

## COP 3502 Fall 2021 Sections 1, 2 Recitation Program #1

### Alphabet Animals

For each recitation program, in order to get full credit, you must submit your solution to open.kattis.com and get your solution accepted on all test cases. In addition, each one will have some separate requirements to fulfill based on your code. When submitting your work to Webcourses, please carefully read the corresponding directions document before submitting all of your files.

**NOTE: Over the course of the semester, you must submit TWO out of the four recitation programs. It is expected that while you are in recitation, you start working on each of them. But, afterwards, you can choose which two to finish up.**

#### What This Program Is Testing

This problem requires reading in upto  $10^5$  strings and solving a problem. Since this is a large amount of memory, my intention is for you to use dynamic memory allocation properly to read in this data. Full credit will only be given if data is being read in properly and freed properly. **Specifically, the array of pointers should be allocated dynamically, AND after reading each word into a statically allocated array of size 21, an array to store each word should be dynamically allocated to the proper space.**

Solving this problem doesn't require knowledge of a specific algorithm, but just requires making some observations that I expect students in the class to be able to make, given some time. TAs will be instructed to give students as little help as possible to nudge students towards these observations. **(Note: A frequency array is likely to be useful in solving this problem. You may ask a TA what a frequency array is if you do not know.)**

#### What to Submit

Please submit the following:

- 1) Your source file, animals.c.
- 2) A screenshot of your solution's accepted status on Kattis.