

Pet Insurance System

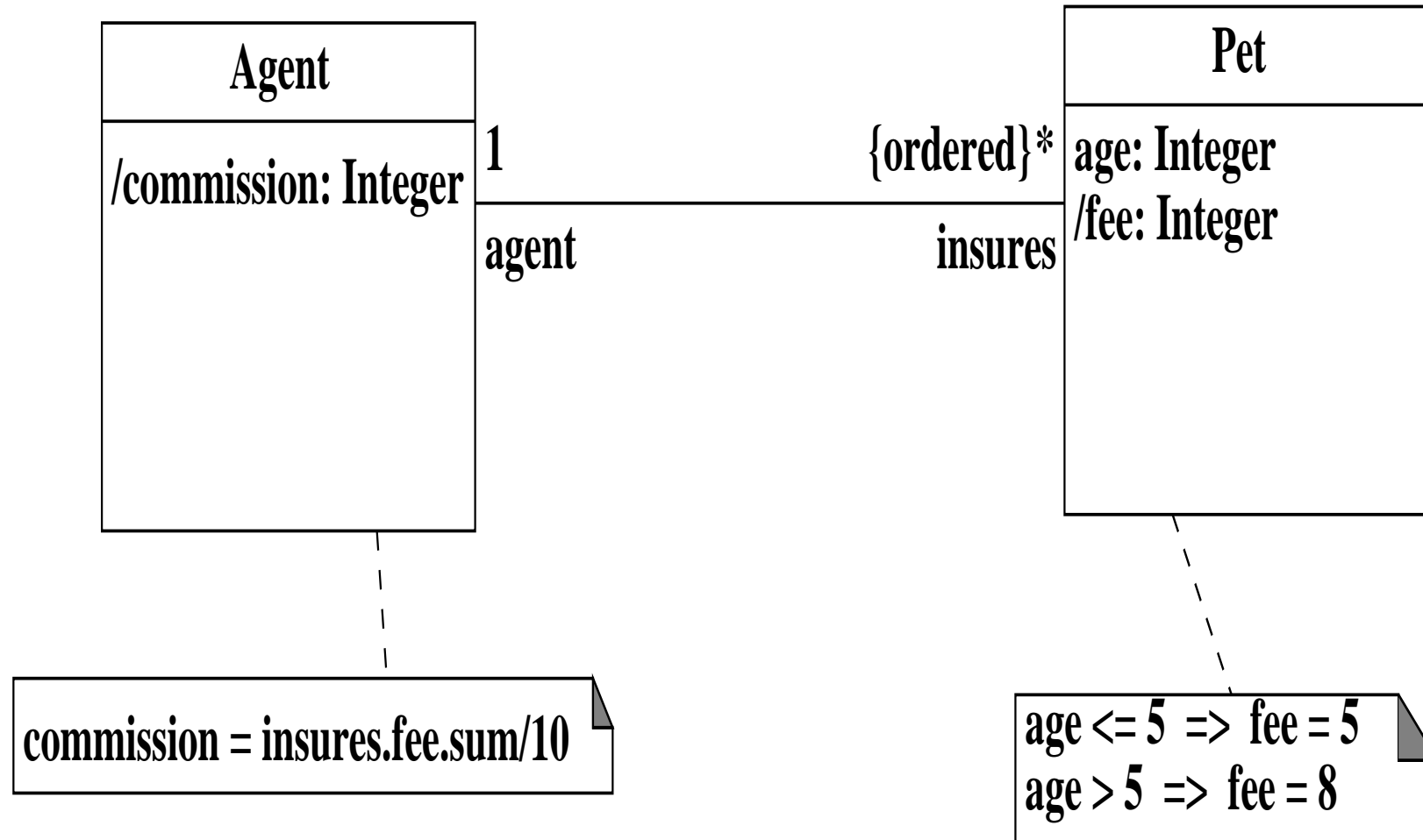
This example illustrates how constraints linking classes are treated.

