



Welcome to the real world: from Python to C++

ENGG1340/COMP2113

Computer Programming II / Programming Technologies

Chenxiong Qian

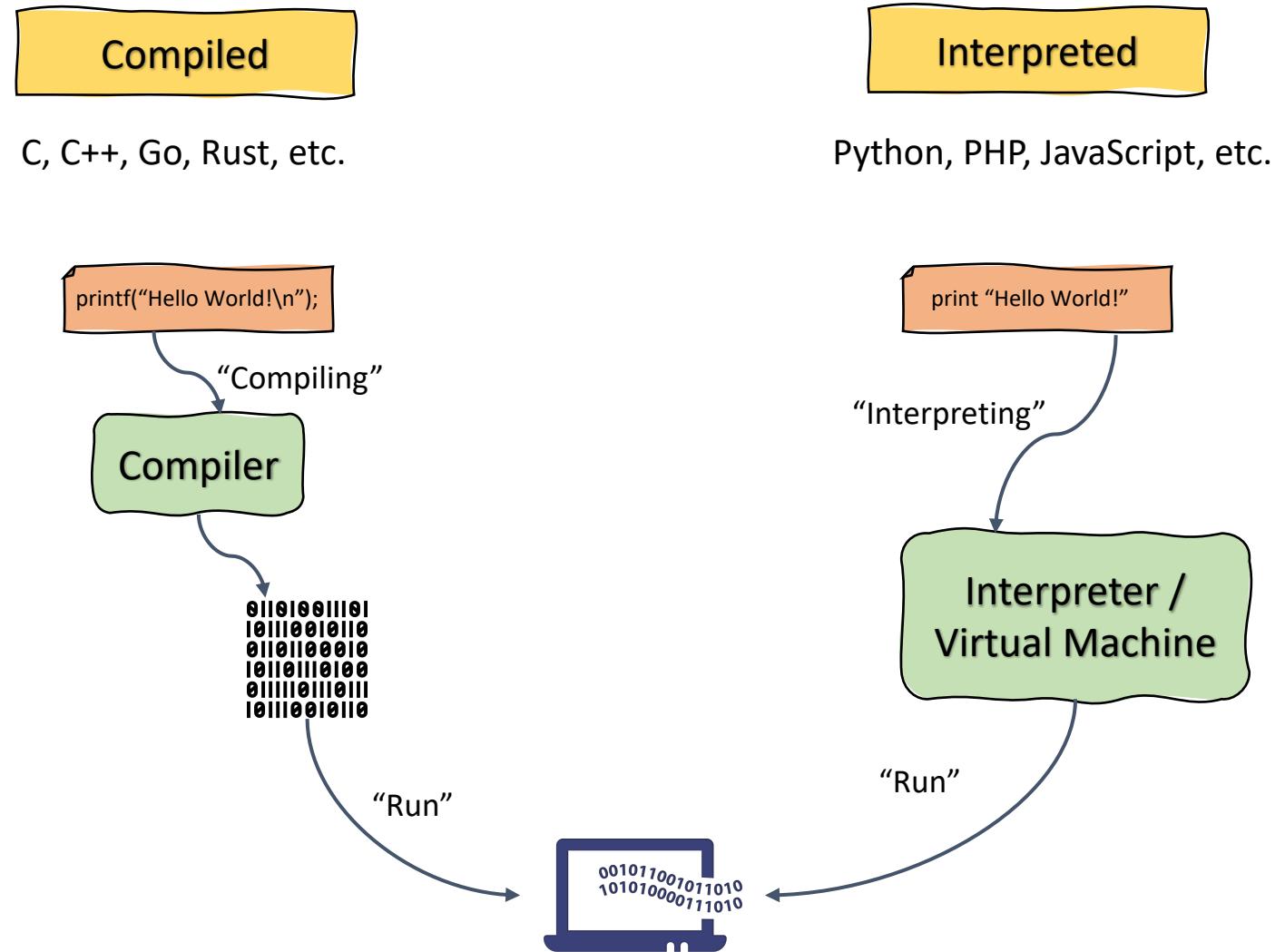
Python
programs
run slower
than C++
programs.

