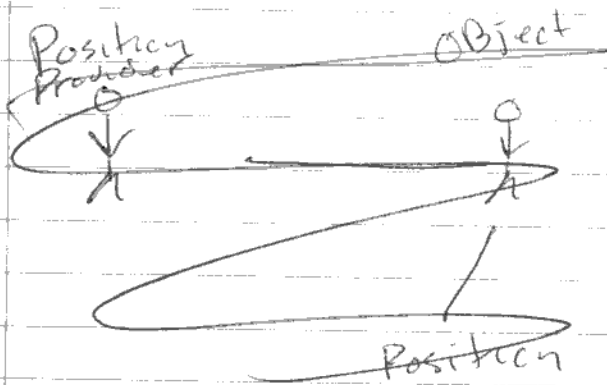
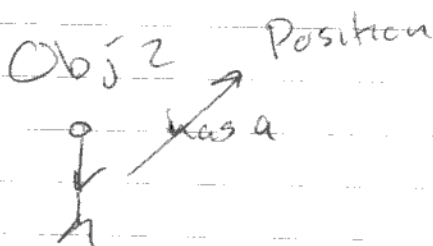
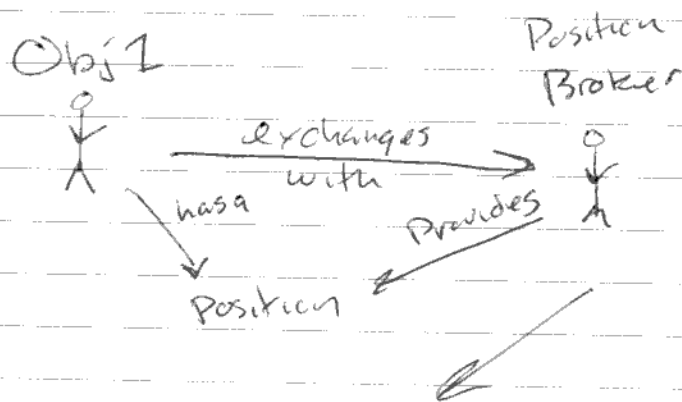


Q) How do we model a lock in code?

~~Position Array = pos~~



This is how  
location / movement  
could work w/  
Lock mechanism



Position Broker

- 1) only exchanges position for position before or after
- 2) will not give same position to two objects
- 3) specific positions may be connected to other resources

- A lock occurs when the probability of escaping a fixed set of states is high enough that the event is unlikely to happen randomly.
- this is like a logical relation

if  $A \wedge B \wedge C$  then  $D$

where the probability of  $A \wedge B \wedge C$  is so low that ~~as~~ a deliberate mechanism must act to unlock the state

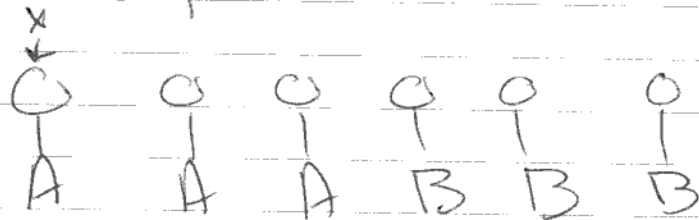
- this is similar to blade of grass in terms of a self sustaining condition that is otherwise improbable
- Importantly a lock is generally or more generically viewed as something that limits allowed states to a subset.

The subset may be as small as a single state but more generally is a larger subset or subspace.

- a lock is much like quantum mechanics in the sense of limiting subsets

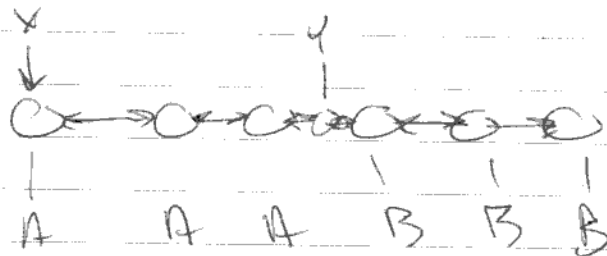
- A lock is predicated on the idea of an invariant requirement(s) for existing in a ~~state~~ state subspace.

- The lock can preclude a whole subspace by precluding each state in the subspace



$x @ 0 \text{ if } A @ 0$

- The lock can preclude a whole subspace by barring an ~~other~~ operation needed to enter the subspace



$x$  can't move to  $0$  that references  $y$