|  |  |
| --- | --- |
| **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.

|  |
| --- |
| **Starter Activity** |
| Include code for creating and setting a string called fullName to the value of your first and last name. |

|  |
| --- |
| **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) |

|  |  |
| --- | --- |
| **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 | class Main {  public static void main(String args[]) {  String Str = new String("First Name, Last Name");  System.out.println(Str.toUpperCase());  }  } |
| Code necessary to convert fullName to all lower case characters | class Main {  public static void main(String args[]) {  String Str = new String("First Name, Last Name");  System.out.println(Str.toLowerCase());  }  } |
| Code necessary to concatenate your name variable with your age in years. Output would be something like: “FirstName LastName is 17” | class Main {  static int age = 200;  static String firstName = "Irst";  static String lastName = "Fay";  public static void main(String args[]) {  String Str = new String(firstName + " " + lastName + " " + age);  }  } |
| Syntax for including the forward slash in a string or print statement. | System.out.println(“//”); |
| Code necessary to retrieve the length of fullName string (see starter) | Take the string name, then put “.length” (without the double quotes) |
| Research: Code to append a string | 1. **public** **static** **void** main(String args[]){ 2. String s="Sachin"+" Tendulkar"; 3. System.out.println(s);//Sachin Tendulkar 4. }   (I think) |
| Research: Code to split or separate a string (substring) into two or more values | String[] Str = str.split (“@”, 2); |

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

|  |
| --- |
| String first.length (1) = first.length + 1;  String first = first + “ay”;  String last.length (1) = last.length + 1;  String last = last + “ay”; |

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)

|  |
| --- |
| class Main {  static int age = 200;  static String firstName = "First";  static String lastName = "Last";  static String ay = "-ay";  public static void main(String args[]) {  String[] firstName = String.splitByNumber(1);  String[] lastName = String.splitByNumber(1);  String pigFirst = firstName[1] + firstName[0] + ay;  String pigLast = lastName[1] + lastName[0] + ay;  String Str = new String(pigFirst + " " + pigLast + " " + age);  System.out.println(Str.toUpperCase());  }  } |