

CSE131 - Compiler Construction

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Hope/expect to learn

Qs for Joe / the class

Programming in Rust!

Some compilers?

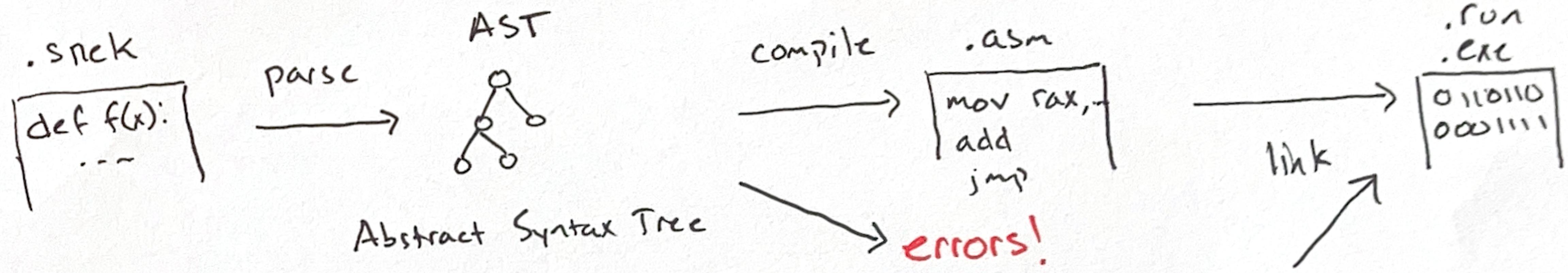
| | input | output |
|----------------|-------|-------------------------------|
| gcc | .c | assembly, binaries, obj files |
| clang | .c | " |
| llvm | IR | " , Javascript! (Emscripten) |
| cl | | |
| rustc | .rs | " |
| ghc | .hs | intermediate files → -o/.exe |
| javac | .java | .class / bytecode / .jar |
| pdflatex | .tex | PDF → .pdf |
| sbcl (LISP) | .lisp | .fasl |

