Algorithm to Compute All the Candidate Keys

Given a relational schema R and a set F of functional dependencies on R, the algorithm to compute all the candidate keys is as follows:

T := ∅

Main:

X := S where S is a super key which does not contain any candidate key in T

remove := true

While remove do

For each attribute A ∈ X

Compute $\{X-A\}^+$ with respect to F

If $\{X-A\}^+$ contains all attributes of R then

X := X – {A}

Else

remove := false

T :=T ∪ X

Repeat *Main* until no available S can be found. Finally, T contains all the candidate keys.