

Boyce–Codd normal form

A database is in Boyce–Codd normal form (or 3.5 normal form) when¹:

- It is in first normal form (Has only atomic values in a row),
- Second normal form (All attributes are dependent on whole key),
- Third normal form (There are no transitive dependencies on the key),
- Has no multiple overlapping values.

Database BlogDB has 4 entities: Editor, Post, Comment, and Category.

The superkeys for Editor entity are Username and all possible combinations of attributes in that entity including Username (e.g. Username and Name; Username, Name and Email). An editor can create many posts.

The superkeys for Post entity are ID and all possible combinations of attributes in that entity including ID (e.g. ID and Title; ID, Title and Text). Many posts can be created by an Editor. A Post can have many comments. Many Posts can have many categories.

The superkeys for Comment entity are ID and all possible combinations of attributes in that entity including ID (e.g. ID and Text; ID, Timestamp and Text). Many comments can be made on a Post.

The superkeys for Category entity are ID and all possible combinations of attributes in that entity including ID (e.g. ID and Title). Many categories can be assigned to many posts.

Database meets all requirements to be specified as BCNF and no changes need to be made.

¹ <http://www.studytonight.com/dbms/database-normalization.php>