* IR = intermediate representation

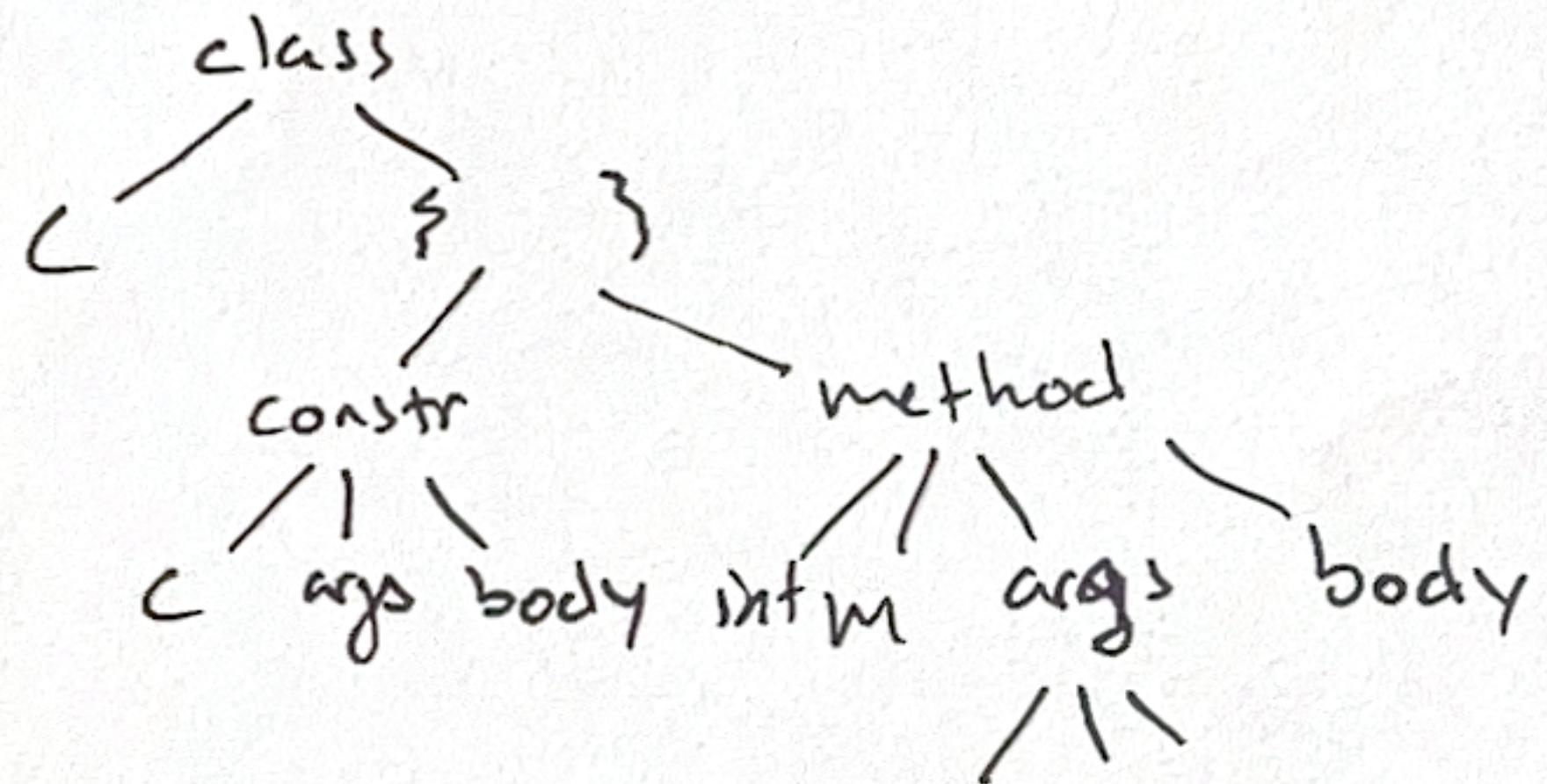
compiler: program → program

- the programs "mean the same thing"

- the output is easy or better to run where you need it



```
class C{
    C() {
        int m(int y) {
            ...
        }
    }
}
```

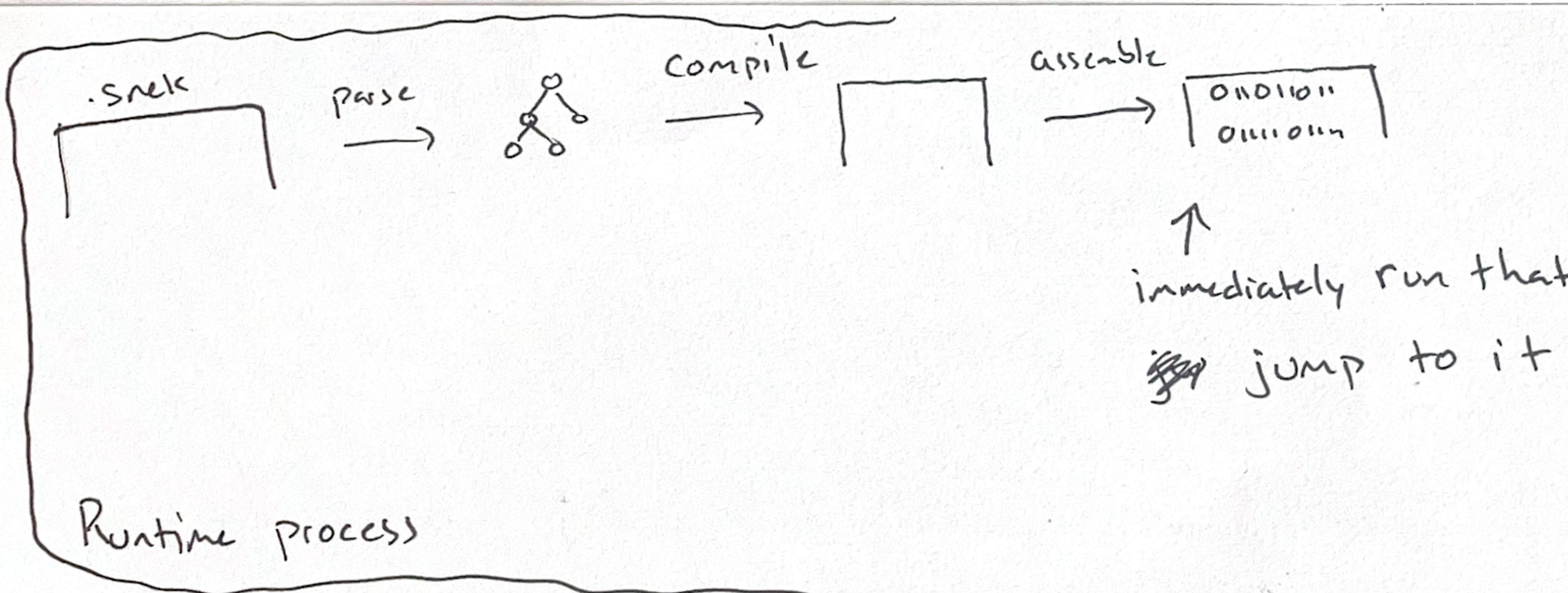


Adder
Boa
Cobra
Diamondback

libraries.rs

```
fn print()
...

```



```
$ python -i
> x = 10
> x + 1
11
```