Week 15: Set, Map, Hash, and Graph

CSCI 2100 Data Structures
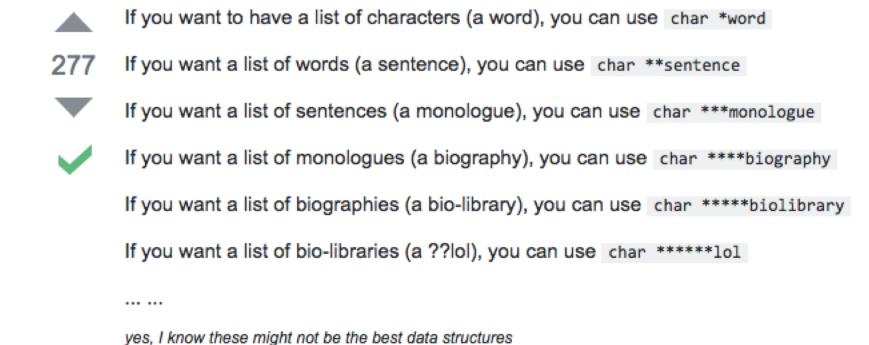
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— EST. 1818 —

Why do we use double pointers?

If you want to have a list of characters (a word), you can use `char *word`

277 If you want a list of words (a sentence), you can use `char **sentence`

If you want a list of sentences (a monologue), you can use `char ***monologue`

✓ If you want a list of monologues (a biography), you can use `char ****biography`

If you want a list of biographies (a bio-library), you can use `char *****biolibrary`

If you want a list of bio-libraries (a ??lol), you can use `char ******lol`

... ...

yes, I know these might not be the best data structures

https://stackoverflow.com/questions/5580761/why-use-double-pointer-or-why-use-pointers-to-pointers

Reading C type declarations

- http://unixwiz.net/techtips/reading-cdecl.html

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C++ and more

Why Bjarne Stroustrup created C++?

http://www.stroustrup.com/index.html

https://www.youtube.com/watch?v=JBjjnqG0BP8&t=149s

New Features of C++11

https://www.codeproject.com/Articles/570638/Ten-Cplusplus-Features-Every-Cplusplus-Developer

https://blog.smartbear.com/development/the-biggest-changes-in-c11-and-why-you-should-care/

http://www.stroustrup.com/C++11FAQ.html

Especially, the smart pointer:

http://www.umich.edu/~eecs381/handouts/C++11_smart_ptrs.pdf

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Boost C++ Library

Standard C++ Foundation

https://isocpp.org/

Boost C++ Library

http://www.boost.org/

https://theboostcpplibraries.com/introduction

Boost is used so extensively because:

- It is open-source and peer-reviewed.
- It provides a wide range of platform agnostic functionality that STL missed.
- It is a complement to STL rather than a replacement.
- Many of Boost developers are on the C++ standard committee. In fact, many parts of Boost is considered to be included in the next C++ standard library.
- It is documented nicely.
- Its license allows inclusion in open-source and closed-source projects.
- Its features are not usually dependent on each other so you can link only the parts you require.

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Some more info

- Make your own free GitHub student account for private repository.

- Interview questions: https://www.careercup.com/

Advent of Code

- Just try to work day one (or as many as days) using C++

- https://adventofcode.com/