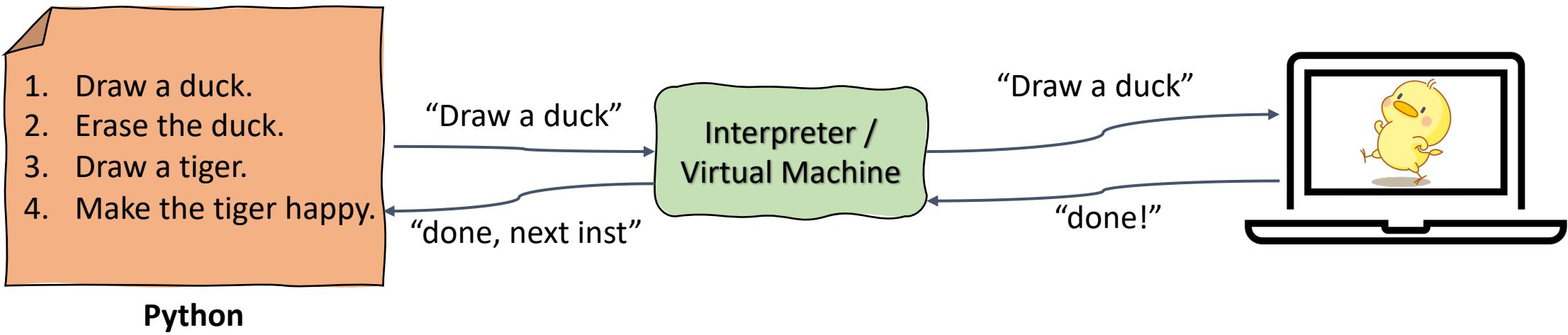


Compiled

VS

Interpreted





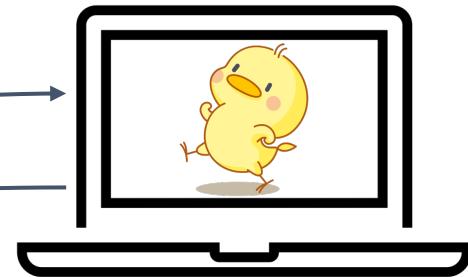
1. Draw a duck.
2. Erase the duck.
3. Draw a tiger.
4. Make the tiger happy.

