

ABSTRACT

The goal of design good data schema is have a good data base, efficient in use of storage, fast access and easy in data manipulation. One approach is applying normalization on the structure of the data schema. Normalization is a process to applying some rules and standard criteria to get a normal structure of data schema. Structure of a data schema is said to be normal if it can eliminate or at least can reduce the problem that usually occurred on the data, like repetition information, unrepresented information, and loss information. These problems appear in bad design of data schema. The impact can make big problems in the database. For example, repetition of information wastes space of the databases. Furthermore, it complicates manipulating the databases. Another example is loss information, that can make inconsistency of information. To avoid these problems, we normalize the schema by decompose it into several schemas with fewer attributes. A decomposition is said to be good if it resulting lossless join and dependency preserving data schema.

At this final project has been built an application that can help database designer to normalize data schema and resulting lossless join dan dependency preserving data schema is needed. This application also can be used as learning tools especially for study about the design of data schema. Where, in this application we can know if *Entity Relationship* (ER) design has complied with second normal form, third normal form and boyce codd normal form (BCNF).

The method which is used in development of this software is object oriented analysis, while software for implementation is JAVA as language of the program and netbeans 3.6 IDE.

Key word : Normalization, Relational Schema, CASE Tools, Database, 1st Normal Form, 2nd Normal Form, 3rd Normal Form and Boyce Codd Normal Form (BCNF).