CSC108 Lab 5: Nested Loops & Fun!

October 6^{th} – October 10^{th} 2025

1 Overview

Welcome to your fifth lab in CSC108. This lab will focus on using nested for loops as well as giving you some more practice on string manipulations.

2 Lab Tasks

You will have three functions to implement for this lab, and one of them will depend on another function within the lab to use as a helper (i.e., you will need to use `sum_string()` within `substring_with_largest_sum()`).

The specifications for the functions have already been laid out in `lab5.py`, so in order to prevent duplicate information, please download `lab5.py` and complete the functions according to their docstrings. You will not need functions from the previous lab in this one.

Lastly, this is already noted in the lab, but we are noting it here just to be extra sure you've seen it. There are restrictions on what operators and constructs you are allowed to use for this lab (and possibly for future labs). For this lab in particular, you must not use any lists or list methods, or any while loops or `try-except` statements. Please note: within your loops, you **must not** use any `break` or `continue` statements. There are several reasons as to why we are restricting the use of these statements: one is that we may not have covered them in class yet, and as a result we want you to work with the material that you have already learned in class to solve the problems set out in this lab. Another is because some of these constructs, like `try-except` or `break`/`continue`, are often used improperly, and for the purposes of this lab, there is no need to use them.

3 Sanity Checks

Often we forget to do our own sanity checks, so this is a reminder. Have you:

1. written at least 3 doctests per function and ensured that they pass? (you **must** do this)
2. considered edge cases in your doctests?
3. uploaded your file to MarkUs and run the student tester?

Remember: you should be running the student tester and using the student correctness and style results to refine your submission. ***Submit your code often and ahead of time!***

4 Final Check!

Once you are finished, submit `lab5.py` to MarkUs. You'll receive a grade once everyone has submitted and automarking has been done. See you next week!