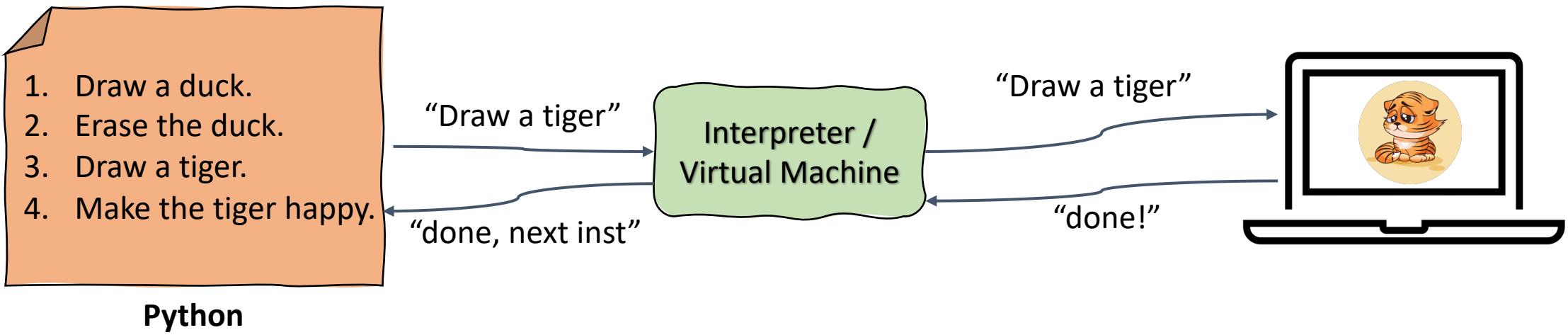
Python

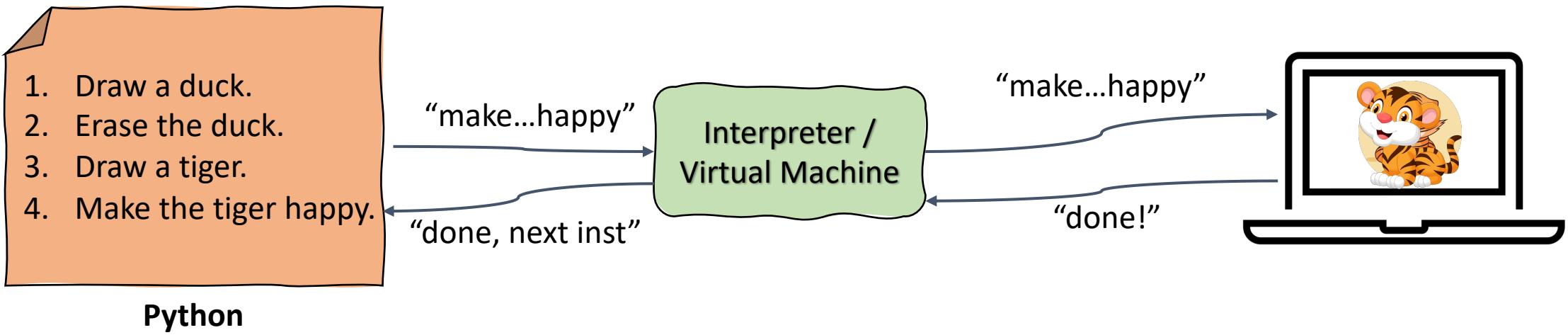
“Erase the duck”
“done, next inst”

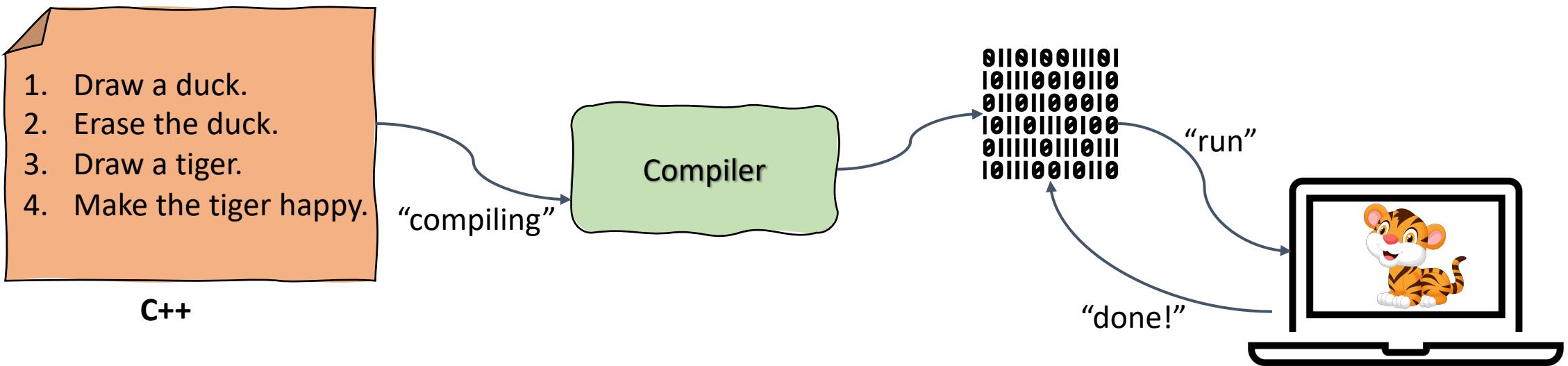
Interpreter /
Virtual Machine

“Erase the duck”
“done!”



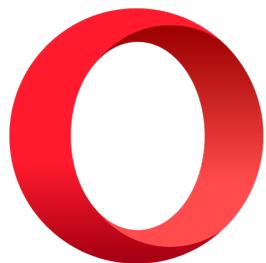
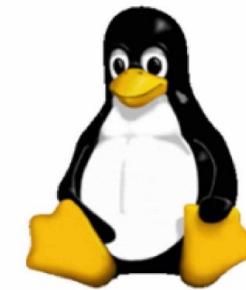






-
- Illusion
 - I can do anything with Python
 - I am good at programming
 - I can ask the computer to do anything
 - I am a computer scientist
 -





A dark, moody photograph of John Wick from the movie "John Wick". He is shown from the chest up, pointing a handgun directly at the viewer. He has long, dark hair and a beard. The lighting is low-key, with strong highlights on his face and hands. The background is blurred.

