software studio
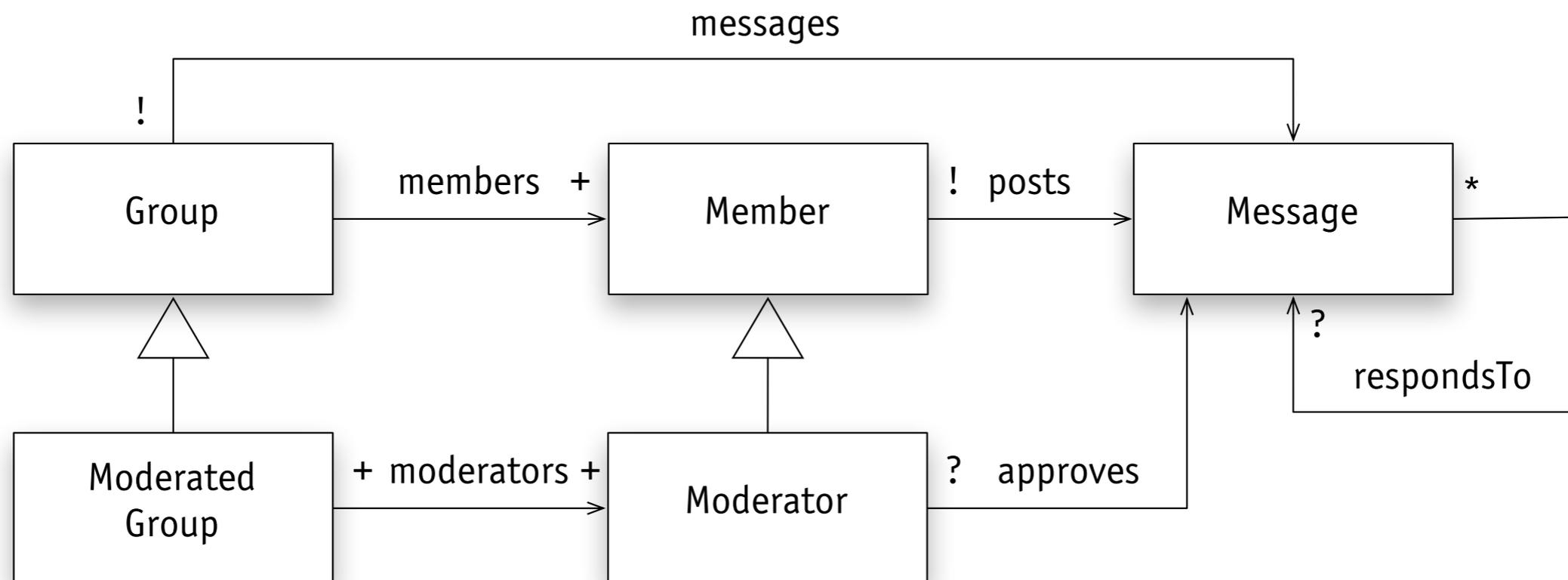
object models: semantics

Daniel Jackson

an object model

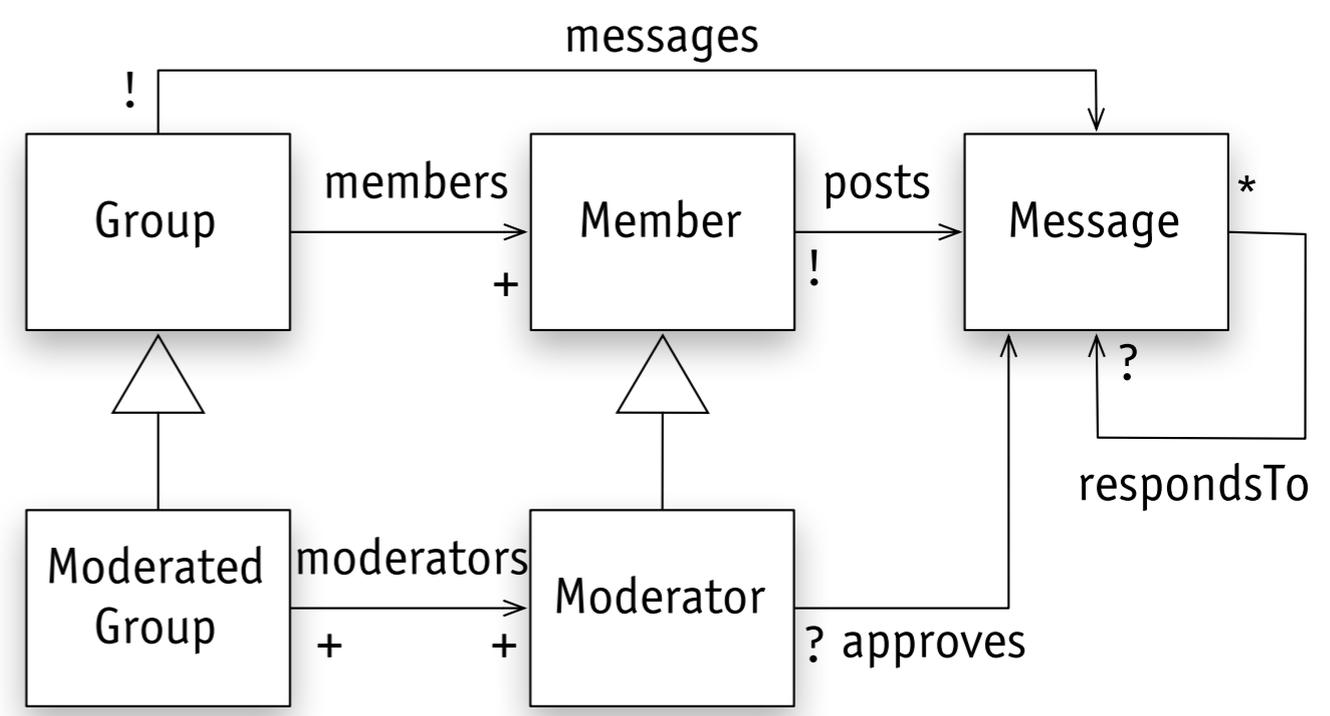› for discussion groups
› what does it denote?

