

## Formats and Restrictions

- For each `c <word>` type of query in input file,
  - If the exact match of `<word>` is found in the original dictionary, output `<word>+` and nothing else (no list is required to output).
  - Otherwise, output `<word>: <suggestion1> <suggestion2> .. <suggestionN>`, where suggestions are those words in dictionary that could be obtained from the typo rules, and those that appear in suggestion of form `r <word> <suggestion>`. The list of suggestions should be sorted first by the number of time it is suggested as correction in the user-input replacement list, then by lexicographical order.
- For each `r <word> <suggestion>` query, output nothing and simply add one to the corresponding replacement rule.
- Size restriction on dictionary (binary output from -b): Your output should be no larger than two times the original dictionary size.
- **Size restriction on binary code: 256KB.**
- Time limit on either constructing the dictionary or processing queries: **60 seconds.** will not run forever.
- **In general, you are allowed to use any libraries that can be compiled successfully within the size restriction above.**