It is exciting,
but
it also sucks!

C++
Programming
is NOT easy.

C++ developer
learning Python



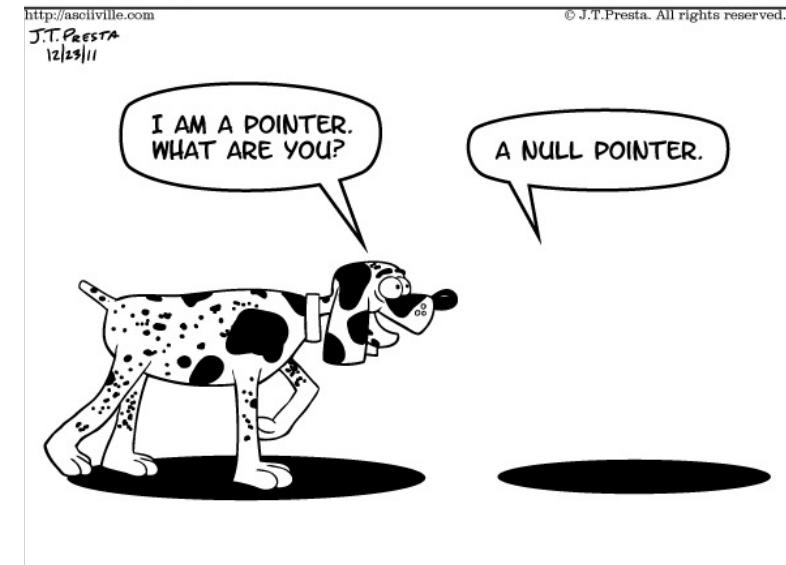
Python developer
learning C++



The syntax is
different.



Pointers are
everywhere.





mcc

@mcclure111

Follow



In C++ we don't say "Missing asterisk" we say
"error C2664: 'void
std::vector<block,std::allocator<_Ty>>::push_
back(const block &)': cannot convert
argument 1 from
'std::_Vector_iterator<std::_Vector_val<std::_Si
mple_types<block>>' to 'block &&'" and i
think that's beautiful

