

CS 535 Object-Oriented Programming & Design
Fall Semester, 2008
Doc 19 Some Heuristics
Dec 2 2008

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Reference

Object-Oriented Design Heuristics, Riel

Reading

Object-Oriented Design Heuristics, Riel

Chapters 2 & 3 this week

Chapter 4 - Dec 2-4

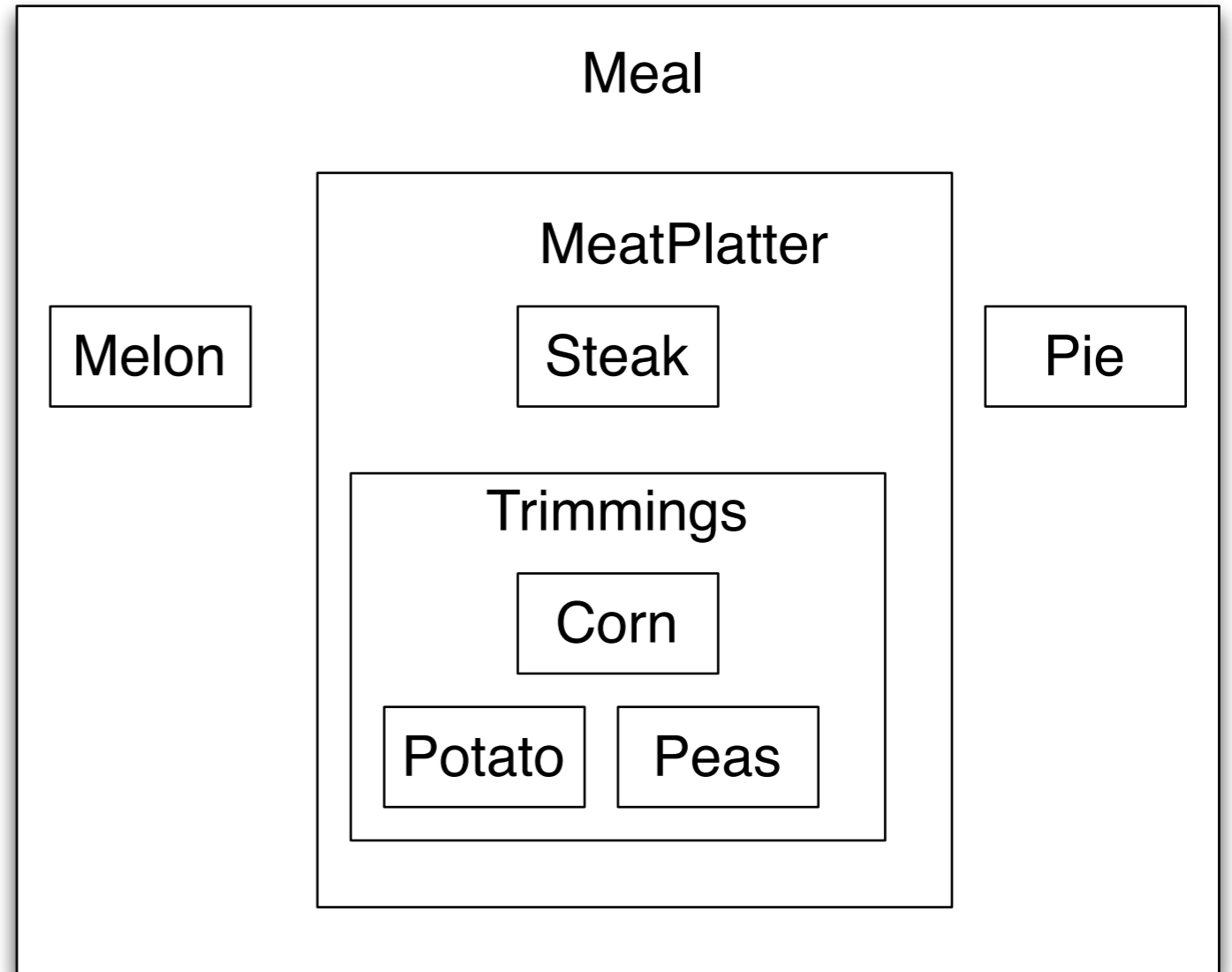
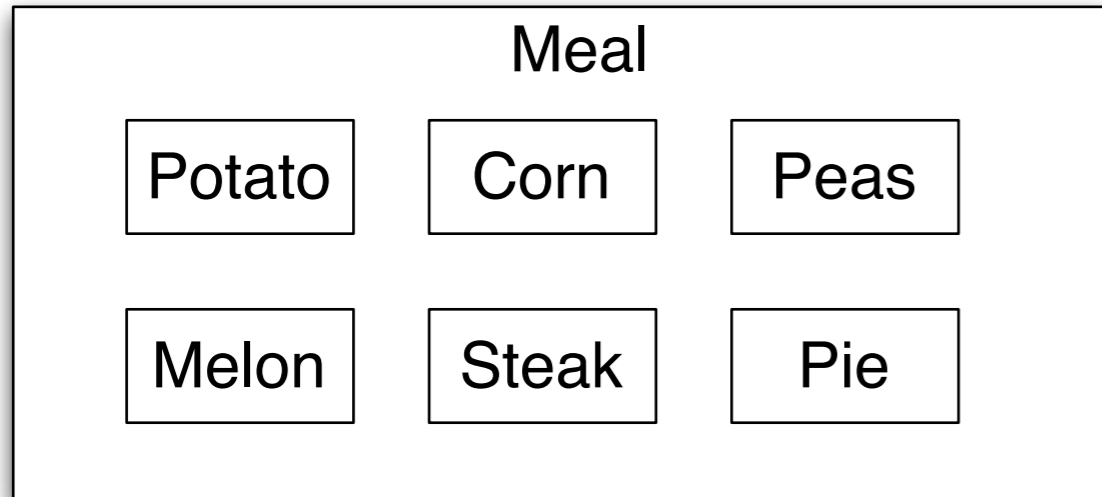
Chapter 5 - Dec 9-11

