

XX00FC41-3001

C++ PROGRAMMING

Wednesday 2022/09/21

TODAY

- Control Flow
- References & Pointers
- Misc.
- Online Compiler

ANNOUNCEMENTS

- Wednesday's evening sessions cancelled
- Thursday from 18:30 - 19:00 is reserved
- 11:30-12:00 breakout room #2 is reserved
- Linked list & Algorithms
- W38 structure (template, use your own)

C++ vs *R language* vs *Rust*

CATEGORIES OF FLOW CONTROL STATEMENTS

- Conditional statements: If, switch
- Jumps: Goto, break, continue
- Function calls: Function calls, return
- Jump VS Function calls
- Loops: While, do-while, for, ranged-for
- Halts: `std::exit()`, `std::abort()`
- Exceptions: Try, throw, catch

GOTO STATEMENTS

- Go To Statement Considered Harmful
- [Link 1](#)
- [LINK 2](#)
- Linux Kernel is OOP in C
- Book: [Linux Device Drivers](#)

GOTO VS LONGJMP() VS SETJMP

- What is the difference between `goto` and `longjmp()` and `setjmp()`
- `nuttx`: (Sony, Samsung)

Group Discussion 1

CONTROL FLOW

- If statements and blocks
- Common if statement problems
- Switch statement basics
- Switch fallthrough and scoping

Pair Programming 1

CONTROL FLOW

- while statements
- Do while statements
- For statements
- Break and continue
- Halts (exiting your program early)

Group Discussion 2

DESIGN BY CONTRACT

- Design by Contract
- Book p185
- Assert

READING MATERIAL

- <https://www.learncpp.com/>

Thank You!

