

Q) what is a fundamental building block of Logical relation

XOR?

Q) what is a "Logical Relation"

$C = A \text{ and } B$

$K = \# > 5$

$D = E \text{ or } F$

$G = H \text{ xor } I$

A) Coupling between states in independent domains

Q) what is tagging, labeling, categorizing

Example

$K = \# \text{ of } E \text{ in } X \text{ and } Y > 10$

A) An entity  $e$  in set  $E$

can be simultaneously logically coupled with

state "red" in domain "color"  
and

state "large" in domain "size"

Q) what is a lock?

A) A world state with a low probability of

- 1) Creation
- 2) Destruction
- 3) Both

such that deliberate or unlikely conditions must precede the state change

Q) How is a lock mechanism related to information?

A) Information is data is a record of a combination of deltas in independent domains.

The information or data is stored as state in one set of domains

The information or data has a relationship with state in a second set of domains.

We are not interested in random state  
We are mostly interested in structured state  
... state that has some duration

Lock mechanisms produce structured state in the set of domains we consider "real"

Likewise lock mechanisms are required in set of states we store info in.

Q) what types of lock mechanisms exist in set of domains we store info in?

1) Differentiation within state domains.

Ex. T/F in Domain "present"

Ex. 0, 1, 2, 3 in X Domain

2) Logical relationships or coupling between domains that is decoupled from other sets of relationships

Ex. distinct ideas or objects

3) Relationships between real world and information state domains.