object model semantics
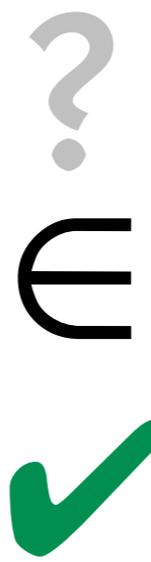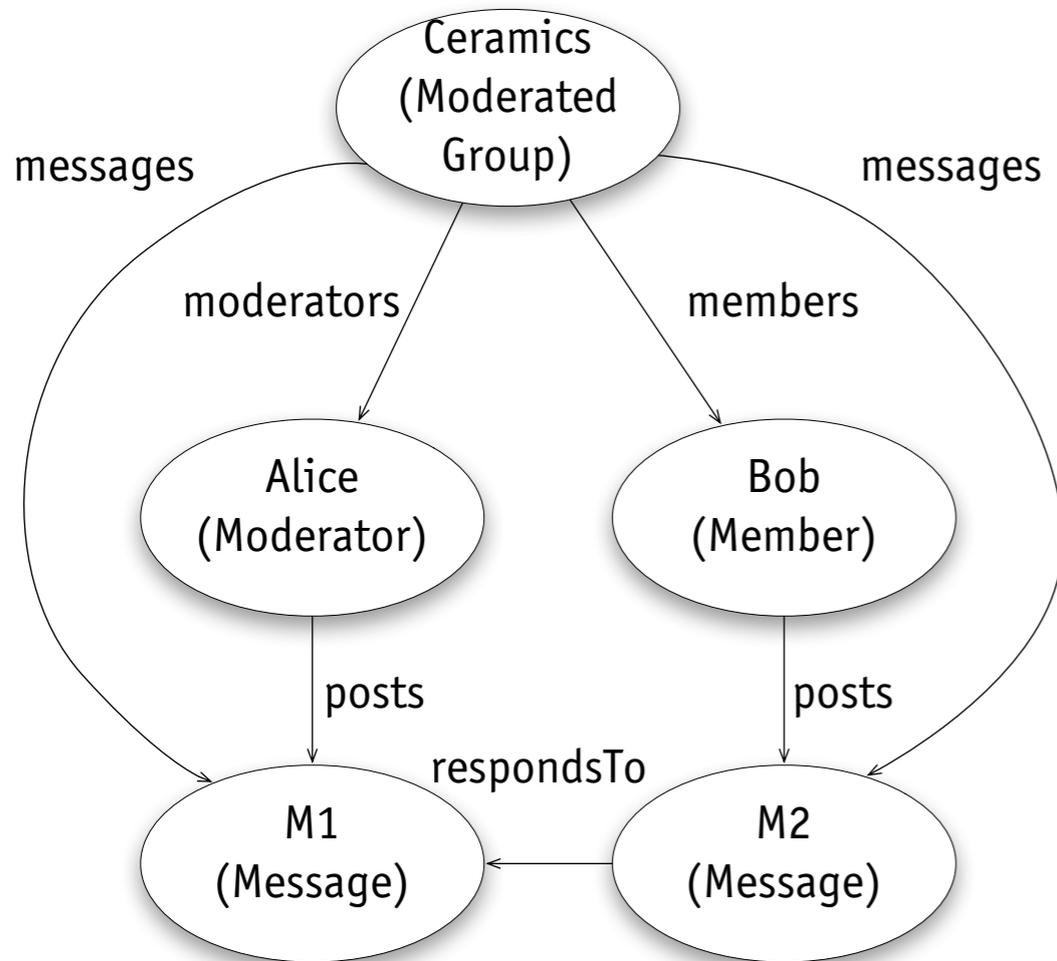
meaning = set of instances
