

Lead in Questions

What does a computer understand?

What makes a computer powerful?

What is an encoding?

What is an interpretation?

What determines how a byte that contains 65 is interpreted as a number, a character, the redness of a pixel, or as an instruction that means "add two numbers"

How many different patterns can we get from 4 binary digits?

Describe the analogy between a recipe and what a computer does.

Why not use Natural Language to specify recipes?

Objectives for the day:

- Java Overview
- Run Dr. Java
- Pick up a set of provided classes (Welcome, then ImageViewer)
- Store on U drive in subfolder under cs171
- Navigate to and Open the classes in Dr. Java
- Compile the classes
- Run a simple Program
- Repeat with the Shapes class
- Copy Utility classes from S Drive
- Set up Dr. Java Preferences
- Use the Interactions Pane
- Introduction to Java Fundamentals

Java Overview?

Platform Independence

Object-Oriented

Less Error Prone than other languages

"Internet Language" and applets

Current Java

Libraries of commonly used
recipes 32138 methods and
fields

For any language-

Syntax vs. Semantics

Compilation process to get from
programming language syntax to simple
instructions that, with the right
interpretation, the computer can
understand

High level view

Intro to objects and manipulating objects

Methods on objects

Statements

Invoking a sequence of statements

Teaser- currently using Interactions Pane, but will
Eventually write our own methods (recipes) and put in a
file so that it is stored more permanently, and the same
recipe can be invoked whenever needed.

After high level view, go back to the lower level view and will
build up from there until we reach the high level view once
again.

Discuss Expressions

Numbers

Operators

Discuss Memory and Variables