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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 <iostream>  #include <string>  #include <cstring>  using namespace std;  int main () {  string fullName = "Nicholas Duval";  cout << fullName << endl;  } |

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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 | #include <iostream>  #include <string> |
| Code necessary to convert fullName to all upper case characters | #include <iostream>  #include <string>  #include <ctype.h>  #include <string.h>  using namespace std;  int main(){  char c[50];    cout << "what is your name?";  cin >> c;  for(int i = 0; i <strlen(c);i++) {  c [i]=toupper(c[i]);  }  cout << "my name is: " << c << endl;  } |
| Code necessary to convert fullName to all lower case characters | #include <iostream>  #include <string>  #include <ctype.h>  #include <string.h>  using namespace std;  int main(){  char c[50];    cout << "what is your name?";  cin >> c;  for(int i = 0; i <strlen(c);i++) {  c [i]=tolower(c[i]);  }  cout << "my name is: " << c << endl;  } |
| Code necessary to concatenate your name variable with your age in years. Output would be something like: “FirstName LastName is 17” | #include <iostream>  #include <string>  #include <ctype.h>  #include <string.h>  using namespace std;  int main(){  char c[50];  char a[3];  cout << "what is your full name?";  cin >> c;  for(int i = 0; i <strlen(c);i++) {  c [i]=tolower(c[i]);  }  cout << "my name is: ";  cout << "what is your age?";  cin >> a;  for(int i = 0; i <strlen(a);i++) {  a [i]=tolower(a[i]);  }  cout << "my name is: " << c << "my age is: " << a << endl;  } |
| Syntax for including the forward slash in a string or print statement. | Str \\ |
| Code necessary to retrieve the length of fullName string (see starter) | #include <iostream>  #include <string>  #include <ctype.h>  #include <string.h>  using namespace std;  int main(){  char c[50];  cout << "what is your full name?";  cin >> c;  for(int i = 0; i <strlen(c);i++) {  c [i]=strlen(c[i]);  }  cout << "my name is: " << c << " long" << endl; |
| Research: Code to append a string |  |
| Research: Code to split or separate a string (substring) into two or more values |  |

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

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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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