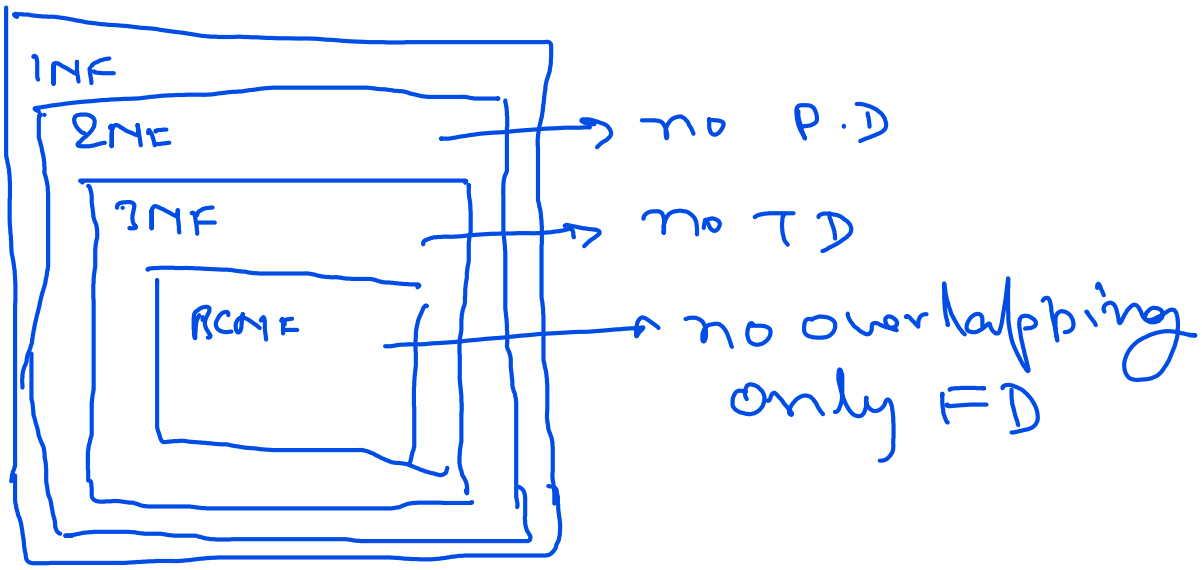
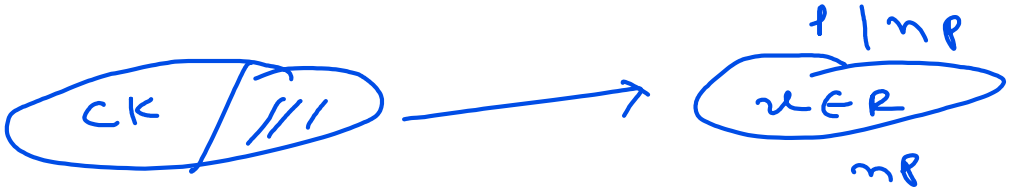
Normalization



$\alpha \longrightarrow \beta$

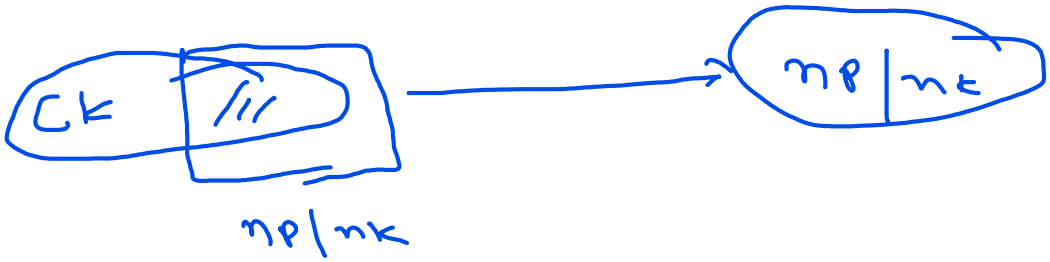
FD

PD

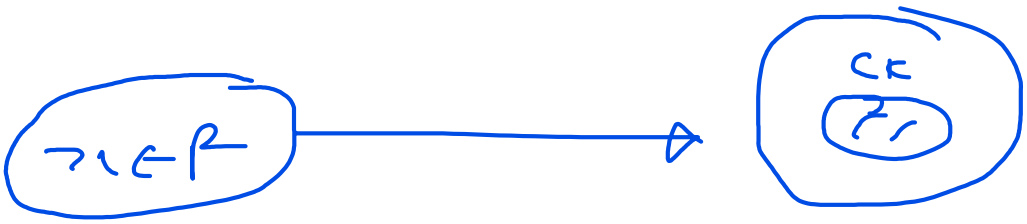


TD

OR



OC



Ex $R(A, B, C, D, E, F)$

$A \to B$ FD

$C \to DF$ FD

$AC \to E$ FD

$D \to F$ TD

CK = ?

This is in 1NF

$A^+ \Rightarrow AB$

$C^+ \Rightarrow CDF$

$AC^+ = ACEBDF$

$D^+ = DF$

CK => AC

Prime = A, C

NP = B D E F

$A \to B$

$P \to \sim P$ ⟹ BD

$C \to DF \to PD$

Ex R(A, B, C, D, E)

A → B PD

BC → E PD 3NF

ED → A PD

A^+ = AB

BC^+ = BCE

ED^+ = EDAB

CK: → CDE, BCD, ACD ⇒ BCDE = CDE = CD ∪ (BC)

CD

= ACD

Decomposition — of relation

Let R is in 1NF

So make it 2NF; we break R in such a way that PD is removed

Ex R(A B C D E)

AB → C PD

D → E PD