**Morse Code FAQ**

***Why doesn't my word frequency method handle lower-casing properly?***

Strings are immutable. For a String str, the call str.toLowerCase() ***returns*** a lower-case version of the String. It won't actually change unless you do str = str.toLowerCase().

***Why does my word frequency method skip some values (or why is it off by a couple)?***

Remember that every time you call Scanner's next method, it parses another token from the file. Multiple calls to next will parse multiple values. Save each value before checking if it exists in the HashMap.

***Why does my program crash with a NullPointerException?***

Null pointer exceptions occur when you attempt to access a variable or method using a reference type variable that isn't storing a reference to an object (it's storing a null value). Example:

HashMap<String, String> map; //declared only! *list* is null

map.**put**("hello", "world"); //null pointer exception

You must first initialize map to reference a new HashMap object. Example:

HashMap<String, String> map = new HashMap<>();

map.put("hello", "world");

Also, make sure you haven't RE-declared instance variables in the constructor. Example:

public class MorseCode {

HashMap<String, String> map; //DECLARES instance variable

public MorseCode() {

~~HashMap<String, String>~~ map = new HashMap<>(); //don't RE-declare!

...

}

}

***Why does my MorseCode*** *decode* ***method output something like*** *t null null t null e* ***etc.?***

Make sure you're decoding an entire Morse code character (a *group* of dashes and/or dots), NOT individual characters in the supplied String. Use a Scanner (with the String to decode supplied as a parameter) to tokenize the String, like you've done previously. Recall that whitespace is the default delimiter, and hasNext returns true if there is another token left in the input source.

***Why does my MorseCode*** *decode* ***output look... off by a small amount?***

See the information in the lab doc at the end of page 2 (the part with a red star \*).