed similar to the normal execution of scanf in C . On the other hand if I try to use the nextLine() scanner function instead of the nextInt() function in fetching an input from the user,

   ```
   Please enter 5 numbers.

   Enter a number: jdsakl;fjaskfjasl;fjask;fdjskd dsaf
   Oops! That's not an integer! :(
   Enter a number:
   ```

   the invalid input message was only displayed once. Hence, I learned that the answer to what I'm pondering about earlier is that the nextLine() function in java behaves more like the fgets() function in C. This newly gained knowledge helped me fix the problem I've been having earlier about those iterations of loop statements due to excess inputs from the user. With this, I'm glad to know that I do not need to put so much effort in restricting inputs in Java anymore.

   2. I found the solution in renaming java projects or file in the link below <https://stackoverflow.com/questions/5178411/how   -to-rename-a-class-and-its-corresponding-file-in eclipse#:~:text=Right%20click%20file%20%2D%3E%20Refactor%20%2D%3E%20Rename.&text=You%20can%20ren me%20classes%20or,you%20want%20to%20update%20references.>, I was able to learn that renaming your file can be done by right-clicking the .java file, locating refractor option in the pop -up menu, then, finally choosing the rename option in the next pop-up menu. OR, you can just press Alt+Shift+R in your keyboard simultaneously OR just simply press the F2 key.

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 object-oriented programming is the world's most popular programming paradigm right now as it offers techniques and concepts that make developing programs much simpler and efficient throughout the many decades that have passed. One of the reasons object-oriented programming is ahead of its paradigm competitors is that it provides a "naturalistic approach" in constructing programs and solving software-related problems. The idea that programs made with

object-oriented programming techniques are solely based on the bottom-up approach helps simplify the designs of much complex systems by dividing them into several smaller units – each of which has its own set of attributes and methods that made them distinct in existence. Its technique of focusing on the objects involved in the program and how they interact to achieve larger object's purpose, rather than focusing on the functions and procedures that need to be done to construct a whole program, also proves to be much efficient in development time consumption as objects are easily reusable in nature. The characteristic of an object being self-contained also makes it ideal for a much comprehensible debugging/troubleshooting as attributes and methods inside one is free of influence from other objects making it easier to pinpoint where the error/s is/are coming from. Though programming languages like Java, Simula, C++ and C# are object-oriented in nature, simply using one does not, by itself, guaranteed a person to be an object-oriented programmer – as one must have an objected-oriented view by his/herself about constructing programs while playing with the idea mentioned earlier that that any object is composed of much smaller objects interacting with each other to form one larger object's purpose and/or functions.

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).