• Pictures
• Syllabus
• Textbook
• Course Agreement
Programming

• What is a program?
  – A set of instructions (an *algorithm*)
  – Understood by a computer
What does a program look like?

• An algorithm is a set of instructions designed to accomplish a specific goal

• For a temperature $f$ in Fahrenheit
  • Subtract 32 from $f$
  • Divide $f$ by 1.8
  • Display the value of $f$
  • [Converts to Celsius]

• Don’t need to understand the goal to follow instructions
Programming Languages

• A language is a tool with which we tell a computer an algorithm

• Compilers translate from one computer language to another

• Each language has own advantages and disadvantages
The Java Language

• Widely Used

• Can be compiled on many computer systems

• Object Oriented (we’ll learn what this means later)
Example Program
Integrated Development Environments

- BlueJ (This class’s primary environment)
  - Designed to teach Java
Integrated Development Environments

• BlueJ:
  – Available on Windows, MacOS, Unix
  – Free and downloadable
Integrated Development Environments (IDEs)

- DrJava
  - Designed for students
Integrated Development Environments (IDEs)

- Eclipse
  - Professional Programming Tool
Non-IDEs

- Text editors
- Separate compiler
Mistakes?

• Sadly, computers read what is written, not the intention.
• Errors will often generate complaints from the IDE.
  – Syntax
  – Logic
• Some complaints are more informative than others
BlueJ Install

• It may be useful to install on your home system

Optional:
• Download and install BlueJ: www.bluej.org
• Later: Getting your computer setup with Robot
Up Next

• Lab 0: Meeting your Robot (and getting it to talk back to you)