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| **Date Assigned: 1/25/17** | **Date Due: 1/27/17** |
| **Unit:** Language Basics | **Turn In List:** **1. This document** |
| *“I will understand and use strings appropriately in programming.”* | |

**Title: Title**

**Content Objectives:** Students will familiarize themselves with creating, initializing, splicing and formatting strings.

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| **Starter Activity** |
| Include code for creating and setting a string called fullName to the value of your first and last name.  fullName = "James Ninow"  print fullName |

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| **Assignment:** |
| Students will use the following websites and internet searches to complete the table below:   * **C++ Strings:**[**http://www.tutorialspoint.com/cplusplus/cpp\_constants\_literals.htm (Links to an external site.)**](http://www.tutorialspoint.com/cplusplus/cpp_constants_literals.htm) * **C++ Literals:**[**http://www.tutorialspoint.com/cplusplus/cpp\_constants\_literals.htm (Links to an external site.)**](http://www.tutorialspoint.com/cplusplus/cpp_constants_literals.htm) * **C++ String Methods:**[**http://www.cplusplus.com/reference/string/string/ (Links to an external site.)**](http://www.cplusplus.com/reference/string/string/) * **Java Strings:**[**http://www.tutorialspoint.com/java/java\_strings.htm (Links to an external site.)**](http://www.tutorialspoint.com/java/java_strings.htm) * **Java Literals:**[**http://www.tutorialspoint.com/java/java\_quick\_guide.htm (Links to an external site.)**](http://www.tutorialspoint.com/java/java_quick_guide.htm) * **Python Strings:**[**http://www.tutorialspoint.com/python/python\_strings.htm (Links to an external site.)**](http://www.tutorialspoint.com/python/python_strings.htm)   **C# Strings:**[**https://msdn.microsoft.com/en-us/library/system.string(v=vs.110).aspx (Links to an external site.)**](https://msdn.microsoft.com/en-us/library/system.string(v=vs.110).aspx) |

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| **Include Sample Code Concepts Below (copy and paste lines from editor)** | |
| Code necessary to use the String class in your program | Really C++ ONLY! |
| Code necessary to convert fullName to all upper case characters | fullName = "James Ninow"  print str.upper(fullName) |
| Code necessary to convert fullName to all lower case characters | fullName = "James Ninow"  print str.lower(fullName) |
| Code necessary to concatenate your name variable with your age in years. Output would be something like: “FirstName LastName is 17” | fullName = "James Ninow"  Age = 17  print fullName + "is" + str(Age) |
| Syntax for including the forward slash in a string or print statement. | forward slash “/”  backward slash “\” |
| Code necessary to retrieve the length of fullName string (see starter) | fullName = "James Ninow"  print len(fullName) |
| Research: Code to append a string | The best way is to use “+” or “+=” |
| Research: Code to split or separate a string (substring) into two or more values | Str.split(str+””, num=string.count(str)) |

Psuedocode an English to Pig Latin converter requesting a first and/or last name from user.

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| print ("Welcome to the English to Pig Latin translator!")  pyg = 'ay'    original = raw\_input('James:')    if len(original) > 0 and original.isalpha():  word = original.lower()  first = word[0]  if first == "a" or first == "e" or first == "i" or first == "o" or first == "u":  new\_word = word + pyg  print new\_word  else:  new\_word = word[1:] + first + pyg  print new\_word  else:  print 'empty' |

You may work in pairs or small groups to code a ***working*** “PigLatin” converter that alters a first and/or last name to traditional Pig Latin. (Python Hint: Unit 3 in CodeAcademy!) (Java Hint: research substring!) (C++ research vector)

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