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| **Date Assigned: 1/25/16** | **Date Due: 1/27/16** |
| **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.  Public class Name {  Public static void main(String args[]) {  String fullName = “Nastassja Motro”;  System.out.println(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 | public fullName toUpperCase() |
| Code necessary to convert fullName to all lower case characters | public fullName toLowerCase() |
| Code necessary to concatenate your name variable with your age in years. Output would be something like: “FirstName LastName is 17” | String FirstName = “Nastassja”;  String LastName = “Motro”;  String fullName = FirstName + LastName;  System.out.println(fullName + “is 17”); |
| Syntax for including the forward slash in a string or print statement. | String s = “\\\\”;  System.out.println(s);  (output:\\) |
| Code necessary to retrieve the length of fullName string (see starter) | String fullName = “Nastassja Motro”;  System.out.println(fullName); |
| Research: Code to append a string | public class Concat {  String cat(String a, String b) {  a += b;  return a;  }  } |
| Research: Code to split or separate a string (substring) into two or more values | String[] str\_array = “name:score”.split(“:”);  String stringa = str\_array[0];  String stringb = str\_array[1]; |

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

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| Have the program find the first vowel with the scanner then have it print on the next like and change the first letter to lower case and then when converting to pig Latin have the program look for the first vowel then add “ay” and such. |

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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| Import java.util.Scanner;  Public class PigLatin {  Public static void main(String [] args) {  System.out.println(“Enter word: “);  Scanner scanner = new Scanner(System.in);  String findFirstVowel = scanner.nextLine();  Char v = Character.toLowerCase(findFirstVowel.charAt(0));  If (v == ‘a’ || v == ‘e’ || v == ‘i’ || v == ‘o’ || v == ‘u’) {  String convertToPigLatin = findFirstVowel + “ay”;  System.out.println(convertToPigLatin);  }  else {  String first = findFirstVowel.substring(0,1);  String slice = findFirstVowel.substring(1,findFirstVowel.length());  System.out.println(slice + first + “ay”);  }  }  } |