

Databases Coursework 2 - Normalisation

Q4)

(followed example on slides... I am so very confused... this is a cry for help)

Let ebay prod_vendor=(prod_id, price, model_num, vendor, delivery price, storage) be a relation scheme.

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Decomposition

Product-Schema = (prod_id, price,model_num)

Vendor_schema = (prod_id ,Vendor, delivery price, storage)

2nd decomposition

Remove product_id to remove redundancy since even after this the original schema can be reached using pro_id → price Model_num

Vendor_schema = (Vendor, delivery price, storage)

Removed redundancy while preserving the original data therefore lossless join decomposition

Any given decomposition is said to be lossless when the reconstruction of the relation R is easy from the decomposed tables with the help of joint

A decomposition = lossless when (using a joint) reconstruction of original relation is simple

(vendor,storage) = product ∩ delivery????

Q5)

For a table to be in BCNF

It should be in the 3rd Normal Form

For any dependency $A \rightarrow B$, A should be a super key

R is not in BCNF with respect to F as there is a functional dependency $c \rightarrow D$, $c \rightarrow A$. In this relation C is not the super key so condition for BCNF is not met.