

Recap: FD

Consider a student_lecture relation

S_id	Address	Course	Teaching_assistant
1234	57 Hockanum Blvd	Database Systems	Minnie
2345	1400 E. Bellows	Database Systems	Humpty
3456	900 S. Detroit	Cloud Computing	Dumpty
1234	57 Hockanum Blvd	Web Programming Lang.	Mickey
5678	2131 Forest Lake Ln.	Software Analysis	Minnie

Assume that there is exactly one teaching assistant assigned to each student for every course

1. Determine all functional dependencies of the relation
2. Give an example of a super key and a candidate key

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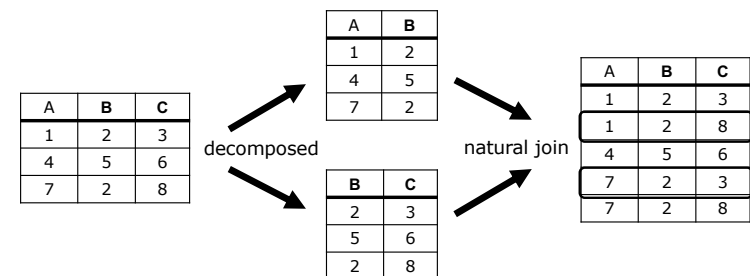
Recap: Attribute Closure

Given a relation R (A, B, C, D, E, F, G) with the following FDs

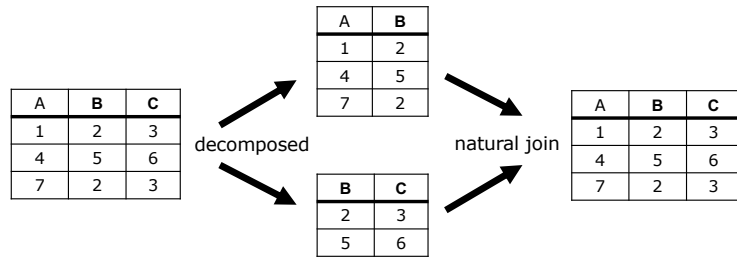
FDs = { $A \rightarrow BC$, $E \rightarrow CF$, $B \rightarrow E$, $CD \rightarrow EF$, $A \rightarrow G$ }

Find the closure of A (A^+)

Let's Try (1) Lossless Join decomposition?



Let's Try (2) Lossless Join decomposition?



Recap: Normal Forms

What is the main aspect of 1NF?

Which among 3NF and BCNF is dependency preserving?

Which among 3NF and BCNF is redundancy free?

What is common between 3NF and BCNF?