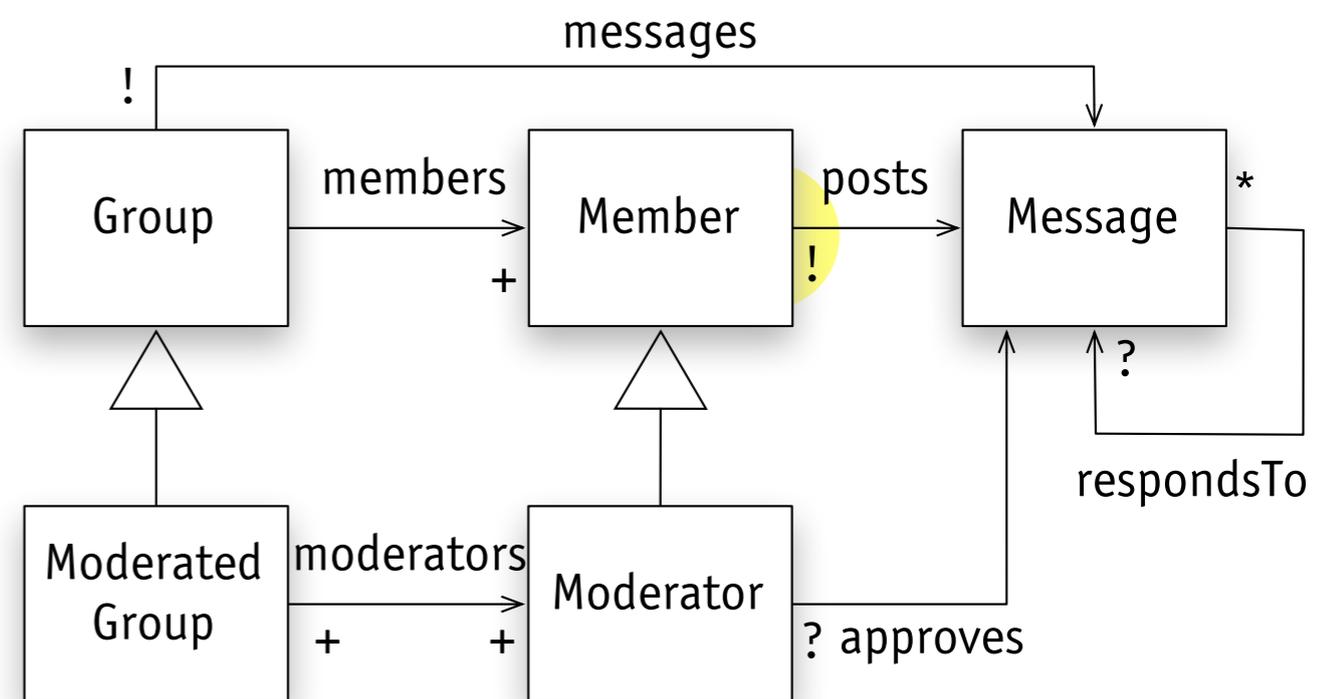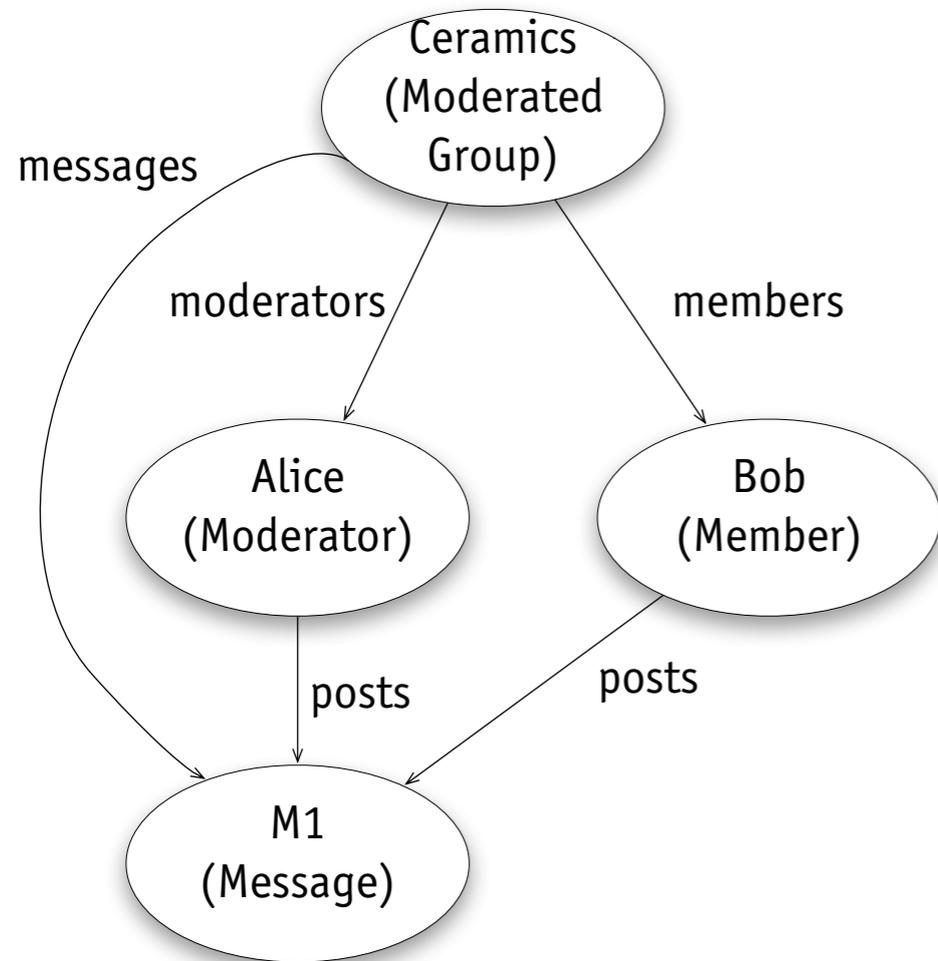
› an instance is an object diagram