4:30 PM - 1 Jun 2018

292 Retweets 926 Likes



20

292

926



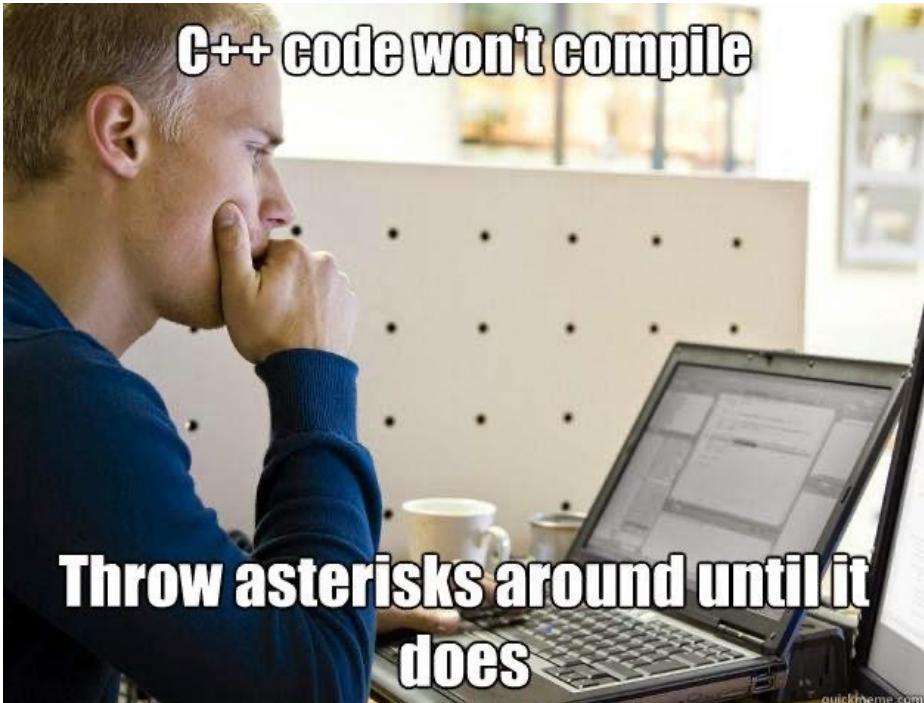
**I'VE ALREADY SPENT
2 1/2 HOURS**



**TRYING TO FIND WHY MY
CODE HAS AN ERROR**

memegenerator.net

Not Recommended



Recommended

1. AFK
2. Get a cup of coffee
3. UNDERSTAND your code

Ask help from others

Running
errors



**Me: Hey can you show me what
is the err-**

C++:



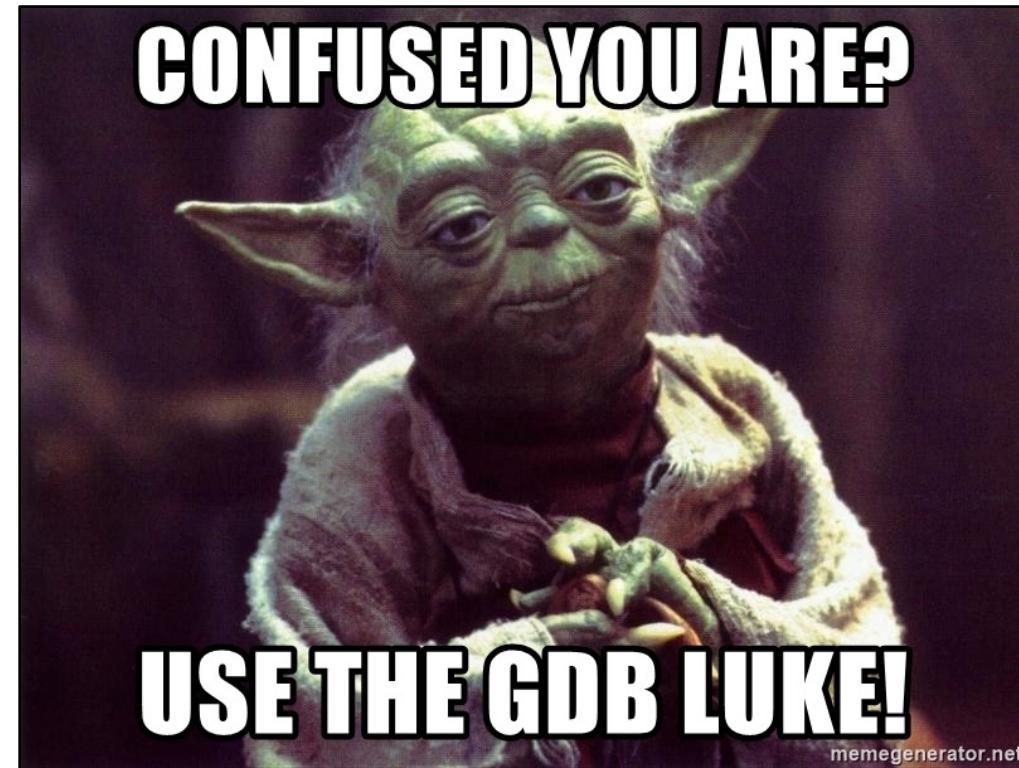
```
tutorial@adda:~/c-test$  
tutorial@adda:~/c-test$ gcc test.c -o test  
tutorial@adda:~/c-test$ ./test  
Segmentation fault (core dumped)  
tutorial@adda:~/c-test$
```

