The Big Picture
My Story

- Wrote great programs
- Didn’t understand how they worked
What is a computer (system)?

- Hardware
- Software
Hardware

- Peripheral (input and output) devices
  - printers
  - monitors
  - speakers
  - etc
- “The box” or “the tower”
  - power supply
  - CPU
  - motherboard
  - etc
Software

- Operating systems
  - OS X, DOS, UNIX, LINUX, Windows, etc

- Applications
  - Games, word processors, web browsers, etc

- Compilers
  - C++, Java, Pascal, FORTRAN, LISP, etc
Man to Machine

- C++ is a human-readable high-level language
- A compiler translates your C++ code into machine-readable low-level language
Simplified Steps of a Compiler

1. Check the syntax
2. Produce the executable
The whole process

1. Man has a problem
2. Man writes C++ solution to the problem
3. The compiler translates C++ into machine code
4. The operating system executes the machine code and sends instructions to the computer’s hardware components
5. The CPU, RAM, disk drives, etc follow those instructions
End of Session