
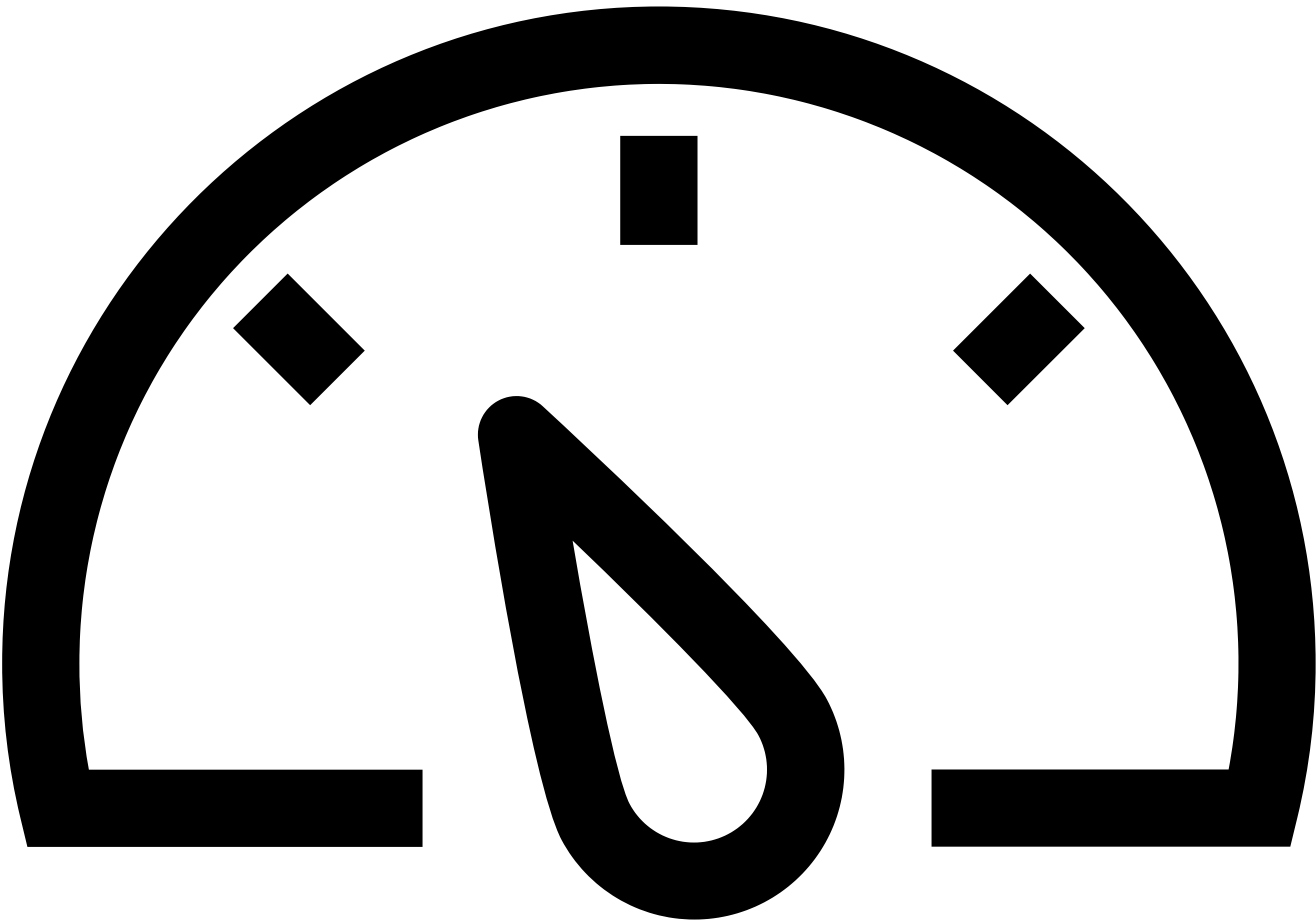


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