non-instances
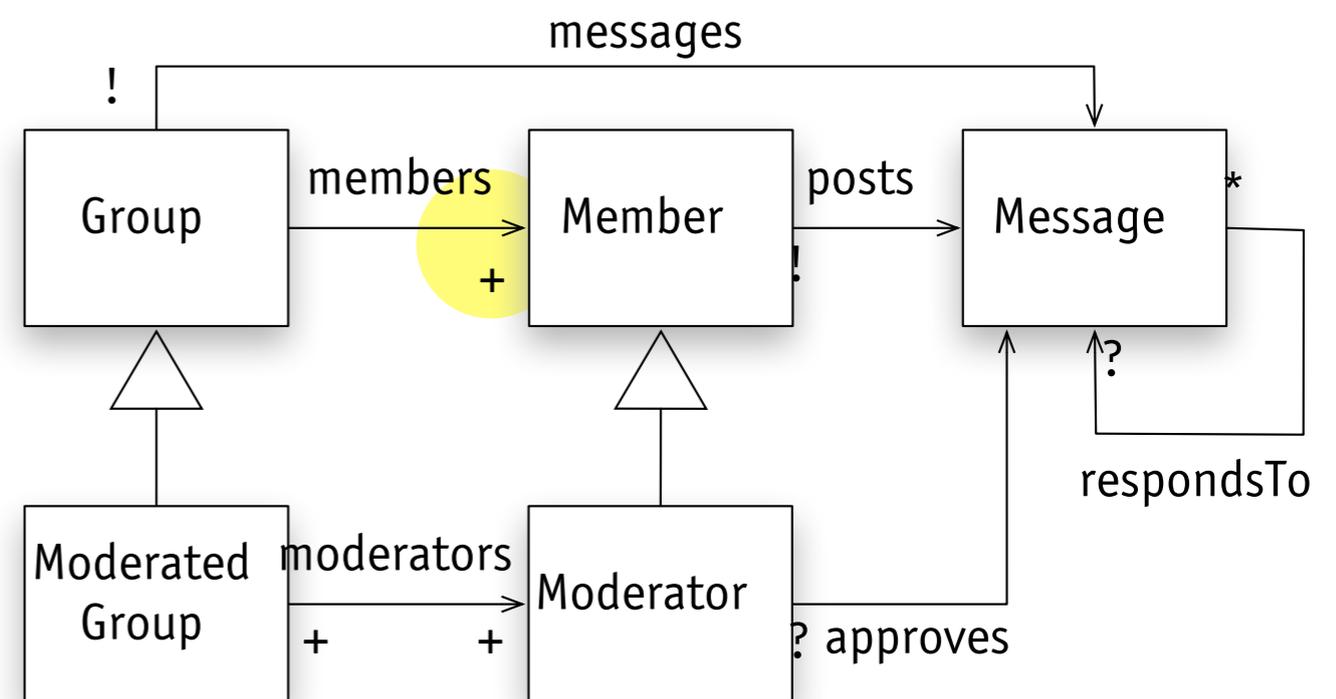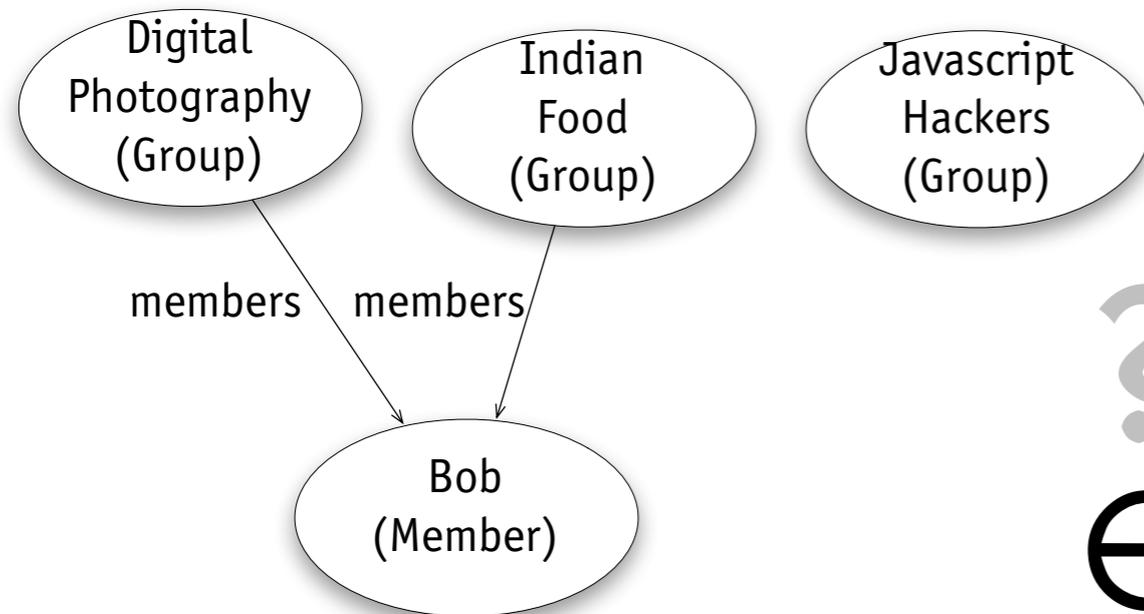