Best I can do is

Not Recommended

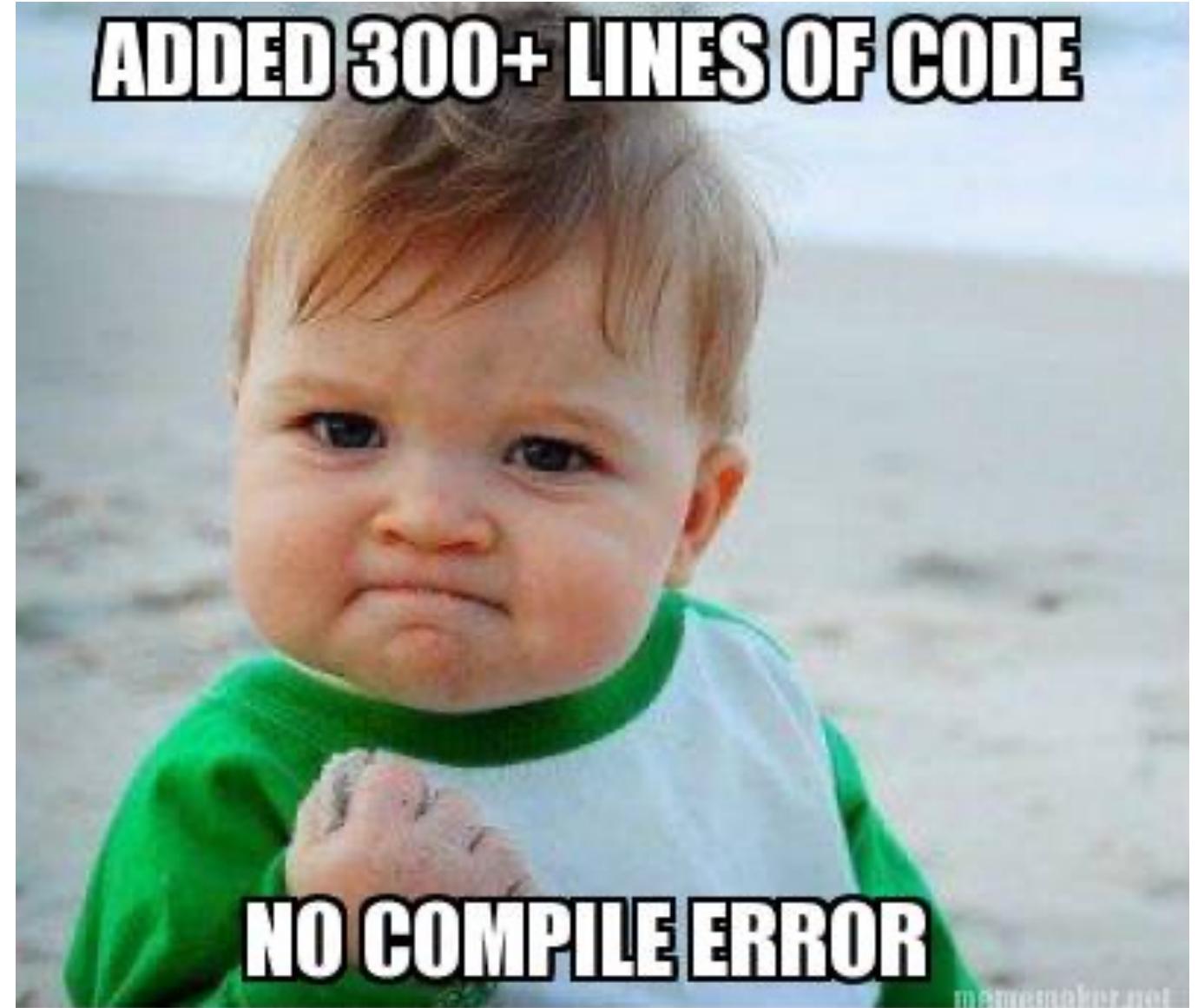


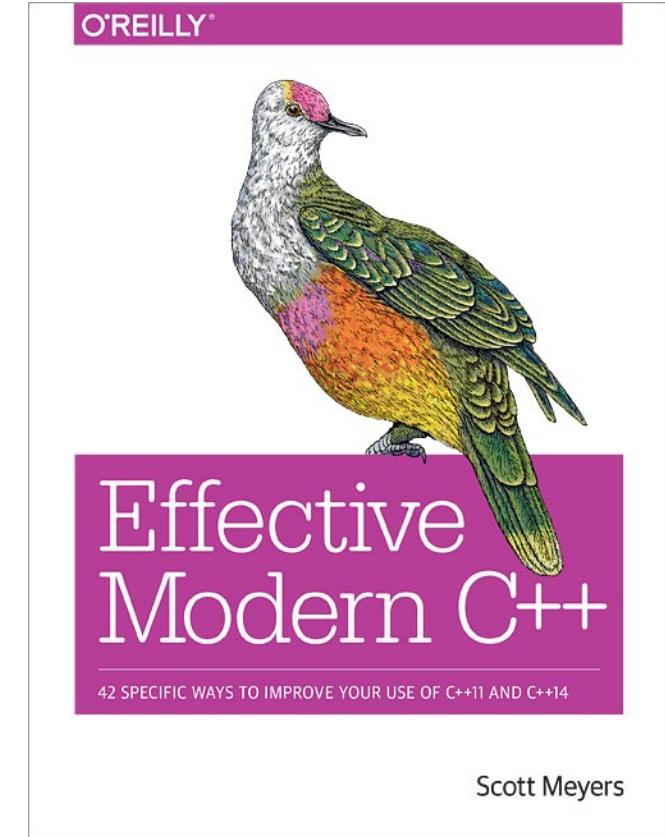
