Project 1 [10 points]

1. Due Date & Time: **September 16, 2022 at 11:59 pm (PT)**

2. What to submit: Submit 1 zip file containing 4 files as described below to iLearn by the deadline.

   - **3 JAVA Files**: AverageCalc.java, KnockKnock.java, and MyOwnIdea.java [9 points (3 points each)]
   - **1 Word/PDF File**: Make a document that shows the screen captures of execution of your programs and learning points in Word or PDF. Please make sure you capture at least 2 executions for each of the programs, so 6 screen captures and write one paragraph reflecting on what you learned from this exercise [1 points]

   Please submit all required files together in a zip file, via iLearn Assignments Submission
   Please make the zip file name according to the naming convention: proj1_<FIRST NAME>_<LAST NAME>.zip

   Always read through the entire assignment before starting and submitting any of it.
   Missing files or missing requirements will result in deducted points.

---

1. **Average calculator:** Compute and display the average of three numbers provided by the user. The algorithm should (1) prompt users to enter numbers, (2) confirm the numbers they have entered, and (3) present the average value in a sentence. (3 points)

The expected execution would look like this:

```
C:\Users\ilmiy\.jdks\openjdk-14.0.2\bin\java.exe "-javaagen
Please enter 3 whole numbers:
45 23 67
You entered 45 23 67 and the average of them is 45.0
Process finished with exit code 0
```

```
C:\Users\ilmiy\.jdks\openjdk-14.0.2\bin\java.exe "-j
Please enter 3 whole numbers:
1
2
4
You entered 1 2 4 and the average of them is 2.33333
Process finished with exit code 0
```

2. Knock Knock Joke: While in the future, you can make a more fun knock knock joke, for now, your program will generate any 1 knock knock joke that you like best.

In this program, the user is expected to enter a proper response as shown in the green font below. Your program will prompt the user (black text below) and eventually respond with a joke punchline. (3 points)

```
C:\Users\ilmiy\.jdks\openjdk-14.0.2\
Knock, knock
Who's there?
Annie
Annie who?
Annie thing you a do I can better!

Process finished with exit code 0
```

Helpful resource: In case you need it, here is a link for many knock knock jokes: https://www.rd.com/jokes/knock-knock/. You can pick any one and use it here.

3. **Your own idea:** In the above 2 questions, users entered values after which your program responded. These are examples of interactive programs. We want you to be creative and think about ways in which you can use the skills you have developed so far to create an interactive program of your own. This can be anything interactive that you want. It has to be similar to problem 1 or 2 in the sense that you have to use print statements, read user input, and print out something related to the user input.

Further, as we don't know what your idea is, you need to briefly explain what your program does. This is similar to how we have described the problems above. (3 points)

You have to submit the Java files of these 3 programs. Please see the instructions in the next page before submitting the Java files.

4. **You also need to create a Word or PDF file** that contains:
    1) 2 screen captures for each of the problems executed above.
    2) Reflection (1 point):

        Please write 200 words or more about what you learned, what challenges you faced, and how you solved it. You can also write about what was most frustrating and what was rewarding. When you write about what you learned, please be specific and list all the new terms or ideas that you learned!

Now, create a zip file with the 3 Java files and the Word/PDF file and submit it to the iLearn submission page.

Every Java file you write in this assignment will require you to include descriptive comments.

In this assignment, you are tasked with writing descriptive

1. Headers

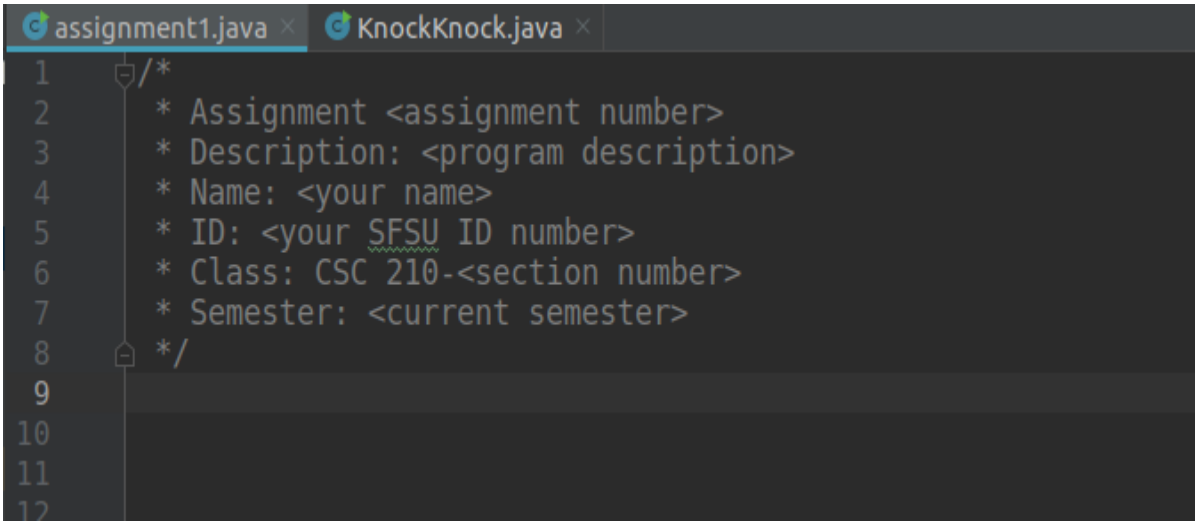
2. Comments

You can write comments in two ways:

- Single-line comments using the // notation.
- Multi-line comments using the /* and */ notation.

a. Include a proper header at the top of every Java file. Replace each tag (such as <assignment number>) with the appropriate text. You should adhere to this format as closely as possible. You do not need to include the <> symbols in your header fields.

Figure 1: Example of the header that your program needs to have.



b. Place your comments at the top of each statement. However, you don't need to write comments on print statements (i.e. anything that starts with System.out.print…) statements. An example of commenting codes is included below in Figure 2:

Figure 2: Example of writing single-line comment before each statement.

```
//To create a scanner object
Scanner scan = new Scanner(System.in);
```