week12 tutorial

November 2023

1 Given the relation schema R = (A, B, C, D) and the canonical cover of its set of functional dependencies

- $A, B \rightarrow C, D$
- $B \rightarrow D$

1 please find a set of candidate keys for this relational schema.

2 please convert this relational schema into 2 NF
(Definition of 2NF: No non-prime attribute should be partially dependent on Candidate Key)

3 please convert this relational schema into 3 NF

2 Given the relation schema R = (order id, date, customer, customer email) and the canonical cover of its set of functional dependencies

- $orderid \rightarrow date, customer$
- $customer \rightarrow customeremail$

1 please list the Candidate key and the Non-prime attributes of this relation schema

2 determine whether the given R is in 2NF

3 Normalize this R to 3NF

3 Given the relation schema R = (StuID, StuBranch, StuCourse, BranchNumber, StuCourseNo) and the canonical cover of its set of functional dependencies

- $StuID \rightarrow StuBranch$
- $StuCourse \rightarrow BranchNumber, StuCourseNo$

1 please list the Candidate key and the Non-prime attributes of this relation schema

2 determine whether the given R is in 3NF

3 Normalize this R to BCNF