Workshop: How to Design Class Hierarchies

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Day 1

Monday am:
Overview and Introductions
Design recipes in HtDP:

- Structure of data: containment, union
- Self-referential data

Monday pm:
Classes: data definitions, pictures, constructors
Making examples of objects
Composition
Union data definitions, pictures, examples

Day 2

Tuesday am:
Self-referential data - lists and trees

Tuesday pm:
Design recipes for class hierarchies
Methods for simple classes

Day 3

Wednesday am:
Design recipes for methods
Methods for classes with containment
**Wednesday pm:**
Methods for union
Abstract vs. concrete methods in the abstract class

**Day 4:**

**Thursday am:**
Methods for lists, trees, and similar structures
Single point of control
Sorting
Data definitions for cyclic class hierarchies

**Thursday pm:**
Designing methods for cyclic class hierarchies: mutation and assignment

**Day 5:**

**Friday am:**
Abstractions
Abstracting over a list of Objects - sorting, min, max
Implementing interfaces
Comparable vs Comparator

**Friday pm:**
Abstraction: Function objects (IString2Bool)
Inner classes
(Maybe) Outlook for further study:
- Equality and mutation
- Moving on to Java classes; reading docs