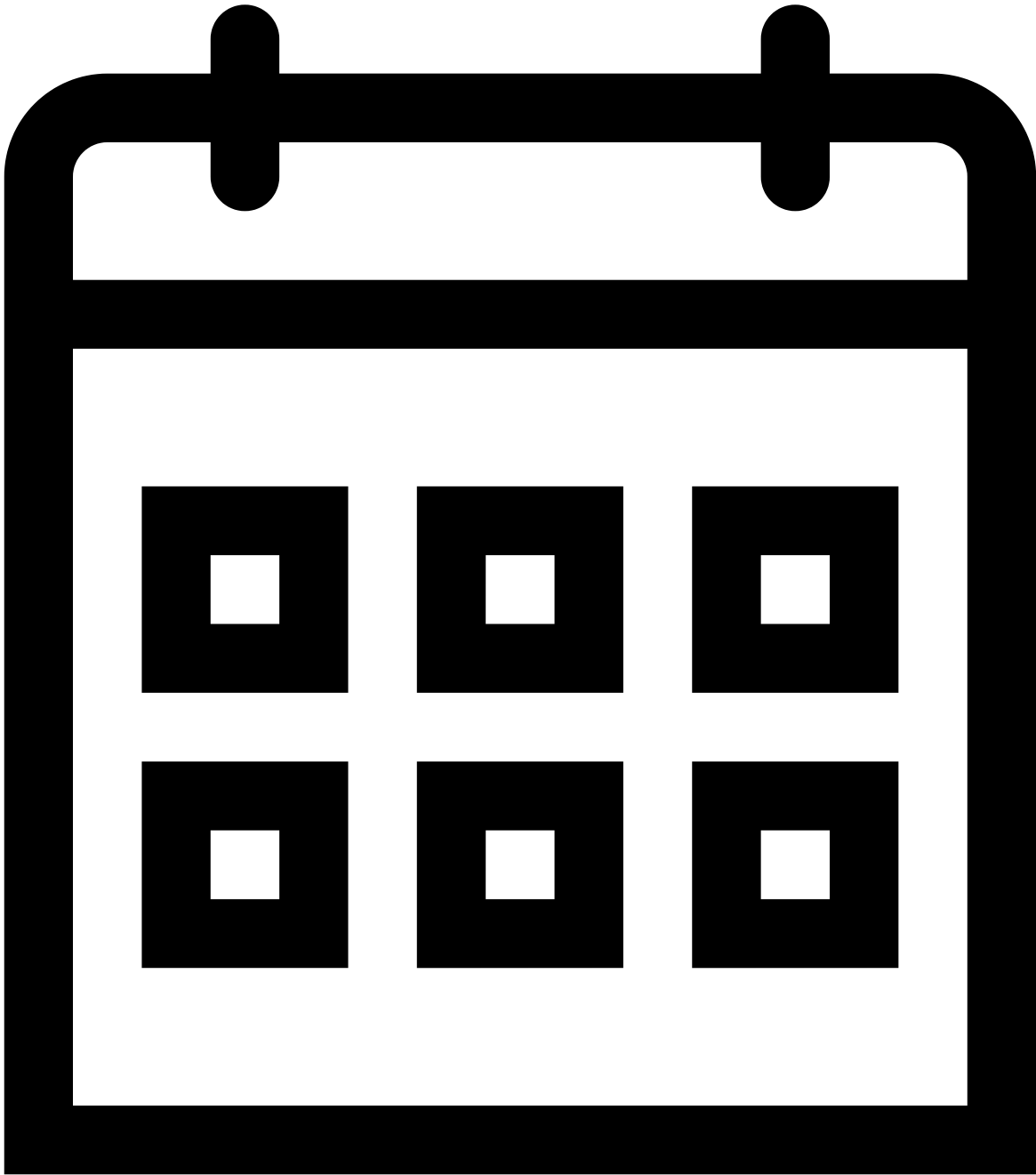
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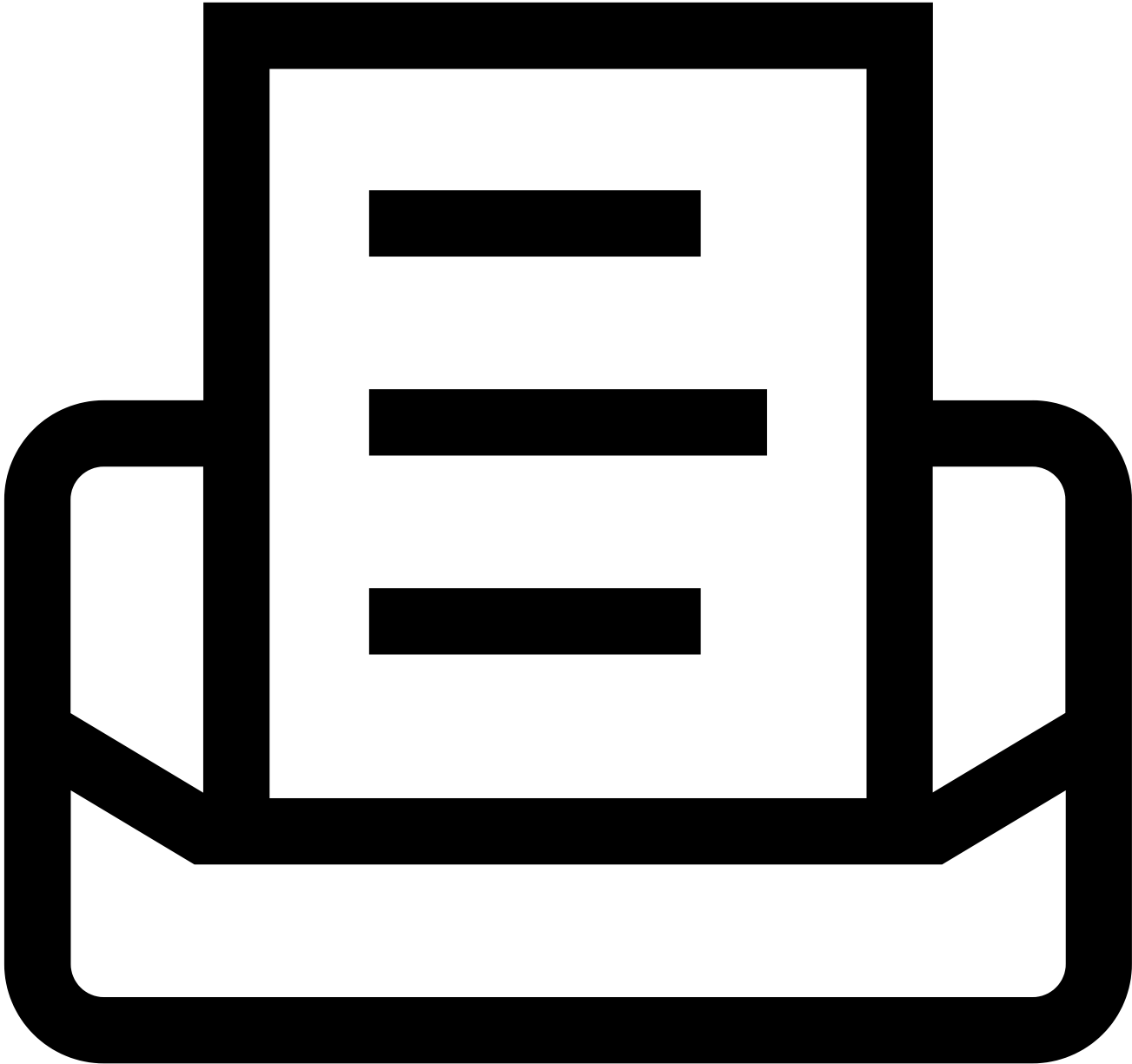


