C++ Club Meeting Notes

Gleb Dolgich

2019-12-12

C++ exceptions and alternatives

Bjarne Stroustrup

Reddit

Niall Douglas's rebuttal: Part 1, Part 2

C++ Exception Optimizations. An experiment

Gor Nishanov

A Universal Async Abstraction for C++

Corentin Jabot

P0443R11 The Unified Executors Proposal

Expression templates, ranges, and coroutines

- Wikipedia
- We don’t need no stinking expression templates by Andy G
    - Reddit

C++ coroutines: Getting started with awaitable objects

Raymond Chen (Microsoft)

Change standard containers’ `size()` method to return signed integer?

Reddit

Is requiring lambdas to explicitly list what they capture a good coding standard?

Reddit

Towards a standard unit systems library

P1930R0

Reddit

Robert Ramey:

> *The value of a paper like this would be to narrow the scope or domain of a problem to something that would be useful component in solving bigger problems. This paper does the opposite – expanding the domain to encompass the whole world of physics.*

C++ `std::string_view` for better performance: An example use case

Article

Reddit

Arthur O'Dwyer: `std::string_view` is a borrow type

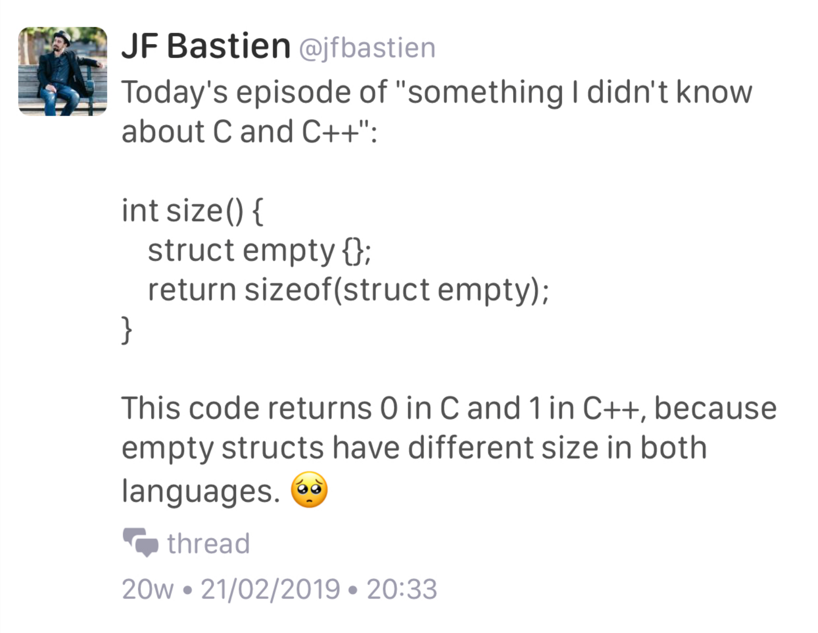
> *Borrow types are essentially "borrowed" references to existing objects. They lack ownership; they are short-lived; they generally can do without an assignment operator. They generally appear only in function parameter lists; because they lack ownership semantics, they generally cannot be stored in data structures or returned safely from functions.*

cppreference: `std::basic_string_view` (C++17)

Scott Meyers's guideline "Make non-leaf classes abstract"

Reddit

Empty struct size in C and C++



JF Bastien @jfbastien

Today's episode of "something I didn't know about C and C++":

```
int size() {
   struct empty {};
   return sizeof(struct empty);
}
```

This code returns 0 in C and 1 in C++, because empty structs have different size in both languages. 🥺

thread

20w • 21/02/2019 • 20:33

Hello World with C++2a modules

Arthur O’Dwyer

> *Here’s how to build a “Hello world” program using Clang’s implementation of C++2a Modules, as it currently stands as of November 2019.*

Reddit

JSON Library from the makers of Boost.Beast

Vinnie Falcou:

> *A survey of existing JSON libraries shows impressive diversity and features. However, no library is known to meet all of the design goals mentioned here. In particular, we know of no library that supports incremental parsing and serialization, and also supports custom allocators robustly.*

Reddit — GitHub (C++11, Boost License) — Docs — Benchmarks

> *This is currently NOT an official Boost library.*

Beginner’s Guide to Linkers

http://www.lurklurk.org/linkers/linkers.html

```
g++ -o test1 test1a.o test1b.o
test1a.o(.text+0x18): In function `main':
: undefined reference to `findmax(int, int)'
collect2: ld returned 1 exit status
```

> *If your reaction to this is ‘almost certainly missing extern “C”’ then you probably already know everything in this article.*