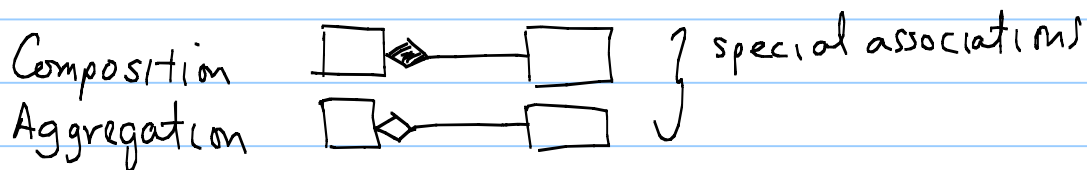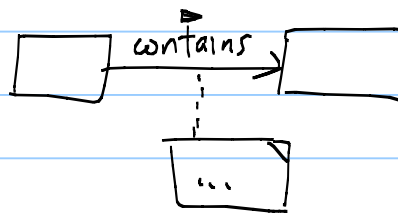Associations : Whole or Part
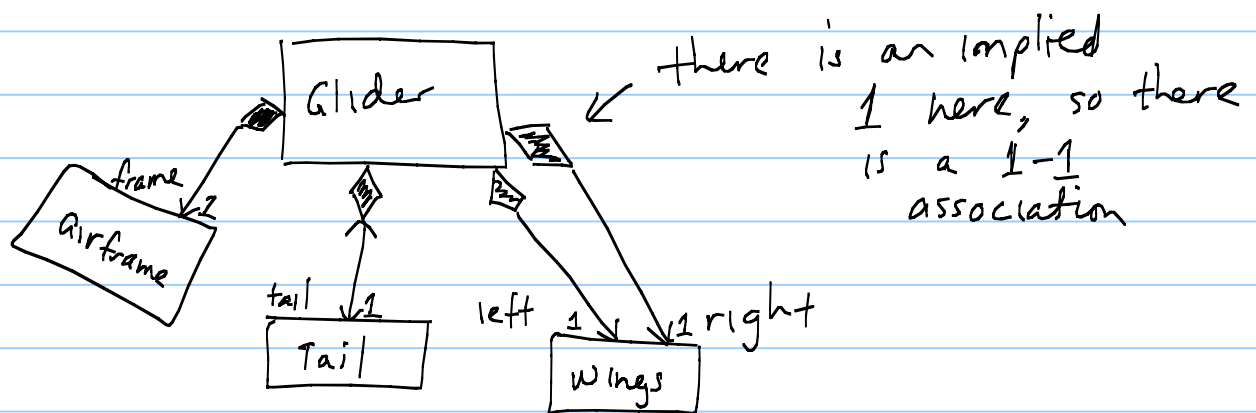
Composition } special associations
Aggregation

If in doubt, use a normal association and write
what you mean over the arrow or in a note
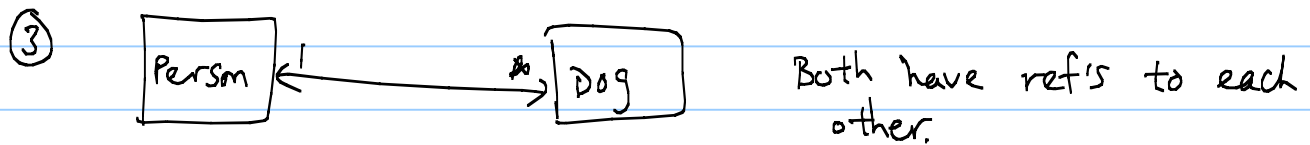ie:

Composition : Parts of Components (made of parts)
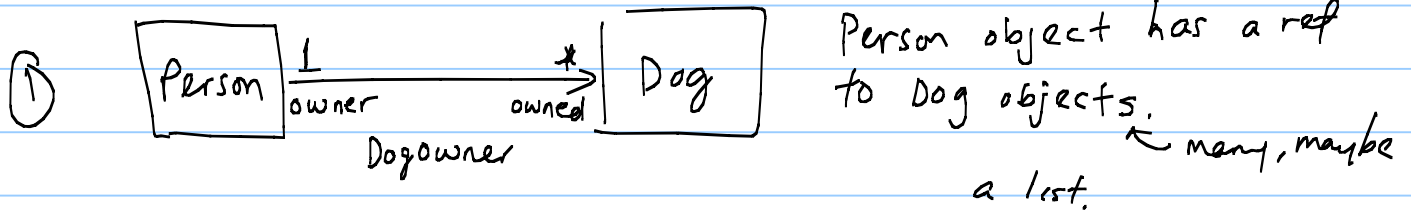

there is an implied
1 here, so there
is a 1-1
association

1) Composite object does not exist w/o it components
   ⇒ Composite cannot outlive its components

ie: if we delete a composite object, we should do a
    cascading delete, delete it children ...

2) ∀ components c, each c is part of a single
      composite.

3) Typically: components are of ≠ types

NAVIGATION (this topic comes before ASSOCIATION)

① Person $\xrightarrow{\text{1 owner} \quad \text{* owned}}$ Dog

Dogowner

Person object has a ref to Dog objects.
↖ many, maybe a list.

② Person $\xleftarrow{\text{1} \qquad \text{*}}$ Dog

Dog object has a ref to Person object.

③ Person $\xleftarrow{\text{1} \qquad \text{*}}$ Dog

Both have ref's to each other.

This relates to PERFORMANCE (at the cost of space)
ie: how many ref's to keep.

See navigation in Glider diagram w/ Glider & tail.
Usually, components don't refer to the composite.
The composite refers to is components (as in wings)

AGGREGATION

Room ◇—— Chair
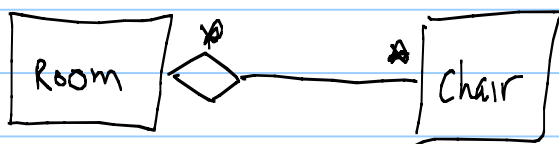
A room has many chairs.
A chair can be in different rooms.

      (Whole)   (parts)

1) Aggregate object can exist w/o aggregands

2) Objects may be part of multiple aggregates

3) Typically, components are of = type.