

Language group

- Imperative
 - von Neumann (Fortran, Cobol, C)
 - object-oriented (Java, C++, C#)
 - scripting languages (Python, JavaScript)
- Declarative
 - functional (Haskell)
 - logic, constraint-based (Prolog)

In this class

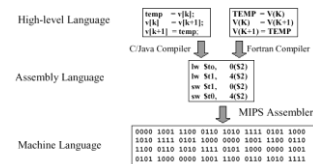
- Languages we will cover
 - Java
 - C++
 - Python
 - JavaScript
 - Haskell
 - Prolog
- Sorry, but don't expect me to guide you be a programming expert, please.

Imperative languages

- Imperative languages predominate
 - They will occupy the bulk of our attention
- We also plan to spend a lot of time on functional language

How does the computer understand program?

- Programs should be translated into an assembly or machine code.



Compilation vs. Interpretation

- Compilation
 - The compiler translates the source program into an equivalent target program



- Interpretation
 - Interpreter stays around for the execution of the program



Compilation vs. Interpretation

- Most language implementations include a mixture of both compilation and interpretation