The constraint

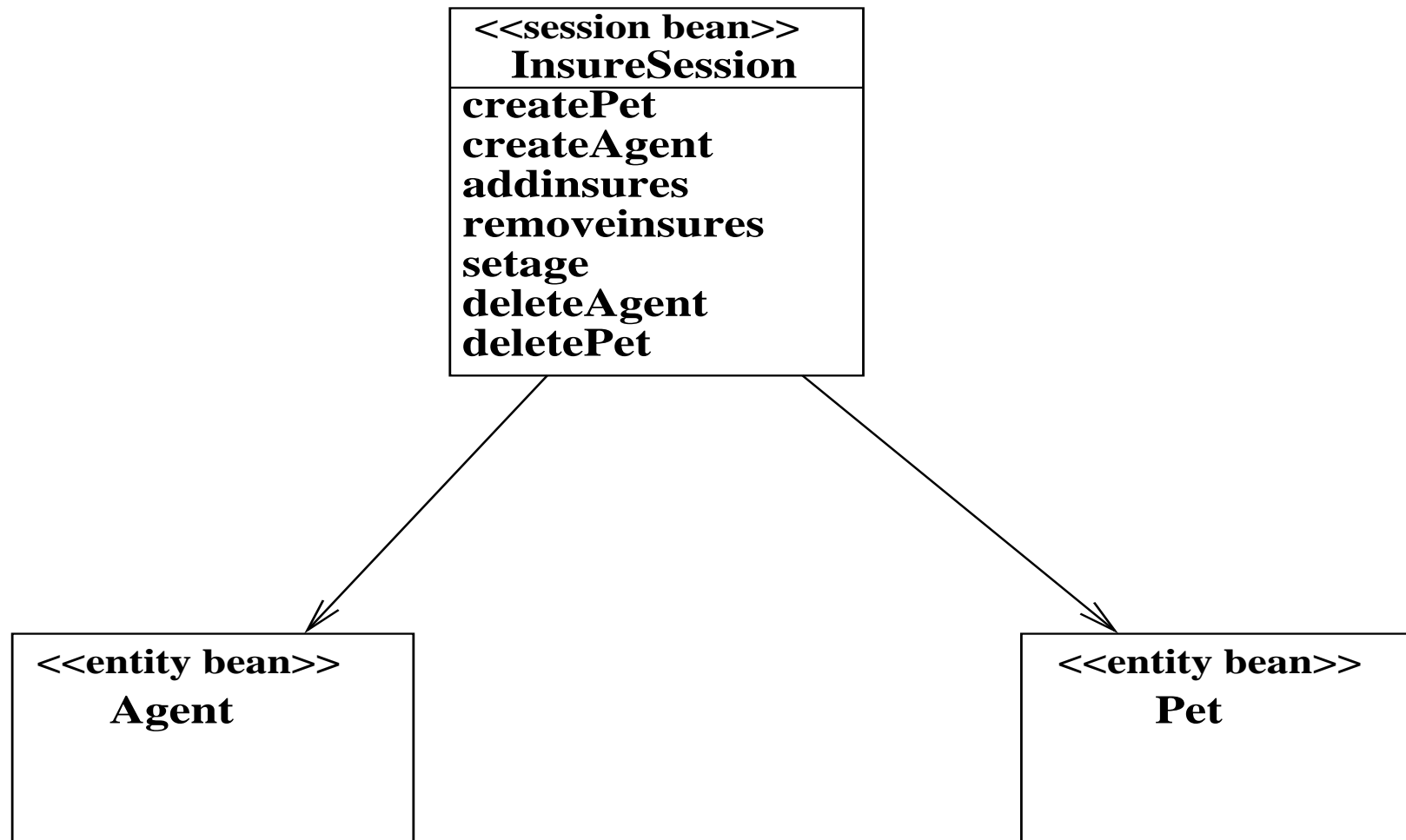
$$commission = insures.fee.sum/10$$

links state of *Agent* and *Pet*, so that an operation *setage* which affects state of *Pet* may also require changes to data of connected *Agent* objects.

A session bean component is therefore required, which ensures the inter-class constraint by carrying out updates to *Pet* and *Agent* objects within single transactions.



PIM of pet insurance system



Architecture of insurance system

Transaction example

The use cases *addinsures*, *removeinsures*, *setage* and *deletePet* all involve both entity beans.

For example, *addinsures* could have outline code:

```
public void addinsures(String agentId, String petId)
{ Agent agentx = agenthome.findByPrimaryKey(agentId);
  Pet petx = pethome.findByPrimaryKey(petId);
  List insuresx = agentx.getinsures();
  insuresx.add(petx);
  agentx.setcommission(insuresx.getfee().sum()/10);
}
```

This is a complete transaction: updates to the agent commission and set of insured pets should either both succeed or both fail (be undone).