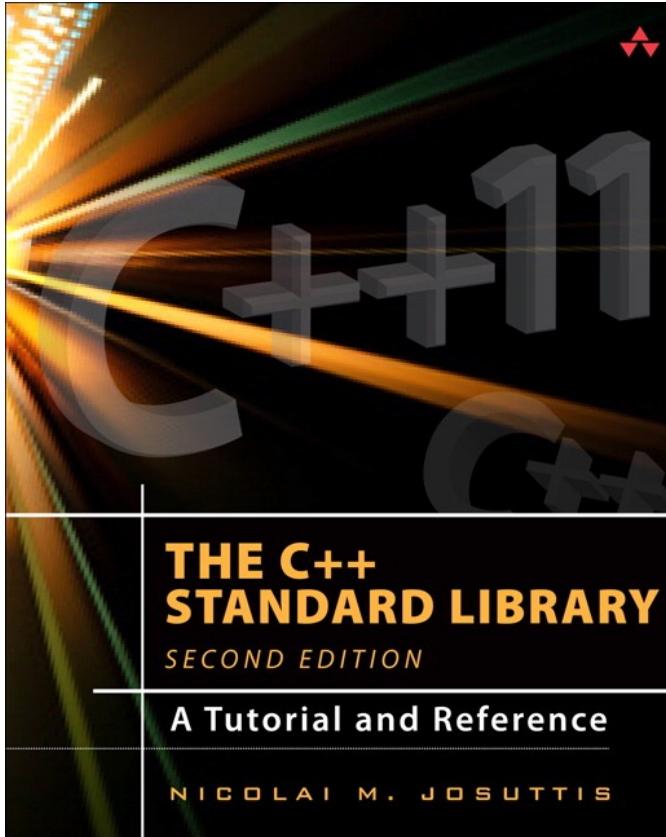
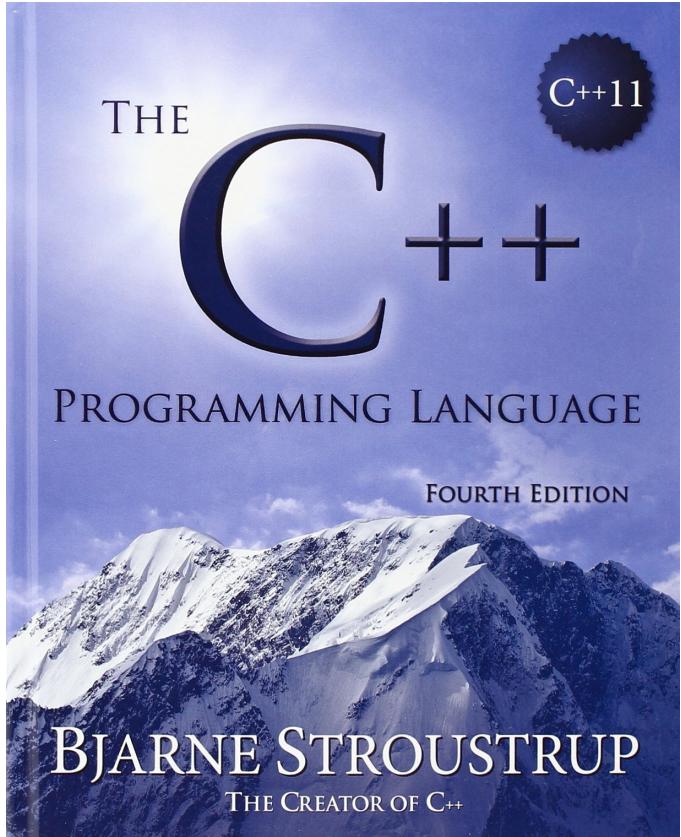
Recommended



