ITEC 120 Lab 2
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Reference links:
http://www.radford.edu/~aaray/template.java
http://java.sun.com/j2se/1.5.0/docs/api/java/lang/String.html

You will need to submit a lab report for this lab. It is due at 10:00PM on Thursday.

Problem 1: Put two strings together
Create two strings and have their values be "Hello " and "World". Add the contents of the second string to the first string and print it out to the command prompt.

To begin:
String h = "Hello";
String w = "World";
String result=" ";
???
System.out.println(result);

The output should be : HelloWorld

Problem 2: Format a name
Office Space Inc. needs you to help format their TPS reports. First, create a String variable and store a line of text provided to the user in this variable. Next, you need to create variables that store the first name and the last name of an employee. Use the string methods to separate the first variable into first and last names. Next you need to use a string to store the first letter of the first name, append a period then a space, then the last name. Lastly print the resulting string to the console.

For example:
Employee Name: Bill Lumbergh
Output of Java program: B. Lumbergh

Problem 3: Apply penalty interest to an overdue bill
You have been hired by Evil Bank Inc. a subsidy of Madoff enterprises to apply interest charges to customer's accounts. You will eventually be given a file containing 100,000 accounts, but for right now you need to figure out how to make it work with one case. The data is stored in the format of name|amount overdue. For example, John Doe|300.00.

You need to write a program that takes a value stored in a String called customer that contains data in the previously described format, adds18% interest to the total cost of the bill, and prints it out. For example, if their bill is $1.00, adding 18% interest would change their bill to be $1.18.

Use the indexOf method to figure out where the | is. Next, use the substring method between what the indexOf method returned +1 and the length method to get the bill amount. Next you will need to use the Double.valueOf(string) function to convert from a String to a double variable.

Problem 4: Output a string using a function
Your employer, Whizbang Inc., has decided that functions are the way to go. They are no longer happy with your single file programs and want you to step things up and start using functions in a second file. To demonstrate that you can use functions your boss wants you to create a function called HW that simply prints out Hello World.

Remember: Write your function in FunctionContainer.java and use template.java to create a FunctionContainer variable, then call the HW method on that variable.

Problem 5: Make your own IO class
As a developer for Whizbang Inc., you are tired of using the Java Scanner class. You feel that the next method should be named nextString to be consistent with the nextDouble/Float/Int type functions. You decide to write readInt, readString, and readDouble functions that use the Scanner API for Java, but are easier to remember and use.

After you have written and tested the functions, the first project your boss wants you to use your new functions on is to calculate the number of frogs in a population. Read in the frog's name, the population size, and a multiplier using the functions you just created. Next, output the name, current population size, and size after one more generation of frogs has been born (current population size x multiplier).

Sample input:
BullFrog
30
1.5

Sample Output:
BullFrog's current population:
30
BullFrog's population after one breeding cycle:
45.0