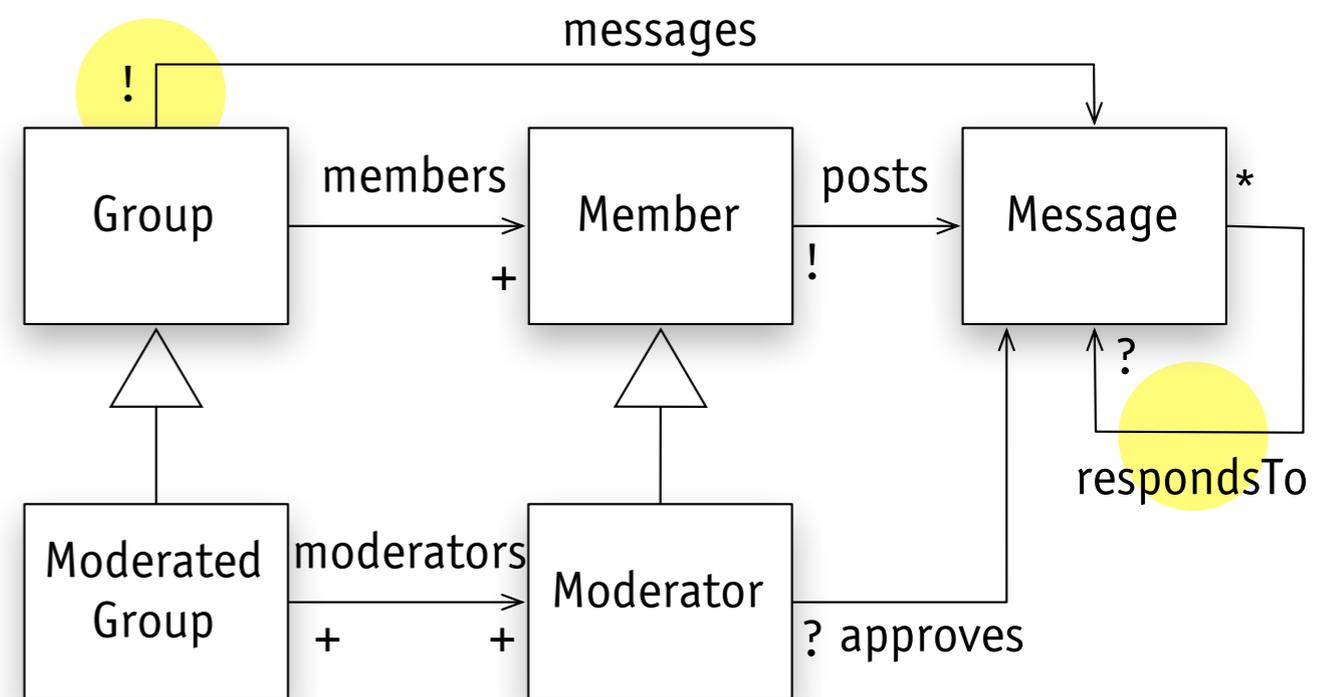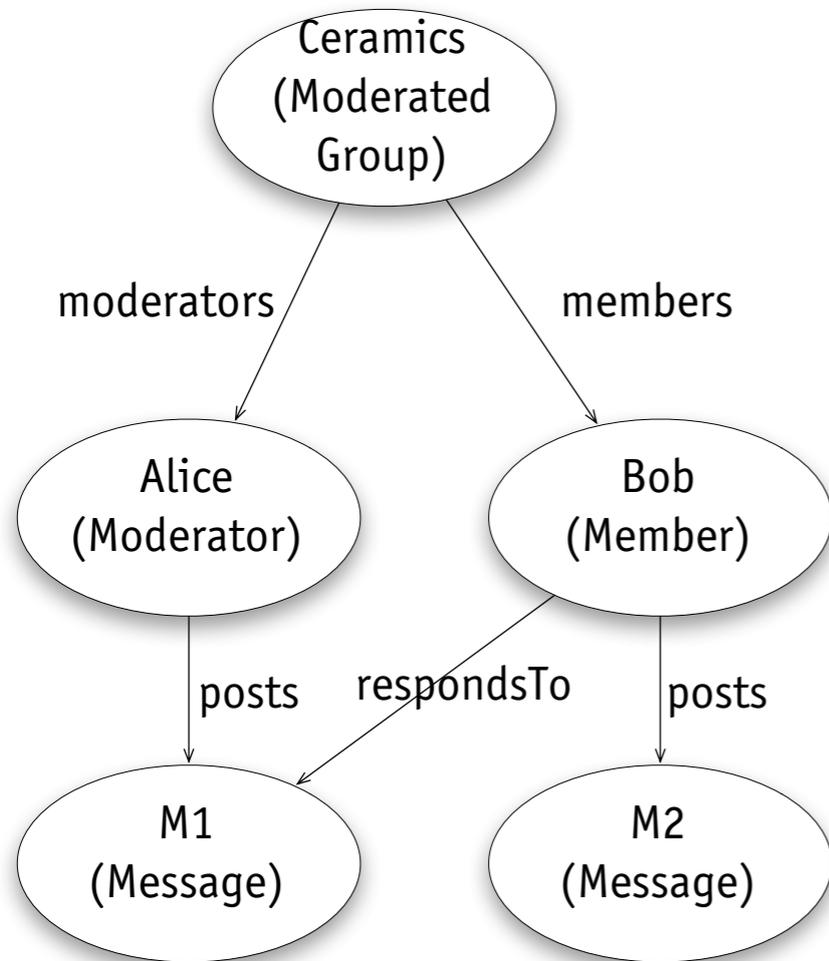› violate some rule in the object model

