CSE 305 Final Project Database Design & Normalization

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Users: uid I, ucity S, ucountry N, ustate D, ucountrycode C, uareacode A

FDs: I -> ISNDCA
S -> D
D -> N
N -> C
D -> A

Normalization:

The candidate key here is uid I. The relation is not BCNF because none of the dependencies contain I at their left hand side. The relation is also not 3NF because none of the dependencies has their right hand side as part of some keys--D, N, C or A are not part of some key. So, lets decompose the user table to IS, SD, DNA and NC with FDs I -> S, S -> D, D -> N, N -> C and D -> A. Now, all dependencies contain key at their left hand side. Thus, it is now decomposed to BCNF.

Posts: pid I, pcontent C, pdisnum N, prank R

FDs: I -> CNR
N -> R
Thus, we can divide Posts table into ICN, NR

Normalization:

The candidate key here is pid I. The relation is not BCNF because none of the dependencies contain I at their left hand side. The relation is also not 3NF because none of the dependencies has their right hand side as part of some keys--R is not part of some key. So, lets decompose the user table to ICN and NR with FDs I -> CN and N -> R. Now, all dependencies contain key at their left hand side. Thus, it is now decomposed to BCNF.