

Why CC?

- This course aims at much more than just learning how to code.
- The choice of programming language is important but not more important than many other choices made here.
- C is relevant, C* is simple.
- With imperative programming the notion of program state maps one-to-one to the notion of machine state.
- Seeing the pitfalls of imperative programming enables students truly appreciate other paradigms such as functional programming.
- In fact, awareness of state makes students understand the value of functional programming. This is nevertheless left to others to teach.

C* by Example

```
uint64_t atoi(uint64_t* s) {  
    uint64_t n;
```

```
    n = 0;
```

procedure

```
    // loop until s is terminated  
    while (*s != 0) {  
        // use base 10, offset by '0'  
        n = n * 10 + *s - '0';  
  
        // go to next digit  
        s = s + 1;  
    }
```

```
    return n;  
}
```

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