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| **Date Assigned: 1/17/17** | **Date Due: 1/19/17** |
| **Unit:** Language Basics | **Turn In List:** **1. This document** |
| *“I will start to familiarize myself with a basic application framework, data types, decision making, looping and plan my own basic application.”* | |

**Title: Title**

**Content Objectives:** Students will familiarize themselves with syntax for common language methodology learned in semester one while studying a different language.

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| **Starter Activity** |
| Include code for a **runnable** “hello world” application in your new language below, in this box: see  <https://en.wikibooks.org/wiki/Computer_Programming/Hello_world>  !!INCLUDE CODE HERE!!  #!/usr/bin/python  print "Hello, Python!" |

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| **Assignment:** |
| Students will use the following websites to complete the table below:  Java (Use DrJava): <http://www.tutorialspoint.com/java/index.htm>  C++ (Use Bloodshed or XCode): <http://www.tutorialspoint.com/cplusplus/index.htm>  Python (Use Idle): <http://www.tutorialspoint.com/python/index.htm>  C# (Use Visual Studio): <http://www.tutorialspoint.com/csharp/index.htm>  Note: if your editor is NOT functioning on your computer, use the web-based version on <http://www.tutorialspoint.com/codingground.htm> |

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| **Include Proper Syntax for the Concepts Below** | |
| Create a number variable called num1 with no decimals and set it to 10 | num1=10  var1=1  var2=10 |
| Create a number variable called num2 with decimals and set it to 3.14 | num2=3.14 |
| Create a text variable called firstName and set it to your first name | firstName=’James’  print firstname |
| Find a data type for the value  -9,223,372,036,854,775,808 and set it with the name bigNum | bigNum=-9223372036854775808 |
| Create variables named a, b, c, d in one statement, then set them to large random decimal numbers between one and 100,000 in another statement (Python you can do this in one statement) | From random import randint  a=randint(1,100000)  b=randint(1,100000)  c=randint(1,100000)  d=randint(1,100000)  print a, b, c ,d |
| Create an if statement that checks the value of a number variable and prints “greater than half” when value is more than half and “less than half” when the value is smaller than half | from random import randint  var = randint(1,100)  if (var > 50): print "greater than half"  if (var < 50): print "less than half" |
| Create a while loop that prints the numbers 1 to 20 | count = 1  while (count < 21):  print 'The count is:', count  count = count + 1 |
| Create a for loop that prints the numbers 1 to 20 | for num in range(1,21):  print 'the count is',num |
| Create two string variable with words “Hello” and “World” as values and print them to the console with a concatenation | var1 = "Hello"  var2 = "world"  print var1  print var2 |

Psuedocode a “99 Bottles” that checks for plural bottles.

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| count = 99  while (count > 0 ):  print count, "bottles of beer on the wall", count, "bottles of beer"  print "take one down pass it around", count-1, "bottles of beer on the wall"  print " "  count = count - 1 |

Code a ***working*** “99 Bottles” app and include code to check for plural bottles.

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| Upload your code to the 99Bottles directory in Github and include a URL to the source file in this box. File name should be formatted with initials, 99Bottles and the proper file extension (i.e. .java, .cpp, cs and .py) |