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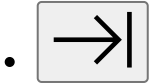
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# Homework 7: Containers

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- Due Thursday by 11:59pm
- Points 35
- Submitting a file upload

## Warm-Up:

**Problem 1 (9 points).** Write a program that reads in from one file, and writes to another output file, in alphabetical order and without repetition, the words from the first file. You **MUST** use a vector, and you can use the Algorithms functions discussed in class (but only those discussed in class.) You do not need to worry about punctuation.

Sample input 1: <http://math.scu.edu/~linnell/cs60resources/gentleseduction.txt> ([Links to an external site.](#))

Beginning of output for input 1: <http://math.scu.edu/~linnell/cs60resources/gsout.txt> ([Links to an external site.](#))

Sample input 2 (may take a long time): [http://math.scu.edu/~linnell/cs60resources/don\\_quixote.txt](http://math.scu.edu/~linnell/cs60resources/don_quixote.txt) ([Links to an external site.](#))

1b(extra credit – 5 points). Make your program write out not only the words (still in alphabetical order and without repetition) but **ALSO** print out how many times they occur. You can still use only vectors. Note; this doesn't work for sets.

**Problem 2 (9 points).** Same as problem 1, but use a set.

**Problem 3 (2 points).** Which do you prefer for this problem; set or vector? Give a couple of sentences of explanation for your choice.

## Main Event:

**Problem 3 (15 points):** Write a program that reads in from a file that is formatted with a score and name on each line. You will then print out to the screen a histogram representing the scores. If you ran your code on the sample input here (Note, your code should work for any file formatted this way, of any length) <http://math.scu.edu/~linnell/cs60resources/scorename.txt> ([Links to an external site.](#)) then you would get:

0

1

2

3

4

5xxxx

6xxxxxxxx

7

8x

9

10xx

You will then prompt the user to ask if they would like to see the names of people who got a given score. If they entered 10, for our sample input you would print

Emma Watson, Anna J. Karenina

When reading in from the input file, you **MUST** read into a map of type `map<int, pair<int, vector<string>>>` where the first int is the score, the second int is how many people got that score, and the vector of strings is a list of everyone who got that score.

Please submit a different file for each problem, with name `HW8PxLastname.cpp` where x is the number of the problem. For problem 3 please submit a pdf.

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