**Lab Report 02**

Problem

In this lab, we are tasked with creating two methods using java’s input and output functionality: turning present tense words into past tense and calculating the volume of a list of tubes, given text from their respective text files.

Solution Description

To switch present tense words into their past tense equivalents, the program reads the text file word-by-word and checks if any word is the word “is”. If that is the case, the word will be printed to the console and file as “was” instead.

In order to calculate the volume of the tubes, each line is separated by its delimiters and has its height and radius processed by the program. The formula for volume is calculated using the formula and the result is then added to the total volume. This is repeated until the last volume is calculated and a final total is found.

Problems Encountered

Something I struggled with at first is figuring out the body field amount of the tubes text file because I didn’t know what it meant. I figured out what it refers to is the number of sections that get delimited on each line of the file, and I was quickly able to finalize the tubes method creation. A minor thing I tripped up on during the creation of both methods was not reading the files properly. In the call of the scanner/printwritter methods, I accidentally omitted calling the File object when passing the names of the files into the parameter and wasn’t able to properly read it until I included it.

4. Absolute paths describe the local directories that are searched to find a file, and relative paths refer to how to access a file from the one you are currently in.

5. “./” refers to a file in your current directory location

6. In the project directory itself, not binary or source directories

7. Close the reader/writer

8. Delimiters help distinguish the different sections within a file

9. The file is not being properly because the scanner is reading until a space (or other non-tab delimiter). To fix this, the scanner needs to read each line using the nextLine() method of the scanner instead of just next().

10. A new output stream is being created each time the loop iterates, so remove the FileOutputStream method from the PrintWriter initialization to prevent that from happening.