semantics examples

semantics examples
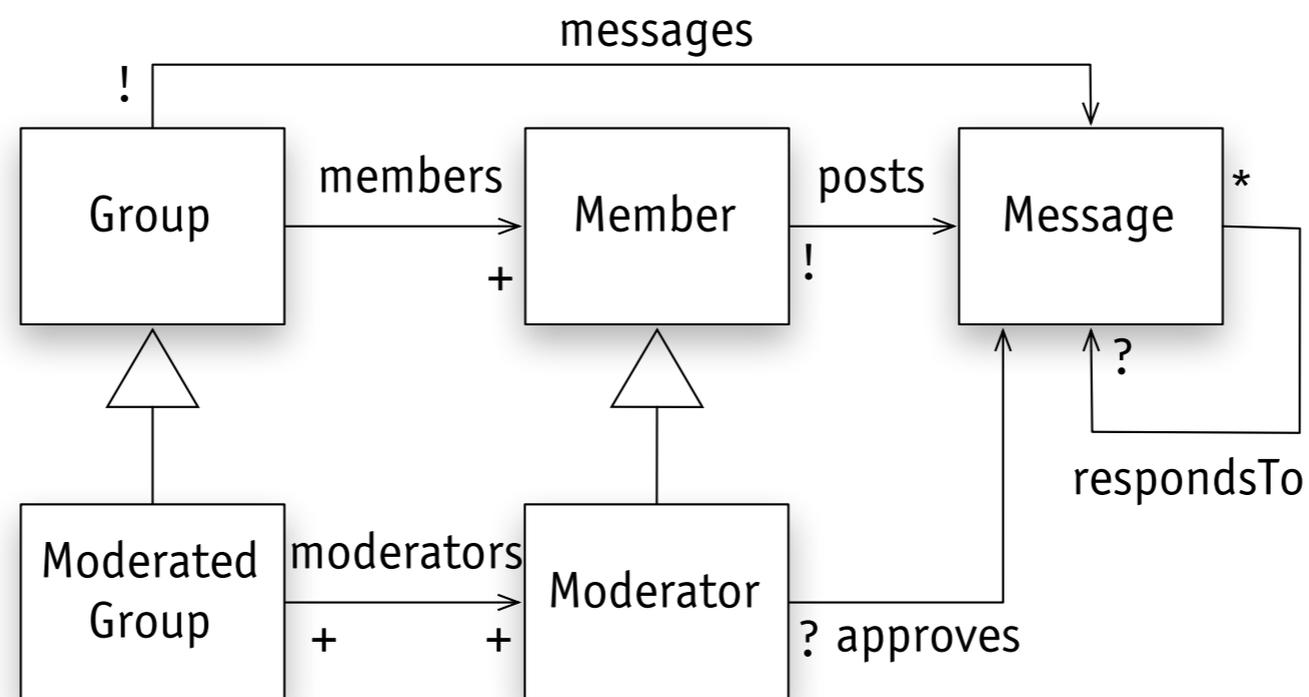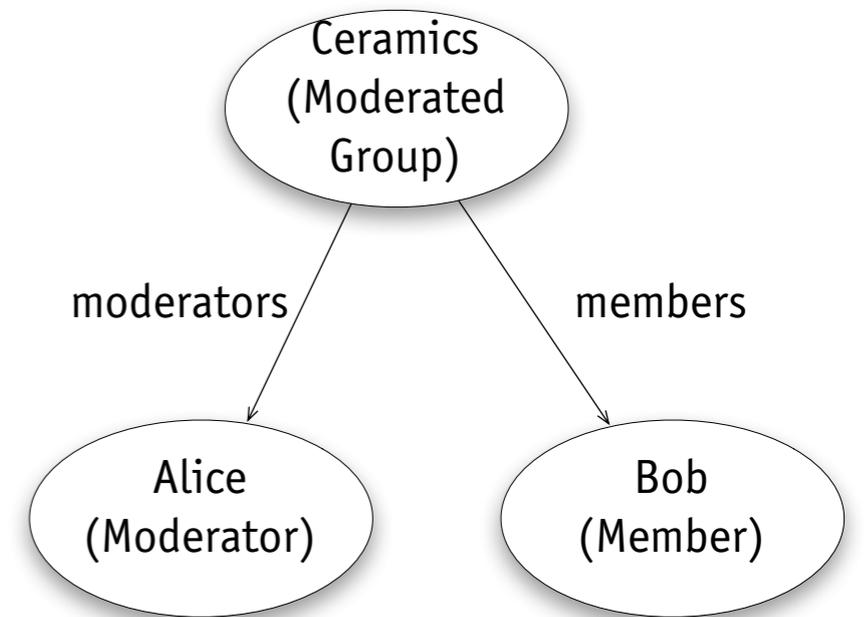
semantics examples

