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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.  #include <iostream>  #include <string>  using namespace std;    int main () {  // number definition:  char fullName[] = "Chanel van Ginkel";  cout << " Name : " << fullName << endl;    return 0;  } |

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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!  Std : : string \_\_; |
| Code necessary to convert fullName to all upper case characters | #include <iostream>  using namespace std;  int main () {  char n[50];  char c[50];  char g[50];  cout << "full Name : ";  cin >> n;  cin >> c;  cin >> g;  for (int i = 0; i < strlen(n) || i < strlen(c) || i < strlen(g); i++) {  n[i] = toupper(n[i]);  c[i] = toupper(c[i]);  g[i] = toupper(g[i]);  }  cout << "Your Name : " << n << " " << c << " " << g << endl;  return 0;  } |
| Code necessary to convert fullName to all lower case characters | for (int i = 0; i < strlen(n) || i < strlen(c) || i < strlen(g); i++) {  n[i] = tolower(n[i]);  c[i] = tolower(c[i]);  g[i] = tolower(g[i]);  } |
| Code necessary to concatenate your name variable with your age in years. Output would be something like: “FirstName LastName is 17” | #include <iostream>  using namespace std;  int main () {  char fullName[] = {"Chanel van Ginkel"};  char age[] = {"15"};  cout << "Name : " << fullName << " is " << age << " years old." << endl;  return 0;  } |
| Syntax for including the forward slash in a string or print statement. | \\/ |
| Code necessary to retrieve the length of fullName string (see starter) | Char fullName[100] |
| Research: Code to append a string | Strncar() |
| Research: Code to split or separate a string (substring) into two or more values | Str:: string str;  Std:: string str1 = “Dogs eat food”;  Std:: string str2 = “Cats drink water”  Str.append(str1, 1, 4);  Str.append(str2, 5,11); |

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

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| Create two char variables that can be given a value for the first and last name. Break apart the name so the first letter is appended to the end of the name and left off of the beginning. Append “ay” onto the end of the new word. Same thing for the last name. |

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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| #include <iostream>  #include <string>  using namespace std;  int main () {  std:: string str;  char f[50];  std:: string stz;  char l[50];  cout << "Full Name with only the last letter capitalized : ";  cin >> f;  cin >> l;      str.append(f,2,10);  str.append(f,1);  str.append("ay");  stz.append(l,2,10);  stz.append(l,1);  stz.append("ay");      cout << "Your name in Pig Latin : " << str << " " << stz << '\n';  return 0;  } |