

## **ABSTRACT**

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# **PRIMARY KEY IDENTIFICATION FOR 4<sup>th</sup> AND 5<sup>th</sup> NORMALIZATION CASES USING PRIMARY KEY IDENTIFIER**

(xi+51 Pages; 2 Figures; 25 Tables; 0 Appendix)

The criteria of a good table are if the data is consistent and there's no data loss or redundancy. One way of preventing redundancy is by using primary key. When the criteria are not fulfilled, it should undergo normalization phase. Normalization is a technique to achieve one set of table which normalized so that the rule of relational model database can be achieved. Stages of normalization are: 1NF, 2NF, 3NF, BCNF, 4NF, 5NF. Each stage is required for their function. 4NF and 5NF are required in multivalued dependency case. Multivalued dependency is a dependence of each attributes in the table.

The step of solving normalization problems 4 and 5 is decomposition, breaking a table to smaller part so there's no duplication anymore in that table. Primary key identification can be done by comparing each record and noted any duplication existed. This is a scheme of how primary key identifier tools work.

The result is primary key identifier can indicate primary key candidates in normalization case 4 and 5, so that tools can be an option in primary key identification. The conclusion is primary key identifier can be used in all phases of normalization, 1NF, 2NF, 3NF, BCNF, 4NF, 5NF.

Reference: 10 (1995-2011)