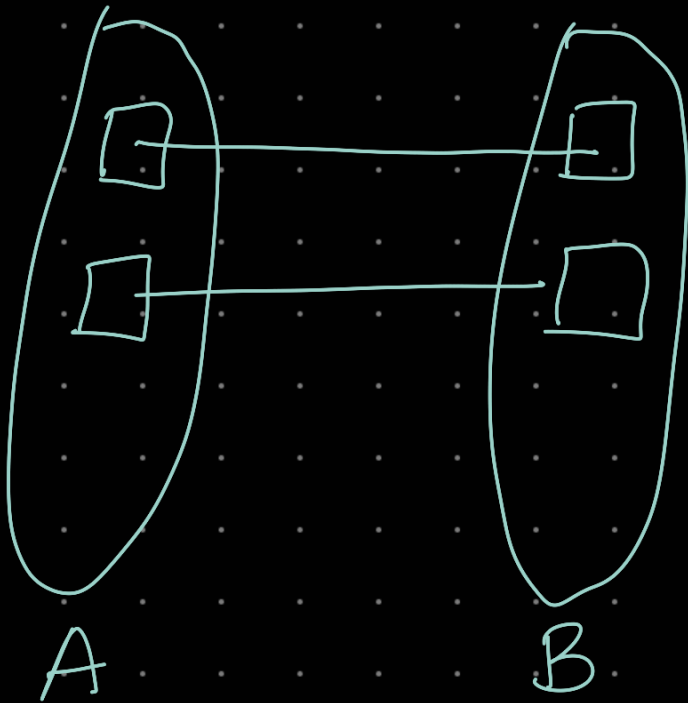


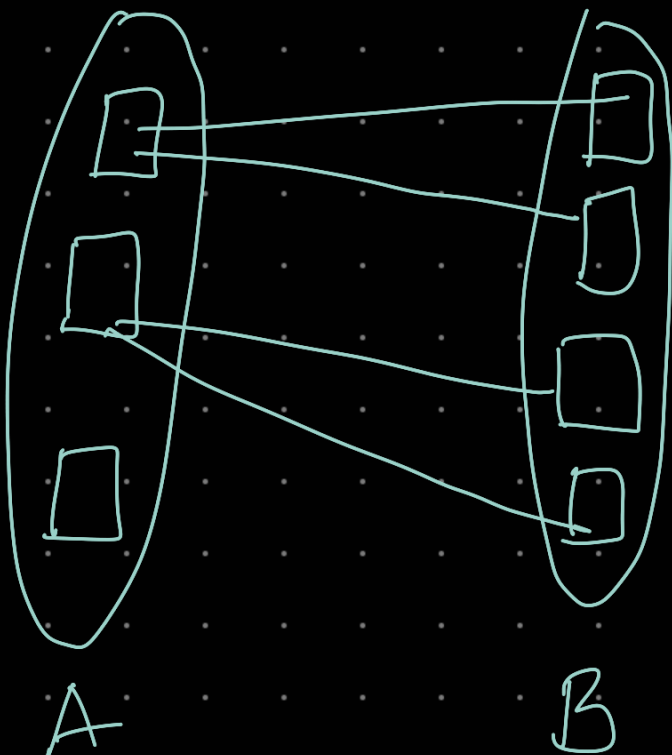
# [Relationship]

