CSC171 — Lab 1

Programs, Statements, Values, Expressions, Variables

The goal of this assignment is to get you started programming in Java, and to give you practice using values, expressions, and literals. This assignment is due by 1159pm on Thursday Sep 22nd (one week). This is an individual assignment. You should do all your work in a file named `Lab1.java`. All problems are worth equal weight.

1. Start with a basic single-class Java program with a `main` method that prints "Welcome to YOURNAME's Demonstration!", where YOURNAME is replaced by your actual name. Add a block comment at the top of the file with your name, your NetID, the lab number/date, and your lab section day/time. **You must include a comment like this in every file you submit for this class.** Once you see the output of this program, you have successfully written and executed Java code.

2. Add code that uses a String variable to store the name of your major and then prints out "My major is: " and then the your major, using a single `println` call.

3. Using a combination and `println`, `equals()`, and a `Scanner` instance, ask the user to tell you their major. If it's the same as yours, say "Me too!". If it's different, say "Sounds interesting!".

4. Modify your program to prompt the user (using a print statement) to enter two decimal numbers. Then use a `Scanner` to read the user input into two `double` variables. Print out the results of the four basic arithmetic operations (addition, subtraction, multiplication, and division), one per line. Print them nicely including the whole expression. For example, with statements like this: "7.0 + 4.2 = 11.2". You can control the number of decimal digits printed using the `printf` method. Congrats, now you've implemented basic input/output and expressions.

5. Modify your program again. This time, make it print a blank line and then ask the user to enter how many seconds they've spent writing Java programs, and output the equivalent "stopwatch time" of hours, minutes, and seconds in the format "HH:MM:SS". You can decide for yourself which data types make the most sense.

Review your code and make sure it has consistent indentation and whitespace. Make sure all your variable names are clear. Make sure you put your name and netid/email at the top. Once you're finished, submit your work to blackboard under the "Lab 1" tab. Just submit a plain Java file for this one - no zip. Ask a lab TA if you need help. Be sure to name your file (and main class) `Lab1`.