Final exam task 1 — Fundamentals of Databases

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1. (a) Let R be {<u>A, B</u>, C, D} of atomic attributes where primary key is <u>{A, B}</u> and {A, B} → C, D and {B, C} → D.

    (b) This relation has no attributes that are not atomic. All non-key attributes are fully functionally dependent on the entire key. There are no transitive dependencies on the key. not every determinant is a candidate key ({B, D} → D here {B, D} is not a key).

2. The BCNF version would be {<u>A, B</u>, C} and {<u>B, C</u>, D}.

3. In some scenarios queries will perform more poorly if they have to look into more tables than needed.

    It's also much simpler to manage. You don't have to keep track of cross references and all that.