Reference

Object-Oriented Design Heuristics, Riel

Reading

Object-Oriented Design Heuristics, Riel
Chapters 2 & 3 this week
Chapter 4 - Dec 2-4
Chapter 5 - Dec 9-11
Minimize the number of classes with which another class collaborates

Minimize the number of message sends between a class and its collaborator

Minimize the number of different messages sent between a class and its collaborator
Broad & shallow Verses Narrow & Deep

Meal

Potato  Corn  Peas

Melon  Steak  Pie

Meal

MeatPlatter

Melon

Steak

Trimmings

Corn

Potato  Peas

Pie
Distribute system intelligence vertically down narrow and deep containment hierarchies

But then we get:
foo.first.x.p.value = 12
Supporting Heuristic

If a class contains objects of another class, then the containing class should be sending messages to the contained objects

Container classes are the exception

Just because your class holds objects does not make it a container class
Supporting Heuristic

Most of the methods defined on a class should be using most of the data members most of the time

Classes should not contain more objects than a developer can fit in their short-term memory

How supporting?
More Containment Heuristics

4.13 A class must know what it contains, but should not know who it contains it

Why?
Objects contained in the same containing class should not have a uses relationship between them

Why
How supports 4.13
Exceptions to 4.13

A number of classes depend on each other in complex ways

Wrap classes in a containing class

Each contained object sends messages to containing class

Containing class broadcasts message to contained classes