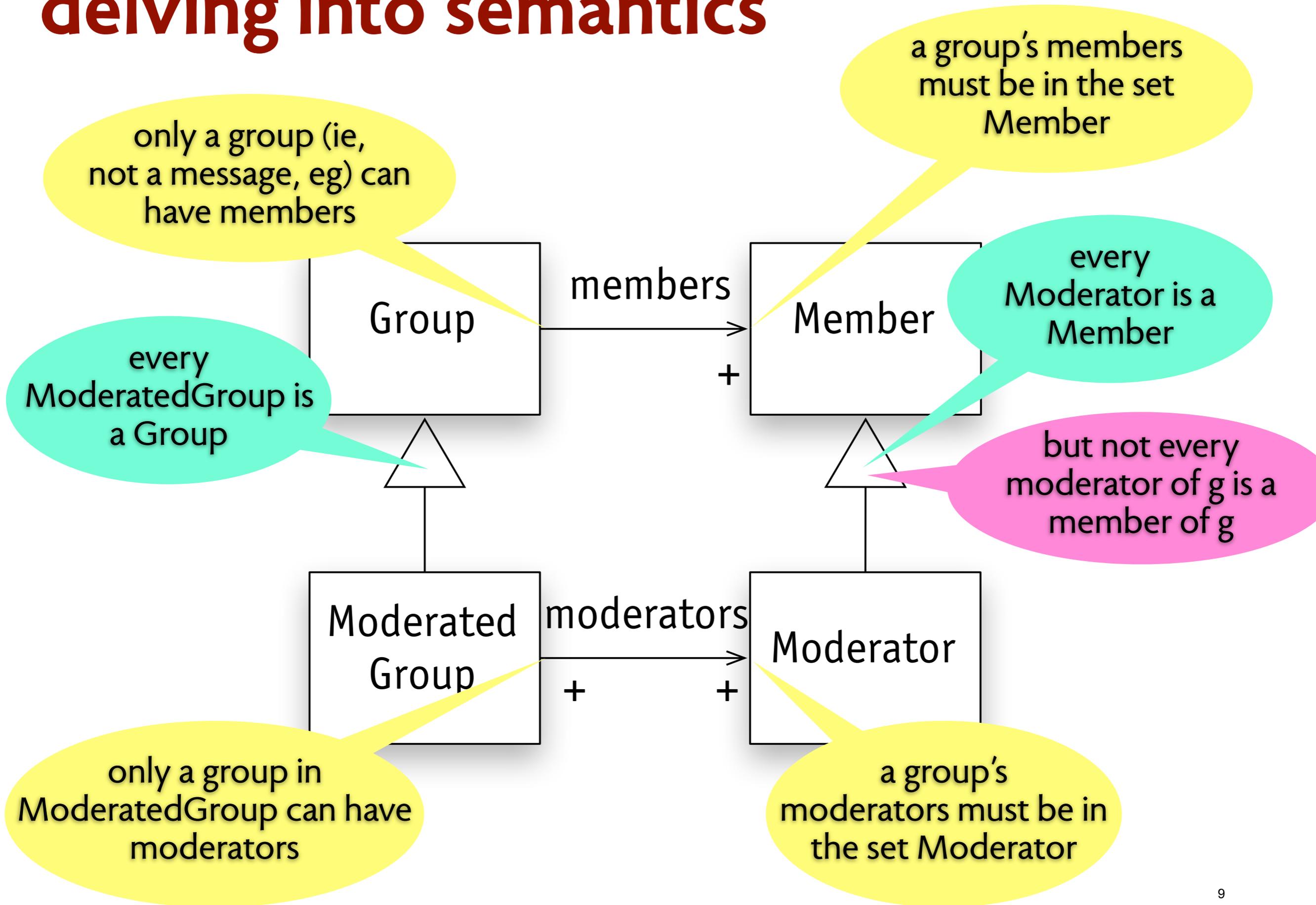# semantics examples

graphical limitations

consider this instance
› Alice is not a member of Ceramics

can we say moderators should be members?
› not in this graphical notation

delving into semantics

only a group (ie, not a message, eg) can have members

a group's members must be in the set Member

every ModeratedGroup is a Group

every Moderator is a Member

Group

members →

Member

+

but not every moderator of g is a member of g

Moderated Group

