**Level 1: Hello World**

1. Install and run the Dr. Java development environment from the network drive:  
   4Students\OUT\Nestor\Java\drjava-beta….exe
2. Edit, compile, and run the “Hello World” program as described online at: <http://www.cs.utsa.edu/~cs1063/resources/gettingstarteddrjava.html>
3. Explain the function of each line in the “Hello World” program below. The following reference will help you answer this question: <https://www.learnjavaonline.org/>

**Level 2: Variables and Types**

1. Read through the “Variables and Types” tutorial at <https://www.learnjavaonline.org/>
2. Explain the difference between “byte’, ‘short’, ‘int’, and ‘long’.
3. Which type would you use most often for a whole number?
4. When would you use the type ‘long’?
5. How is the type ‘float’ different from the type ‘int’?
6. How is the type ‘float’ different from the type ‘double?
7. When would you use the type ‘char’ and when would you use the object “String”?
8. What is an easy to concatenate (append) strings together?
9. What is the type ‘boolean’ used for?
10. How is the Java ‘boolean’ different from the Python ‘boolean’ type?
11. Write a program that prints ‘H3110 w0r1d 2.0 true’. You must use each of the variables discussed above.
12. How does your program compare to the solution provided at the bottom of the Variables and Types tutorial?

**Level 3: Conditionals and Arrays**

1. Read through the “Conditionals” tutorial at <https://www.learnjavaonline.org/>
2. For each Boolean operator (“>”, “<”, “<=”, “>=”, “!=”, “==”), write an if…else… statement that demonstrates what they do.
3. Explain the function of the “||” operator.
4. Write an if…else… statement that demonstrates how the “||” operator works.
5. Explain the function of the “&&” operator.
6. Write an if…else… statement that demonstrates how the “&&” operator works.
7. Explain how the “? … : …” operator works.
8. Explain why the statement: String(“wow”) == String(“wow”) returns false.
9. Explain why the statement: String(“wow”).equals(String(“wow”)) returns true.
10. Read through the “Arrays” tutorial at <https://www.learnjavaonline.org/>
11. Create some code to do the following:
    1. Define an array of integers.
    2. Initialize the array to hold 4 values.
    3. Add 4 integers to the array.
    4. Print out the length of the array.
    5. Print out the value of the last element of the array.
    6. Add the elements of the array together and print out the result.
12. Repeat the above question for an array of Strings.