CS142 **Assignment 6** Spring 2025

Given: Sat, Mar 1
Due: Thu, Mar 6, 3:00 p.m.

1. (40%) Create a program that asks the user for the name of a file and then rearranges the contents of the file so that its lines are in alphabetical order. The program should modify the file, not print its contents to the screen. Use the STL algorithm `sort`.

2. (60%) Experiment with the following STL algorithms. More precisely, write a test driver that tests each algorithm on a vector of integers and a vector of strings. Both of these algorithms are defined in the library file `algorithm` and included in the `std` namespace. *Hint*: Before trying to test `replace` on a vector of strings, read the footnote on pp. 133 and 134 of the notes.

   (a) `replace(start, stop, x, y)` replaces all occurrences of element `x` by a copy of element `y` in the range `[start,stop)`. Uses == on elements.

   (b) `max_element(start, stop)` returns an iterator that points to the maximum element in the range `[start,stop)`. Returns `stop` if the range is empty. Uses < on elements.