① 1 - to - 1



$A \xleftrightarrow[\underline{1}]{\text{at most}} B$

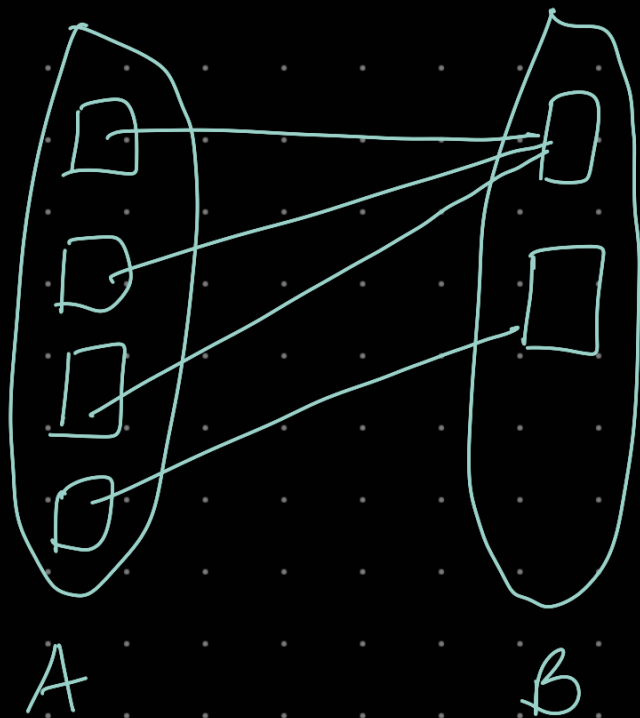
② 1 - to - many



$A \xrightarrow[\text{more}]{\text{zero or}} B$

$A \xleftrightarrow[\underline{1}]{\text{at most}} B$

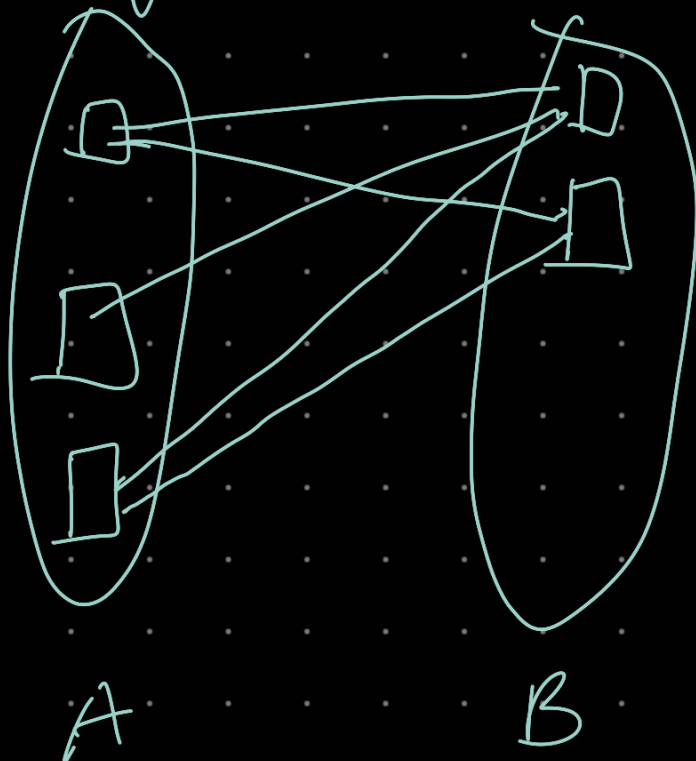
③ Many - to - 1



$A \xrightarrow[\text{1}]{\text{at most}} B$

$A \xleftarrow[\text{more}]{\text{zero or}} B$

④ Many - to - Many



$A \xrightarrow[\text{more}]{\text{zero or}} B$

$A \xleftarrow[\text{more}]{\text{zero or}} B$

① Degree  $\rightarrow$  How many entity sets participating

Binary relationship

$\hookrightarrow$  Degree = 2

② Cardinality ratio

$\hookrightarrow$  Max number of relationship an Entity can participate

(i) 1 - to - 1  $\rightarrow$  1 : 1

(ii) 1 - to - many $\rightarrow$ 1 : N
(iii) Many - to - 1 $\rightarrow$ N : 1

$\Rightarrow$  could be interchanged

(iv) Many - to - many  $\Rightarrow$  M : N

$\Downarrow$   
Depends on perspective

③ Participation or existence

↳ Minimum no. of relationship an Entity can participate

## [Recursive Relationship]

↳ Relationship within same Entity type

