

# Anagram exercise

## The Task

Write a program that takes as an argument the path to a file containing one word per line, groups the words that are anagrams to each other, and writes to the standard output of each of these groups.

The groups should be separated by newlines and the words inside each group by commas.

## The Data

You can make the following assumptions about the data in the files::

- The words in the input file are ordered by size
- The files may not fit into memory all at once (but all the words of the same size would)
- The words are not necessarily actual English words. For example, "ABC" and "CBA" are both considered words for the sake of this exercise.

The files in the `Data` folder are just sample input data to help you reason about the problem. Production files will be much more significant.

If you make other assumptions, write them down in a readme in your submission.

## How much time do I have?

Try to spend 30-45 mins on this exercise. We have written some scaffolding that you can use: [commercial-trading-java-techtest-master.zip](#). We ask you not to fork this repository instead just download the zip and push to your own public git repo.

## Our expectations

A solution implemented on **Java 21+**.

We expect testable code that's not only accomplishing the task, but is maintainable by anybody in the team.

## What should a good submission include?

1. Full suite of automated tests covering the edge cases
2. Exceptions handling
3. Separation of concerns
4. The resources (CPU, memory, disk...) efficiently used
5. README will describe your solution, including:
  - a. How can we run your code
  - b. Big O analysis
  - c. Reasons behind data structures chosen
  - d. What would you do given more time
6. The code should be easy to read, with well-named variables/functions/classes. We like Clean Code principles :)



- We expect your code to compute the anagrams **without the help of any library**.
- You are allowed to use any library for any other aspect functional to the task (e.g., handling the CLI, testing, I/O)
- The order of the groups in the output does not matter

## Example:

```
command_to_run_your_program Data/example1.txt
```

## Output:

```
abc , bac , cba  
unf , fun  
hello
```

#### Submission Instructions:

Please create a GitHub public repository or wrap your submission into a single zipped file and send it to <GLOBAL\_RECRUITMENT\_EMAIL\_ADDRESS>.

File	Modified
 example1.txt	Oct 03, 2022 by Guillermo Gutierrez-Tamargo
 example2.txt	Oct 03, 2022 by Guillermo Gutierrez-Tamargo
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