**Level 1: Hello World**

* Install and run the Dr. Java development environment from the network drive:  
  4Students\OUT\Nestor\Java\drjava-beta….exe
* Edit, compile, and run the “Hello World” program as described online at: [http://www.cs.utsa.edu/~cs1063/resources/gettingstarteddrjava.htm HYPERLINK "http://www.cs.utsa.edu/~cs1063/resources/gettingstarteddrjava.html"l](http://www.cs.utsa.edu/~cs1063/resources/gettingstarteddrjava.html)
* 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**

* Read through the “Variables and Types” tutorial at <https://www.learnjavaonline.org/>
* Explain the difference between “byte’, ‘short’, ‘int’, and ‘long’.

Byte: a group of binary digits such as ones and zeroes. It is 8 bit.

Short: a data type that is 16 bit signed two's integer complement

Int: a data type that is 32 bit signed two's integer complement

Long: a data type that is 64 bit signed two's integer complement

* Which type would you use most often for a whole number?

int

* When would you use the type ‘long’?

when there is a really big number and it is also bigger than a type short

* How is the type ‘float’ different from the type ‘int’?

a float can also hold decimals but an int cant

* How is the type ‘float’ different from the type ‘double?

float is 32 bit and double is 64 bit

* When would you use the type ‘char’ and when would you use the object “String”?

You would use char when you are storing data in a fixed-length field. You would use the object string when creating a sequence of Unicode characters

* What is an easy to concatenate (append) strings together?
* What is the type ‘boolean’ used for?

boolean is a 1 bit data type and it will only return the words "true" and "false" this is used to tell if a statement is true or false for example: if you wanted x to be 1 the boolean if the x was 1 would send true and for every other number would send false

* How is the Java ‘boolean’ different from the Python ‘boolean’ type?