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



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

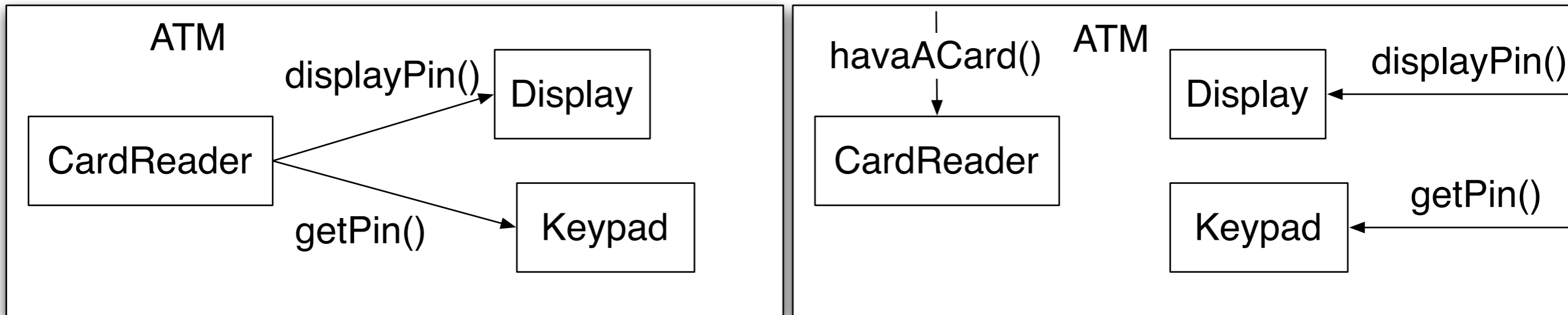
How supporting?

More Containment Heuristics

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

Why?

Same Lexical Scope



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