

# Dictionary Task

There are many correct implementations of this problem; we are not looking for any single one of them, but just that your design is clean, efficient, and that the tradeoffs you make are documented in the comments.

Your task is to implement, in C++, a simple dictionary API that supports as much of the following functionality as time permits. Do not stress about implementing everything; cleanness and correctness are more important:

Functionality, in order of importance:

1. Inserting a word and its definition
2. Retrieving all words that start with a given prefix
3. Retrieving the definition of a given word
4. Deleting a word from the dictionary

Dictionary should be capable of storing ascii as well as non-ascii data.

You do NOT need to make the dictionary persistent (writable/readable on disk). An in-memory implementation is fine.

You do NOT need to make a program that uses this API (for example, something can insert words into using the command line). However, feel free to do so if it would be helpful to you in designing or debugging the API.

You may use the C standard library, but no other libraries (Do not use STL). All source code must be your own.

Please strive for:

1. Clean design—Make your code readable and re-useable where possible; give thought to your interface
2. Efficiency—Try to make each functionality as fast as possible
3. Robustness—Handle error sensibly; handle large or unusual sets of words.

Please briefly explain your design choices and assumptions in your comments.