

CISC 3115 TY3

# C22b: Problem Solving using Recursion: Exercises

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# Exercises

- C21b-2: Count occurrences of a specified character in a string (if you haven't completed this one, you've given more time to complete it)
- C22b-1: Bubble Sort

# C21b-2: Count Occurrences of Specified Character

- Complete exercise 18.10 in the textbook, i.e., to count occurrences of a specified character in a string.
  - Create directory C21b-2 in your weekly exercise repository
  - Write a class that has a recursive method to count the occurrences of a given character in a given string
  - Write a client class to test your recursive method
  - Use git to make a submission

# C22b-1: Bubble Sort

- Bubble sort can also be solved using recursion, like Selection sort. It can be divided into two subproblems, one is to bubble up the smallest (or the largest) to the top for the array, and the other is to sort the remaining array (the original array less the top one) using Bubble sort.
  - Create directory C22b-1 in your weekly practice repository. Copy [the sample program from C20aComparable](#) to the directory.
  - Add another method called bubbleSort to the class. Design and implement the method using recursion.
  - Revise the main method accordingly to use bubbleSort to sort the array.
  - Use git to make a submission