object models: semantics

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an object model

› for discussion groups
› what does it denote?

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Group

Moderated Group

Moderator

Member

Message

messages

members +

! + moderators +

? approves

? respondsTo

! posts

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

every ModeratedGroup is a Group

only a group in ModeratedGroup can have moderators

delving into semantics

a group’s members must be in the set Member

every Moderator is a Member

but not every moderator of g is a member of g

a group’s moderators must be in the set Moderator

only a group in ModeratedGroup can have moderators
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