CppCon 2019: Bjarne Stroustrup "CppCon 2019: Bjarne Stroustrup "C++20: C++ at 40"

Key C++ "Rules of thumb"

High level to low level
Optimization with research(Be careful!)

First of all, the lecturer covered what there are in C++20. I guessed the reason why he covered this topic was make us prepare for upcoming C++20. Overall, he tried to categorized his topic into 10 of rule of thumb for C++. There is A bunch of stuff that I never heard before. For example, Metaprogramming, Modules, and Coroutines were the thing that he covered.

Sorrowfully, it is hard to make curiosity on this topic. The major reason why was I completely did not understand everything what he said. I carefully guessed the reasons are my short english ability, his sullen accent, and audio issue. However, coroutines are interested for me and so do modules. I hope to handle and study more on these new techniques when C++20 is came up.

I have learned about the features that will be released on C++20. Sadly, I understood only there are a bunch of things in C++20. I believed currently I need extra study if I want to use it for myself.

Clearly, the lecturer emphasized simplicity to advocate writing a clean code. I believe that the motivation of her is to produce clear example and make us a good teacher for beginners. There are a bunch of example and metaphor to make it clear.

Obviously, lecture was interesting enough. Since her description and examples are clear and easy to make sense, anything could not became a obstacle that hinder to understand.

The big reason why I felt this lecture is cool is it is not only clear but also be applied directly. For example, one of her example was a

```cpp
// total of the numbers in the vector
int i = 0;
for(auto n : v)
{
        i += n;
}
becomes
int total = accumulate(begin(v), end(v), 0);
```

Before declare a reasonable naming variable and use a nice STL function, it need a verbose comment. However, using these things, we are able to make sense without a comment and surprisingly, it can be compressed into only 1 line. Furthermore, she show me a command line parsing example with using stringstream or not. In addition, she told me a "do not nest deeply - return early". It seems amazing programming style. I was happy to there are a chunk of example code that can be applied for my code style and her nice lecture.

The lecturer try to explain the new released features with C++17. I believe the motivation was a introducing and spread widely this new thing. There are really really a lot of examples to explain new functionality of C++17. I will show a part of it in presentation.

His explanation was cool enough, which means the lecture was very interesting to me. The new features were really interested and cool to know. For example, I've known about selection sequence with initializers. However, I didn't know details and the fact that it was from C++17. Conversely, there was a new advanced function based on unknown function. For instance, there was a if constexpr and fold expressions. The lecturer introduced these features with packs. Since I didn't have any concept on packs, I need an extra time to understand it.

I've learned a bunch of new features in C++17. It was good and easy to use on my code directly.