

## Lecture 14 Exercises

### CS 51P –Fall 2023

Define a function `count_words` that takes a filename as input and returns the total number of unique words in that file.

Use list comprehension to write a function `square_positive` that takes a list of ints and returns a list that contains the square of all those that are positive. For example, `square_positive([-1, -2, 3, 4, -5])` will return `[9, 16]`.

Use list comprehension to write a function `average_pairs` that takes a list of pairs (two-element tuples where both elements are integers), and returns a list consists of the average value of each pair. For example `average_pairs([(1, 2), (2, 3), (3, 4)])` will return `[1.5, 2.5, 3.5]`.