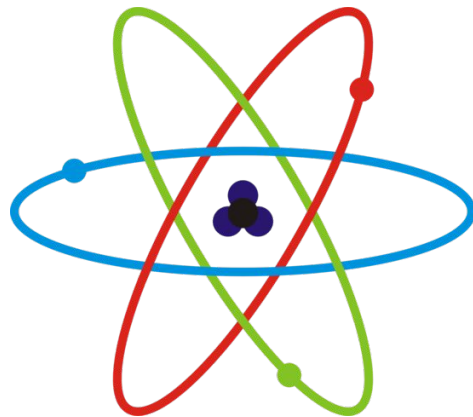


# Computer Architecture from 10,000 Feet

```
int foo(int x) {  
    ...  
}
```

Computation



Convenient  
physical  
phenomenon

*we use abstractions to make this easier*

# Abstraction Layers that Makes this Easier

```
int foo(int x) {...}
```

## Computation

Language/API

Compiler/OS

ISA

Microarchitecture

Circuit

Layout

Design rules

Process

Material science

## Physics



Fortran, C  
arm, x86

adder  
nand gate  
Mead & Conway

