object models: semantics

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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

Digital Photography (Group) ∈  Indian Food (Group) ∈  Javascript Hackers (Group) ∈

members

members

Bob (Member)

? ∈

x

Group

members

Message

posts

RespondsTo

Moderated Group

Moderator

moderators

? approves

! messages

+ +

??
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

every ModeratedGroup is a Group
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