

# CSCI/CMPE 3333 Homework TT1: Trendtracker

Due Saturday, September 15 at 5:00 PM

## 1 Introduction

The instructions on how to complete this homework, please check the document `howtohw.pdf`.

The **Twitter** website has become a de facto first source for many important events in the last decade. Twitter’s hashtag feature lets users tag tweets with single words or phrases (e.g. `#superbowl`, `#algorithms`, or `#vacaciones`). Popular or *trending* hashtags indicate strong shared interest by many people in a topic, and tracking these trends is of interest to businesses, news outlets, and researchers.

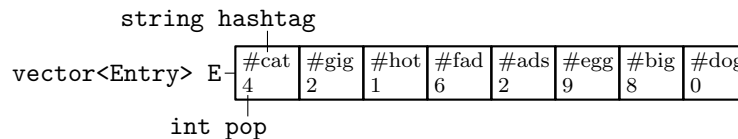


Figure 1: Representing hashtags and their popularities using a vector-based data structure.

In this homework, you’ll implement an vector-based data structure that tracks information about a collection of hashtags, including which are most popular, i.e. are *trending*.<sup>1</sup>

## 2 Instructions

The following files have been given to you:

1. A C++ header file (`trendtracker.h`) declaring the `Trendtracker` class.
2. A C++ source file (`main.cpp`) containing a `main` function with tests.
3. A text file (`common.txt`) containing 3612 common English words.<sup>2</sup>

Download the files on blackboard Create a new C++ source file named `trendtracker.cpp` that implements the `Trendtracker` class, so that `trendtracker.cpp` and the provided files compile into a program that runs with no failed tests. Submit the source file `trendtracker.cpp`.

## 3 Submission and Grading

Submit the aforementioned source file(s) via Blackboard as attached file(s). In the case of multiple submissions, the last submission before the deadline is graded.

For grading, each submission is compiled with the provided files and run. Submissions that do not run to completion (i.e. fail to print “Assignment complete.”) receive no credit. Submissions that take an unreasonable amount of time (e.g. more than a minute or so) to run and do not meet the asymptotic efficiency requirements receive no credit. All other submissions receive full credit.

See the course late work policy for information about receiving partial credit for late submissions.

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<sup>1</sup>The trending topics displayed on Twitter’s website are actually chosen using more complex **algorithm**.

<sup>2</sup>Source: <https://xkcd.com/simplewriter/words.js>.