moderators →

Moderator

+   +

only a group in ModeratedGroup can have moderators

a group's moderators must be in the set Moderator
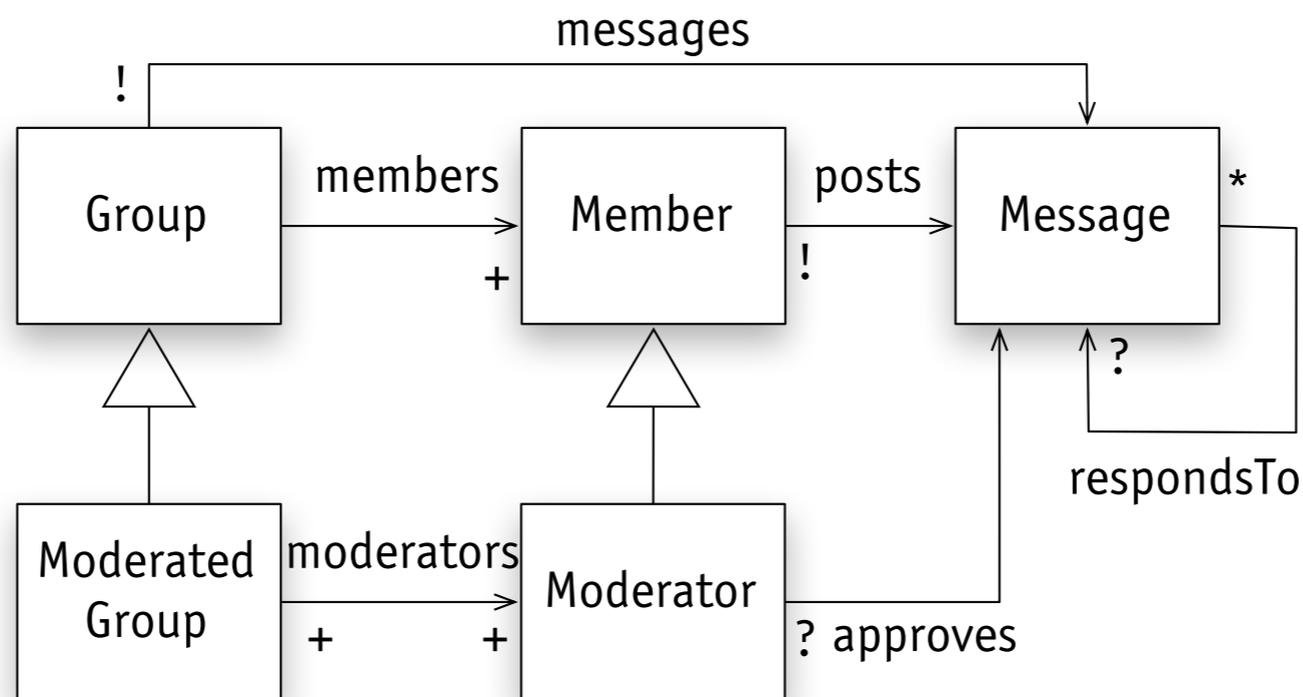
textual constraints

› moderators must be members of the group
› member only posts message in group she belongs to
› moderators approve messages in groups they moderate
› message only responds to message in same group

in this course, just informal text; more advanced: express in Alloy

6.170 Software Studio
Spring 2013