

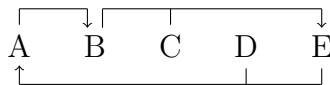
CIS 551: Assignment 5

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Problem 19.2

Consider a relation R with five attributes $ABCDE$. You are given the following dependencies.



Part 1)

List all keys for R

We can see that $A \rightarrow B$ which means we can rewrite the relationships as $ACDE$. Giving us



With A and C we are given E . Thus we have

$A \quad C \quad D$

And we no longer have any relationships.

Similarly we can get the other keys. Giving us the answer: ACD, BCD, CDE

Part 2)

Is R in 3NF?

Part I

3

Is R in BCNF?

Problem 19.6