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| **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!!../Desktop/Screen%20Shot%202018-01-16%20at%208.41.43%20AM.png |

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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  print(num1) |
| Create a number variable called num2 with decimals and set it to 3.14 | num2 = 3.14  print(num2) |
| Create a text variable called firstName and set it to your first name | firstName = ('Jaxon')  print(firstName) |
| Find a data type for the value  -9,223,372,036,854,775,808 and set it with the name bigNum | bigNum = -9,223,372,036,854,775,808  print(bigNum) |
| 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)  print(b)  print(c)  print(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 | number = .5  variable = 0  if variable > number:  print('less than half')    if variable < number:  print('greater than half') |
| Create a while loop that prints the numbers 1 to 20 | number =(0,21)  while number < 21:  print(number) |
| Create a for loop that prints the numbers 1 to 20 | for x in range (0, 21):  print (x) |
| Create two string variable with words “Hello” and “World” as values and print them to the console with a concatenation | a = “Hello”  b = “World”  print(a ++ b) |

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

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| Using a while statement I will go from 99 down to 1 with bottles and have a statement saying that they will go down each time I tell the number to go down, until there is only 1 bottle |

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

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