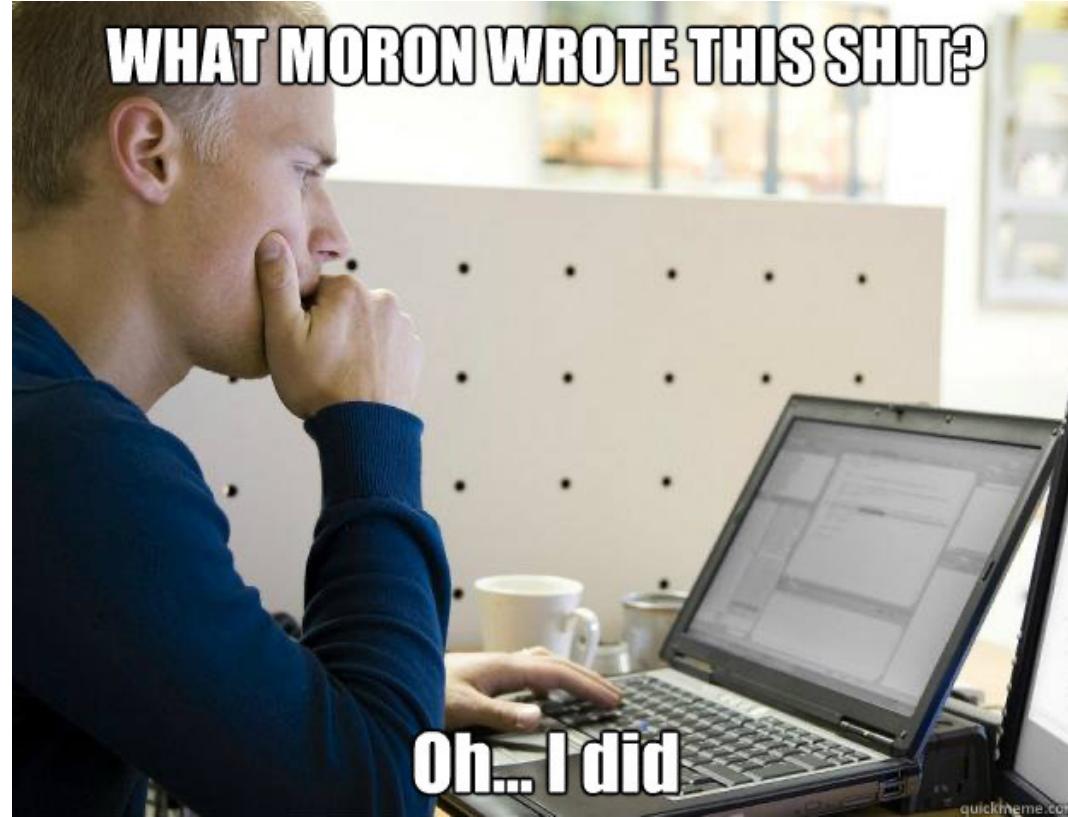
“printf” cannot catch all bugs!

If you are
a
forerunner





“If you think it's simple, then you have
misunderstood the problem.”
— Bjarne Stroustrup



Self-evaluation

Happy self-paced
learning and we
lecturers and
tutors are all
hands to help!

