CSCI 1011 – Lab 3

# Learning Outcomes

* Represent text data with constants and variables of type String.
* Process text using String class methods.
* Read text input.
* Display text output.
* Use standard Java documentation and style.

# Required Reading

Savitch - 2.2-2.4

# Instructions

1. Start NetBeans.
2. Create a new project called Lab3 with a main class called YournameLab3 with your last name.
3. Declare a String variable called courseCode, and set it to "CSCI 1011".
4. Declare a String variable called courseTitle, and set it to "Introduction to Programming I Lab".
5. Concatenate String constants "Welcome to", ":" and String variables courseCode and courseTitle using the concatenate operator + so that it reads "Welcome to CSCI 1011: Introduction to Programming I Lab", and set it to another String variable called welcomeMessage.
6. Display welcomeMessage to the output screen. The result should look like this:

* Testing + operator:  
  Welcome to CSCI 1011: Introduction to Programming I Lab!

1. Use the toLowerCase methods to display welcomeMessage in all lower-case letters. The result should look like this:

* Testing toLowerCase method:  
  welcome to csci 1011: introduction to programming i lab!

1. Use the toUpperCase methods to display the welcomeMessage in all upper-case letters. The result should look like this:

* Testing toUpperCase method:  
  WELCOME TO CSCI 1011: INTRODUCTION TO PROGRAMMING I LAB!

1. Use the String class length method to display the length of welcomeMessage. The result should look like this:

* Testing length method:  
  The length of the string welcomeMessage is: 56

1. Declare another String variable called welcomeMessage2 and set it to the result of converting welcomeMessage to upper case.
2. Use the String class equals method to display whether welcomeMessage and welcomeMessage2 are equal or not. The result should look like this:

* Testing equals method:  
  Messages are equal: false

1. Use the String class equalsIgnoreCase method to display whether welcomeMessage and welcomeMessage2 are equal or not. The result should look like this:

* Testing equalsIgnoreCase method:  
  Messages are equal ignoring case: true

1. Use the String class replace method to replace 1011 by 1010 in welcomeMessage, and save the updated value to welcomeMesage and display it. The result should look like this:

* Testing replace method:  
  Welcome to CSCI 1010: Introduction to Programming I Lab!

1. Use the String class indexOf method to identify the index of the first character of the substring "Introduction" in welcomeMessage.
2. Use the substring method to copy text from the beginning of welcomeMessage up to to the last character before "Introduction".
3. Use the String class concat method to add "Introduction to Programming" to the substring.
4. Display the result. The result should look like this:

* Testing indexOf, substring, and concat method:  
  Welcome to CSCI 1010: Introduction to Programming

1. Modify the program so that it prompts the user for the values of courseCode and courseTitle.
2. The output from your program should look like the following:

* Enter the course code:   
  CSCI 2011  
  Enter the course title:   
  Introduction to Programming II Lab  
  Testing + operator:  
  Welcome to CSCI 2011: Introduction to Programming II Lab!  
    
  Testing toLowerCase method:  
  welcome to csci 2011: introduction to programming ii lab!  
    
  Testing toUpperCase method:  
  WELCOME TO CSCI 2011: INTRODUCTION TO PROGRAMMING II LAB!  
    
  Testing length method:  
  The length of the string welcomeMessage is: 57  
    
  Testing equals method:  
  Messages are equal: false  
    
  Testing equalsIgnoreCase method:  
  Messages are equal ignoring case: true  
    
  Testing replace method:  
  Welcome to CSCI 2011: Introduction to Programming II Lab!  
    
  Testing indexOf, substring, and concat method:  
  Welcome to CSCI 2011: Introduction to Programming

1. Add single line comments above the use of all Java String class methods (e.g., length, concat, equals, etc.)
2. Add CSCI 1011 Lab 3 in the javadoc comments in the line before your name, and a brief description of your program in the line after your name.
3. Make sure your code is indented.
4. Run the program again and test it to make sure that the new code works.
5. Upload the file YournameLab3.java to the drop box folder labeled **Lab Assignment 3**.