

CSC108 Lab 3: Doctests & String methods

September 22nd – September 26th 2025

1 Overview

Welcome to your third lab in CSC108. This lab will give you the opportunity to use some of the string methods which you have covered in class, and also give you the opportunity to write doctests for the functions you are about to implement.

2 Lab Tasks

You will have three functions to implement for this lab, and the first one will make use of the `exists_triangle` function which you have implemented in the previous lab. So we strongly encourage you to go back and review any feedback you got from the autotester!

The specifications for the functions have already been laid out in `lab3.py`, so in order to prevent duplicate information, please download `lab3.py` and complete the functions according to their docstrings. You will note that an `exists_triangle` function is present in this lab too, that is because you will be re-using it for the first function of this lab. If you got it right the last time, then you can just copy over your implementation. However, if you did not get it right the last time, you are given a chance here to revise your implementation and submit the function again. We will also test that function individually so that you get feedback back for this lab too.

Important Note: we are requiring you to write **at least three** doctests for each of the four main functions in this lab, if you used helpers, we encourage you to write doctests as well but we will not be checking this. Your doctests for the four main functions must pass and be reasonable to earn marks.

Lastly, this is already noted in the lab, but we are reiterating 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 may not use any `if` statements, any `for` or `while` loops, any `try-except` statements, or any other material not yet covered in class. We are restricting the use of these statements because of two reasons: firstly, we haven't 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. Secondly, some of these constructs like `try-except` are often used improperly, and for the purposes of this lab, there is no need to use them.

3 Final Check!

Once you are finished, submit `lab3.py` to [MarkUs](#). You'll receive a grade once everyone has submitted and automarking has been done. See you next week!

WARNING: Do not modify the starter code, except where asked to do so. You should replace `pass` with your code for each function. You should add doctests below the line specified in the docstring. You should not delete our code or rename functions. You should not modify our preamble. You may create helper functions if you believe they are necessary, these should be formatted with a proper header and docstring (including doctests). Additional "LAB RESTRICTIONS" can be found in the preamble of the python file and must be adhered to. Failure to follow these instructions may result in a mark of 0 for this lab.